



MAKERERE UNIVERSITY

College of  
Agricultural and  
Environmental Sciences  
(CAES)

# CAES ANNUAL REPORT 2025





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Agricultural and  
Environmental Sciences  
(CAES)

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**Concept: Prof. Gorettie Nabanoga, Principal, CAES**

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## ACRONYMS

<b>APRC</b>	Agricultural Policy Research Centre
<b>CAES</b>	College of Agricultural and Environmental Sciences
<b>DABE</b>	Department of Agricultural and Bio-Systems Engineering
<b>DANRE</b>	Department of Natural Resource Economics
<b>DCSH</b>	Department of Crop Science and Horticulture
<b>DRAS</b>	Department of Range and Animal Science
<b>DSSLM</b>	Department of Soil Science and Land Use Management
<b>DEIS</b>	Department of Extension and Innovation Studies
<b>DEM</b>	Department of Environmental Management
<b>DFTHN</b>	Department of Food Technology and Human Nutrition
<b>GGCS</b>	Department of Geography, Geo-informatics and Climatic Sciences
<b>DRGT</b>	Directorate of Research and Graduate Training
<b>FBT</b>	Department of Forestry, Biodiversity and Tourism
<b>FTBIC</b>	Food Technology and Business Incubation Centre
<b>Mak</b>	Makerere University
<b>MARCCI</b>	Makerere University Regional Centre for Crop Improvement
<b>MUARIK</b>	Makerere University Research Institute Kabanyolo
<b>MUBFS</b>	Makerere University Biological Field Station
<b>NBDB</b>	National Biodiversity Data Bank
<b>NFC</b>	Nyabyeya Forestry College
<b>SAS</b>	School of Agricultural Sciences
<b>SFECS</b>	School of Forestry, Environmental and Geographical Sciences
<b>SFTNB</b>	School of Food Technology, Nutrition and Bioengineering



## College of Agricultural and Environmental Sciences (CAES)

### COLLEGE LEADERSHIP



**Prof. Gorette Nabanoga**  
Principal, CAES



**Prof. Yazidhi Bamutaze**  
Deputy Principal, CAES

### Deans & Directors



**Dr. John Baptist Tumuhairwe**  
Dean, School of Agricultural Sciences



**Dr. Julia Kigozi**  
Dean, School of Food Technology,  
Nutrition and Bio-engineering



**Dr. Revocatus Twinomuhangi**  
Dean, School of Forestry,  
Environmental and Geographical  
Sciences



**Dr Peter Ebanyat**  
Director, MUARIK



**Prof. David Tumusiime**  
Director, Makerere Biological  
Field Station

# Heads of Department



**Dr. Mildred Ochwo Ssemakula**  
Head, Department of Crop  
Science and Horticulture



**Dr. Rosemary Isoto**  
Head, Department of Agribusiness  
and Natural Resource Economics



**Dr. Bernard Obaa**  
Head, Department of Extension  
and Innovation Studies



**Dr. Donald Kugonza**  
Head, Department of Range  
and Animal Science



**Dr. Olupot Giregon**  
Head, Department of Soil Science  
and Land Use Management



**Dr. Paul Mukwaya**  
Head, Department of  
Geography, Geo-Informatics  
and Climatic Sciences



**Prof. Justine Namaalwa**  
Head, Department of  
Environmental Management



**Dr. Lawrence Orikiriza**  
Head, Department of Forestry,  
Biodiversity & Nature  
Conservation



**Prof. Jim Ayorekire**  
Head, Department of  
Tourism



**Prof. Mukisa Muzira Ivan**  
Head, Department of Food  
Technology & Nutrition



**Prof. Isa Kabenge**  
Head, Department of Agricultural  
& Bio-Systems Engineering

# Heads of Administrative Units



**Mr. Lebo Julius**  
Human Resource  
Officer



**Ms. Jofrina Kyohairwe**  
College Registrar



**Ms. Susan Kyamulabi**  
Team Leader, Finance



**Mr. Deo Ibanda**  
Procurement Officer

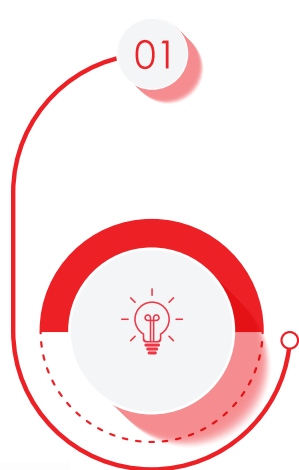


**Ms. Hasifa Kabejja**  
Principal Communication Officer



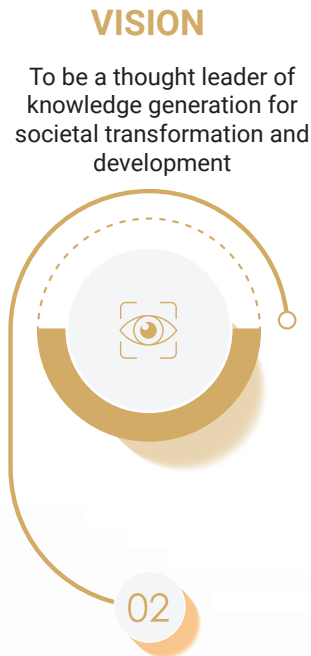
**Ms. Mariam Kasemiire**  
IT Officer

# OUR MISSION, VISION & CORE VALUES



## MISSION

To produce graduates, research products and knowledge services in the fields of agricultural, food technology and environmental management



## VISION

To be a thought leader of knowledge generation for societal transformation and development



## CORE VALUES

- Accountability
- Professionalism
- Inclusivity
- Integrity
- Respect

# STRATEGIC GOALS

In pursuit of our mandate, we are guided by the four core goals of Makerere University



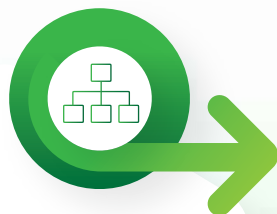
### Goal 1

To transform Makerere into a research-led university, responding to national, regional and global development challenges, as well as contributing to global knowledge generation



### Goal 2

Innovation in teaching and learning: In her quest to provide the desired human capital, the University is committed to creating the appropriate environment and support for students to meet their academic and professional aspirations. Teaching and learning will be all-inclusive, integrating gender and special needs requirements.



### Goal 3

A professionally managed, equitable, inclusive and gender mainstreamed institution



### Goal 4

An engaged University with enhanced partnerships with industry, the community and international institutions.

1

# INTRODUCTION



# PRINCIPAL'S MESSAGE



It is with great pride, gratitude, and a renewed sense of purpose that I present the 2025 Annual Report of the College of Agricultural and Environmental Sciences (CAES), Makerere University. This report reflects a year of resilience, transformation, innovation, and growing impact as the College continued to strengthen its contribution to agricultural development, environmental sustainability, climate resilience, and human capital development in Uganda, Africa, and beyond.

At CAES, we remain firmly committed to Makerere University's vision of becoming a research intense institution that responds meaningfully to national, regional, and global development priorities. Guided by our "Innovation Intentional Agenda" and anchored in the CAES Pact for Transformational Change, we continue to reposition the College as a center of excellence in practical training, impactful research, innovation, and community transformation.

During the year under review, the College continued to advance teaching and learning through the delivery of 42 academic programmes supported by experiential and field-based learning approaches. Our commitment to practical education remained central, with approximately 60% of undergraduate training dedicated to hands-on learning through laboratories, university farms, research

institutes, field stations, internships, and community engagement platforms. The College enrolled over 16,000 students, including a growing number of graduate and international students, affirming CAES' expanding regional and global relevance.

The College also celebrated significant milestones in graduate training and academic excellence. We proudly presented 562 graduates during the 75th Graduation Ceremony of Makerere University, including 19 PhD graduates whose research addressed critical issues in climate resilience, food systems, agricultural productivity, environmental management, innovation systems, and rural livelihoods. The inaugural CAES Doctoral Symposium further strengthened our commitment to nurturing impactful, interdisciplinary, and solution-oriented research capable of addressing the complex challenges facing society today.

Research and innovation remained at the heart of our mandate. Across our three Schools, two research institutes, and specialized centres, CAES continued to generate knowledge, technologies, and innovations that are transforming communities and industries. The College implemented numerous government- and donor-funded projects addressing food security, climate adaptation, clean energy, biodiversity conservation, sustainable urban systems, agricultural commercialization, nutrition, and youth employment. Several of our researchers and students received national and international recognition for excellence in research, innovation commercialization, and scientific contribution.

Notably, the College strengthened strategic partnerships with universities, research organizations, development agencies, governments, and the private sector. These collaborations enhanced graduate training, mobility,



## 42

Academic Programmes



## 562

Graduates



## 19

PhD Graduates

infrastructure development, technology transfer, and interdisciplinary research. We also continued to invest in digital transformation and modern learning infrastructure, including the enhancement of the CAES e-Learning Studio and improvements in student mobility and practical training support systems.

As we reflect on the achievements of 2025, we remain cognizant of the emerging challenges facing agricultural and environmental systems globally, including climate change, food insecurity, ecosystem degradation, unemployment, and inequality. These challenges demand bold thinking, innovation, strategic partnerships, and a new generation of highly skilled graduates and researchers capable of driving transformative change. CAES remains fully committed to contributing solutions through research-led teaching, innovation, entrepreneurship, policy engagement, and community outreach.

I extend my sincere appreciation to the Government of Uganda, Makerere University Council and Management, our development partners, collaborators, alumni, staff, students, and surrounding

communities for their continued support and confidence in CAES. I particularly commend our staff and students whose dedication, resilience, and creativity continue to position the College among the leading institutions in agricultural and environmental sciences in Africa.

As we look ahead, we remain inspired by the belief that universities must not only generate knowledge but must also shape futures, transform communities, and provide solutions to society's most pressing challenges. Together, we shall continue to strengthen CAES as a vibrant hub for innovation, excellence, sustainability, and transformative impact.



**Prof. Gorette Nabanoga**  
Principal



# 1. INTRODUCTION

The College of Agricultural and Environmental Sciences (CAES) is one of the ten constituent colleges of Makerere University. Established through the merger of the former Faculty of Agriculture, Faculty of Forestry and Nature Conservation, Makerere University Institute of Environment and Natural Resources, and the Department of Geography, CAES has evolved into a leading institution in agricultural and environmental sciences, building on a strong foundation of expertise and innovation. The College comprises three dynamic schools;



## The School of Agricultural Sciences (SAS)

SAS is committed to bolstering knowledge and building resilience across agri-food systems, emphasizing productivity, resilient farming practices, and soil management and conservation. With a focus on promoting equitable access and enhancing income, food, and nutrition security, the mission is to cultivate a proficient workforce equipped to lead transformative development. This includes empowering individuals to implement innovative approaches within agri-food systems and the broader community, thereby ensuring lasting positive impacts on livelihoods and well-being. In achieving this mission, the school comprises of three Departments. The school is composed of 5 Departments – **Agriculture and Natural Resources Economics (DANRE), Innovation and Extension studies (DIES), Crop Science & Horticulture, Soil Science and Land Use Management and Animal & Range Science** curved out of the **Department of Agricultural Production (DAP)**.



## The School of Forestry, Environmental and Geographical Sciences (SFEGS).

SFEGS is committed to facilitate the creation of sustainable and resilient landscapes that support thriving economies and also foster job creation and community well-being. SFEGS focuses on developing innovative strategies for land, water, and air management, mitigating climate change impacts, conserving biodiversity, and promoting sustainable tourism practices. Our mission is to build a future where nature thrives, economies flourish, and communities prosper. We strive to create resilient landscapes that provide vital ecosystem services, support sustainable livelihoods, and safeguard the well-being of present and future generations. The school is composed of 4 Departments – Department of **Forestry, Biodiversity and Nature Conservation**, Department of **Environmental Management**, Department of **Geography, Geo-informatics and Climatic Sciences**, and **Tourism**.



## The School of Food Technology, Nutrition and Bioengineering (SFTNB)

SFTNB offers specialized education and research across food science, technology, human nutrition, and agricultural engineering. With commitment to robust human resource training and innovation, our graduates are equipped with diverse skillsets to pioneer sustainable farming systems, implement cutting-edge technologies, and design resilient water infrastructure projects. From optimizing bioprocessing techniques to ensuring food safety and quality, our interdisciplinary approach fosters a new generation of leaders ready to drive positive change in the agro-industry sector. The SFTNB is where excellence meets impact in shaping a more sustainable and nourished future for communities worldwide. The school is composed of 2 departments - the Department of **Food Technology and Nutrition** and the Department of **Agricultural and Biosystems Engineering**.



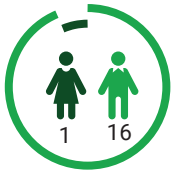
## CAES hosts two premier institutes, namely;

- (1) Makerere University Agricultural Research Institute Kabanyolo (MUARIK) and
- (2) Makerere University Biological Field Station (MUBFS).

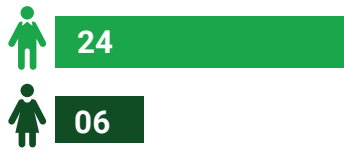
There are also 14 specialized research centers which support research, knowledge generation and technology transfer.

# FACTS AND FIGURES

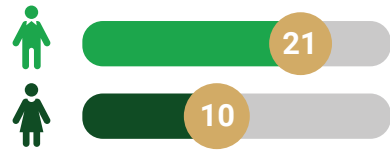
## Professors



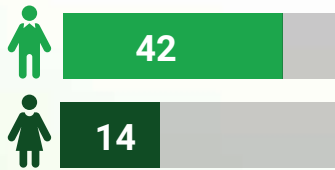
## Associate Professors



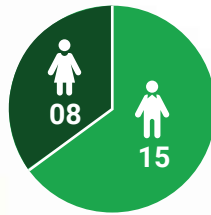
## Senior Lecturers



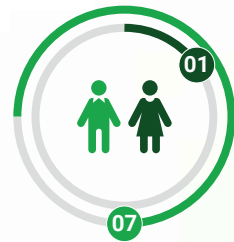
## Lecturers



## Assistant Lecturers



## Technicians



## Administrative Staff



## Support Staff



## Students

16,939+

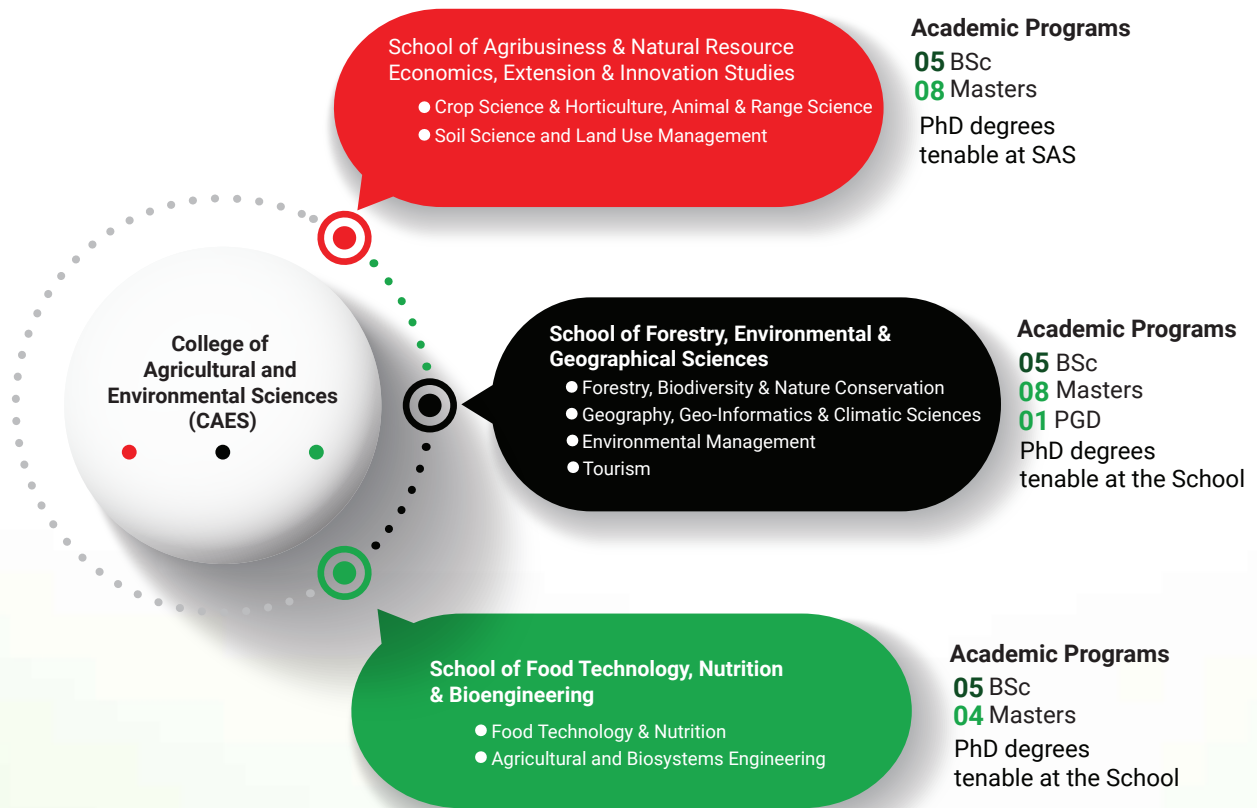
female  
40%

male  
60%

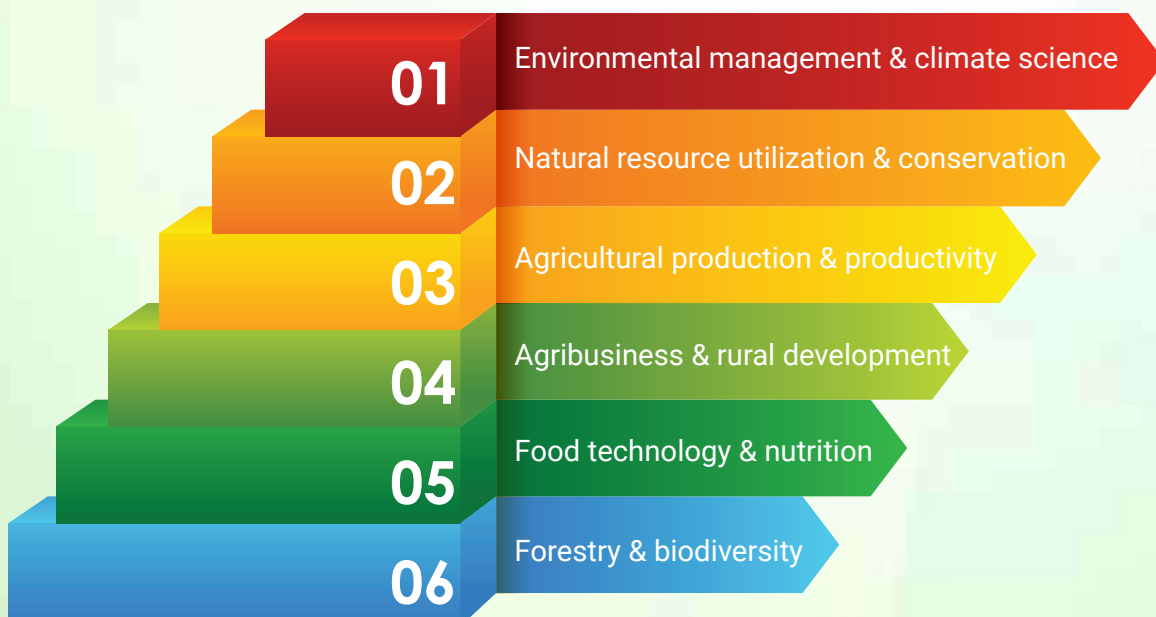


4% International


## SCHOOLS & DEPARTMENTS



## RESEARCH FOCUS




# RESEARCH OUTPUT

 **14** Research Centres and Institutes

 **100** Research projects

 **200+** Publications Per Year

 **20** PhD graduating students per year





# 2

# TEACHING AND LEARNING



## 2.1 Message from the Deputy Principal

### Prof. Yazidhi Bamutaze Deputy Principal, CAES



The academic year 2025/2026 has been highly eventful on the academic front, marked by numerous activities, deliverables, and achievements that have advanced the strategic goals of CAES. Overall, our vision remains clear; to elevate and sustain CAES as a modern 21st century college that stands tall in academic excellence, producing competent graduates in the domain of Agricultural and Environmental Sciences who are able to tackle societal challenges and cultivate solutions that lead to thriving communities.

At the 76th Graduation Ceremony held in February 2026, CAES recorded the highest number of postgraduate completions, graduating 28 PhD and 145 Master's students. We are committed to increase postgraduate enrolment in line with the university's strategic direction, but also ensure timely completion.

We have continued to enhance the quality and relevance of our academic programmes by incorporating emerging developments into the curriculum to ensure strong alignment with labour-market demands. Nearly all undergraduate and graduate programmes now comply with the requirements of the National Council for Higher Education (NCHHE). In addition, we have initiated the development of new programmes to address human-capital gaps that cannot be adequately met through the existing offerings. Notably, a Master of Science in Green Economy and Climate Finance has been developed. We have also defined our PhD by Research degree programmes in line with guidance from the Directorate of Graduate Training. These new programmes are expected to be approved and accredited by the end of 2026.

To strengthen practical training, several laboratories have been refurbished and equipped with relevant facilities to support the development of knowledgeable and skilled graduates capable of addressing contemporary societal problems. We also leveraged opportunities to deploy students to work more closely with farmers and local governments at the grassroots level, strengthening

community engagement and applied learning in agricultural practice.

Significant milestones have been registered with the Makerere University Journal of Agricultural and Environmental Sciences (MUJAES), which has been reinvigorated under the able leadership of Jeninah Karungi. During this academic year, the journal obtained a Digital Object Identifier (DOI). Consequently, publications in MUJAES are now recognized by the Makerere University Appointments Board, enhancing its academic standing and impact.

We remain alert to both the opportunities and challenges presented by Artificial Intelligence. Accordingly, we are gradually adapting our curricula and pedagogical approaches to integrate AI aspects to equip students with relevant skills in this rapidly evolving field. However, AI related challenges also exist particularly concerning the unethical use. The College is committed to instituting measures that promote optimal, responsible, and ethical use of AI to enhance academic and administrative effectiveness.

The quality of our academic enterprise is anchored in the calibre of our human resource, especially the faculty as our most valuable asset. Our talented faculty continues to excel in teaching, research, innovation, and enterprise development, with many serving as national role models. However, we have also experienced the loss of some prolific professors who have taken up positions in other public universities. Compounding this is the challenge of staffing "structure," which has constrained the promotion of deserving faculty to higher ranks. We are hopeful that the restructuring proposals advanced by management to create more senior positions in the ladder will ultimately merit favourable consideration by Public Service and bring the much needed relief to our academic units.

## 2.2 Teaching and learning at CAES

The College of Agricultural and Environmental Sciences (CAES) remains in its commitment to advancing STEM education by integrating science-driven approaches throughout its undergraduate and postgraduate programs. Currently offering 42 carefully crafted and regularly updated academic programs, CAES emphasizes practical, experiential learning-dedicating 60% of its undergraduate curriculum to hands-on activities. This commitment is supported by cutting-edge laboratories, expansive university farms, and strategically located field stations, all of which provide an ideal setting for students to engage in applied research and tackle real-world challenges. These critical infrastructure assets not only enhance the quality of learning but also serve as catalysts for innovation and discovery. Through its sustained focus on STEM excellence and experiential education, CAES is shaping a new

generation of skilled and innovative leaders prepared to address the complex issues surrounding agriculture, food systems, and environmental sustainability.

Teaching and learning at CAES are delivered through its Schools and Departments, each structured to focus on specific disciplines-including agriculture, natural resource management, environmental sciences, and food systems. Under the College's mandate, these academic units offer undergraduate, postgraduate, and doctoral programs designed to equip students with the knowledge and competencies necessary to meet the evolving demands of the agricultural and environmental sectors. During the year in review, the college offered 48 academic Programs. Total students enrolled were 16,939, 39.76 % Female, 60.24% Male, and 4.17 % international.

## 2.3 CAES Enrolment 2025/2026 (Ugandans and International)

2025/2026 CAES Enrolment (Ugandans and International)			
	Female	Male	Total
College Of Agricultural and Environmental Sciences	6490	9742	16232
Semester I	5526	8578	14104
Bachelor of Agribusiness Management	594	870	1464
Bachelor of Agricultural and Rural Innovation	673	1553	2226
Bachelor of Agricultural Extension and Rural Innovation	94	127	221
Bachelor of Conservation Forestry and Products Technology		5	5
Bachelor of Environmental Science	161	244	405
Bachelor of Geographical Sciences	210	224	434
Bachelor of Science in Agricultural Engineering	224	365	589
Bachelor of Science in Agricultural Land Use and Mgt	40	72	112
Bachelor of Science in Agriculture	332	731	1063
Bachelor of Science in Bioprocessing Engineering	140	190	330
Bachelor of Science in Food Science and Technology	232	353	585
Bachelor of Science in Forestry	367	605	972
Bachelor of Science in Horticulture	20	29	49
Bachelor of Science in Human Nutrition	157	160	317
Bachelor of Science in Human Nutrition and Dietetics	51	28	79

Bachelor of Science in Meteorology	54	67	121
Bachelor of Science in Tourism and Hospitality Management	571	384	955
Bachelor of Science in Water and Irrigation Engineering	177	328	505
Bachelor of Tourism	2	3	5
Doctor of Philosophy in Plant Breeding and Biotechnology	82	106	188
Doctor of Philosophy (School of Agricultural Sciences)	49	125	174
Doctor of Philosophy (School of Food Technology, Nutrition and Bio-Engineering)	42	63	105
Doctor of Philosophy (School of Forestry, Environmental and Geographical Studies)	69	153	222
Master of Agribusiness Management	76	89	165
Master of Geographical Sciences	33	40	73
Master of Land Use and Regional Development Planning	21	47	68
Master of Science in Agricultural and Applied Economics	70	129	199
Master of Science in Agricultural Engineering	27	81	108
Master of Science in Agricultural Extension Education	39	56	95
Master of Science in Agroforestry and Community Development	18	19	37
Master of Science in Animal Science	20	53	73
Master of Science in Applied Human Nutrition	71	48	119
Master of Science in Applied Meteorology	5	17	22
Master of Science in Climate Change and Development	83	105	188
Master of Science in Crop Science	82	139	221
Master of Science in Disaster Risk Management	27	30	57
Master of Science in Environment and Natural Resources	142	267	409
Master of Science in Environment and Natural Resources Management	88	73	161
Master of Science in Food Safety and Quality Management	67	85	152
Master of Science in Food Science and Technology	44	32	76
Master of Science in Forestry and Biodiversity Management	21	41	62
Master of Science in Integrated Watershed Management	27	25	52
Master of Science in Plant Breeding And Seed Systems	65	96	161
Master of Science in Soil Science	30	25	55
Master of Science in Tourism and Hospitality Management	20	13	33
MSc Environment and Natural Resources (Environmental Pollution and Waste Management)		1	1
MSc Environment and Natural Resources (Natural Resources Management)		1	1
MSc. In Agricultural Extension and Rural Innovation	10	21	31
MSc. in Forestry Resources Management	1	10	11
MSc. in Soil Science and Agrology	9	10	19
PGD In Environmental and Social Impact Assessment	11	15	26
PhD In Agricultural and Applied Economics	29	95	124
PhD in Agricultural and Rural Innovation	42	102	144

Postgraduate Diploma in Environmental Impact Assessment	7	28	35
Semester II	<b>964</b>	<b>1164</b>	<b>2128</b>
Bachelor of Agribusiness Management	112	137	249
Bachelor of Agricultural and Rural Innovation	114	219	333
Bachelor of Agricultural Extension and Rural Innovation	66	92	158
Bachelor of Environmental Science	31	20	51
Bachelor of Geographical Sciences	63	41	104
Bachelor of Science in Agricultural Engineering	35	58	93
Bachelor of Science in Agriculture	58	127	185
Bachelor of Science in Bioprocessing Engineering	27	30	57
Bachelor of Science in Food Science and Technology	39	60	99
Bachelor of Science in Forestry	57	82	139
Bachelor of Science in Human Nutrition	12	4	16
Bachelor of Science in Human Nutrition and Dietetics	30	14	44
Bachelor of Science in Tourism and Hospitality Management	138	66	204
Bachelor of Science in Water and Irrigation Engineering	32	41	73
Doctor of Philosophy in Plant Breeding and Biotechnology	5	6	11
Doctor of Philosophy (School of Agricultural Sciences)	4	12	16
Doctor of Philosophy (School of Food Technology, Nutrition and Bio-Engineering)	3	11	14
Doctor of Philosophy (School of Forestry, Environmental and Geographical Studies)	3	9	12
Master of Agribusiness Management	5	3	8
Master of Geographical Sciences	1	5	6
Master of Land Use and Regional Development Planning	3	6	9
Master of Science in Agricultural and Applied Economics	5	5	10
Master of Science in Agricultural Engineering	6	10	16
Master of Science in Agroforestry and Community Development	2	3	5
Master of Science in Animal Science	3	3	6
Master of Science in Applied Human Nutrition	12	6	18
Master of Science in Applied Meteorology		3	3
Master of Science in Climate Change and Development	10	14	24
Master of Science in Crop Science	13	8	21
Master of Science in Disaster Risk Management	6	6	12
Master of Science in Environment and Natural Resources	1	2	3
Master of Science in Environment and Natural Resources Management	28	14	42
Master of Science in Food Safety and Quality Management	7	7	14
Master of Science in Food Science and Technology	3	4	7
Master of Science in Forestry and Biodiversity Management	4	3	7
Master of Science in Integrated Watershed Management	1	1	2
Master of Science in Plant Breeding and Seed Systems	1	3	4
Master of Science in Soil Science		1	1
Master of Science in Tourism and Hospitality Management	4	1	5

Msc. in Agricultural Extension and Rural Innovation	5	4	9
Msc. in Forestry Resources Management	1	5	6
Msc. in Soil Science and Agrology	4	2	6
PGD in Environmental and Social Impact Assessment	3	2	5
PhD in Agricultural and Applied Economics	4	12	16
PhD in Agricultural and Rural Innovation	3	2	5

## INTERNATIONAL STUDENTS 2025/2026 SEMESTER I AND 2

College	Female	Male	Grand Total
<b>College Of Agricultural and Environmental Sciences</b>	<b>245</b>	<b>462</b>	<b>707</b>
<b>Semester I</b>	<b>216</b>	<b>418</b>	<b>634</b>
Bachelor of Agribusiness Management	7	31	38
Bachelor of Agricultural and Rural Innovation	6	32	38
Bachelor of Agricultural Extension and Rural Innovation	4	8	12
Bachelor of Environmental Science	4	6	10
Bachelor of Geographical Sciences	4	1	5
Bachelor of Science in Agriculture		7	7
Bachelor of Science in Food Science and Technology	13	4	17
Bachelor of Science in Forestry		5	5
Bachelor of Science in Human Nutrition	9	3	12
Bachelor of Science in Human Nutrition and Dietetics	4		4
Bachelor of Science in Tourism and Hospitality Management	4	2	6
Bachelor of Science in Water and Irrigation Engineering		7	7
Bachelor of Tourism		1	1
Doctor of Philosophy in Plant Breeding and Biotechnology	36	68	104
Doctor of Philosophy (School of Agricultural Sciences)	9	17	26
Doctor of Philosophy (School of Food Technology, Nutrition and Bio-Engineering)	6	3	9
Doctor of Philosophy (School of Forestry, Environmental and Geographical Studies)	3	14	17
Master of Agribusiness Management	11	8	19
Master of Geographical Sciences		3	3
Master of Science in Agricultural and Applied Economics	1	20	21
Master of Science in Agricultural Engineering		3	3
Master of Science in Agroforestry and Community Development	2	4	6
Master of Science in Animal Science	2	6	8
Master of Science in Applied Human Nutrition	14	13	27
Master of Science in Applied Meteorology		2	2
Master of Science in Climate Change and Development		7	7
Master of Science in Crop Science	7	14	21
Master of Science in Disaster Risk Management		6	6
Master of Science in Environment and Natural Resources	10	32	42
Master of Science in Food Safety and Quality Management	5	9	14

Master of Science in Food Science and Technology	11	2	13
Master of Science in Forestry and Biodiversity Management	3	5	8
Master of Science in Integrated Watershed Management	8	2	10
Master of Science in Plant Breeding and Seed Systems	22	43	65
Master of Science in Soil Science	5	3	8
Master of Science in Tourism and Hospitality Management		1	1
MSc. in Agricultural Extension and Rural Innovation		1	1
MSc. in Forestry Resources Management		2	2
MSc. in Soil Science and Agrology	1		1
PhD in Agricultural and Applied Economics		6	6
PhD in Agricultural and Rural Innovation	5	17	22
<b>Semester II</b>	<b>29</b>	<b>44</b>	<b>73</b>
Bachelor of Agribusiness Management	2	7	9
Bachelor of Agricultural and Rural Innovation	1		1
Bachelor of Agricultural Extension and Rural Innovation	2	4	6
Bachelor of Environmental Science	2	2	4
Bachelor of Science in Agriculture		2	2
Bachelor of Science in Food Science and Technology	2	2	4
Bachelor of Science in Human Nutrition	2		2
Bachelor of Science in Human Nutrition and Dietetics	3		3
Bachelor of Science in Tourism and Hospitality Management	1		1
Bachelor of Science in Water and Irrigation Engineering		1	1
Doctor of Philosophy in Plant Breeding and Biotechnology	2	4	6
Doctor of Philosophy (School of Agricultural Sciences)		1	1
Doctor of Philosophy (School of Food Technology, Nutrition and Bio-Engineering)	1	1	2
Master of Agribusiness Management	2	1	3
Master of Science in Agricultural and Applied Economics		1	1
Master of Science in Agricultural Engineering		1	1
Master of Science in Agroforestry and Community Development	1		1
Master of Science in Animal Science	1	1	2
Master of Science in Applied Human Nutrition	1	1	2
Master of Science in Applied Meteorology		1	1
Master of Science in Climate Change and Development		1	1
Master of Science in Crop Science	1		1
Master of Science in Disaster Risk Management		2	2
Master of Science in Food Safety and Quality Management	2	3	5
Master of Science in Forestry and Biodiversity Management	2	3	5
Master of Science in Plant Breeding and Seed Systems		1	1
Master of Science in Tourism and Hospitality Management		1	1
MSc. in Forestry Resources Management		1	1
MSc. in Soil Science and Agrology	1		1
PhD in Agricultural and Applied Economics		1	1
PhD in Agricultural and Rural Innovation		1	1

## 2.4 Programmes offered at CAES

No.	School	Programmes (Undergraduate)	Code	Duration		
1	School of Agricultural Sciences (SAS)	Bachelor of Science in Agriculture	AGR	4 Years		
		Bachelor of Agricultural Extension and Rural Innovation	BAR	3 Years		
		Bachelor of Agricultural Extension and Rural Innovation (External)		4 Years		
		Bachelor of Agricultural and Rural Innovation (External)		4 Years		
		Bachelor of Science in Agricultural Land Use & Management (under reconsideration)	BAM	3 Years		
		Bachelor of Science in Horticulture	HOT	3 Years		
		Bachelor of Agribusiness Management	AGM	3 Years		
		<b>Graduate (Masters &amp; PhD)</b>				
		Master of Science in Agricultural Extension & Rural Innovation		2 Years		
		Master of Science in Crop Science		2 Years		
		Master of Science in Animal Science		2 Years		
		Master of Science in Soil Science and Agrology		2 Years		
		Master of Science in Integrated Watershed Management		2 Years		
		Master of Agribusiness Management		2 Years		
		Master of Science in Plant Breeding and Seed Systems		2 Years		
		Master of Science in Agricultural and Applied Economics		2 Years		
		Ph.D. Plant Breeding and Seed Systems (Coursework & Dissertation)		3 Years		
		Ph.D. Program in Agricultural and Applied Economics		3 Years		
		Ph.D. Agricultural and Rural Innovations (Coursework & Dissertation)		3 Years		
		2	School of Forestry, Environmental & Geographical Sciences (SFEGS)	<b>Undergraduate</b>		
Bachelor of Science in Forestry	BOF			4 Years		
Bachelor of Science in Tourism and Hospitality Management	BTH			3 Years		
Bachelor of Geographical Sciences	BGS			3 Years		
Bachelor of Science in Meteorology	BMT			3 Years		
Bachelor of Environmental Science	BVS			3 Years		
Post Graduate Diploma in Environmental Impact Assessment				1 Year		
<b>Postgraduate</b>						
Master of Science in Forestry and Biodiversity Management				2 Years		
Master of Science in Disaster Risk Management				2 Years		
Master of Landuse and Regional Development Planning		2 Years				

		Master of Science in Agroforestry and Community Development		2 Years	
		Master of Geographical Sciences		2 Years	
		Master of Science in Environment and Natural Resources		2 Years	
		Master of Science in Applied Meteorology		2 Years	
		Master of Science in Climate Change and Sustainable Development		2 Years	
<b>3</b>	School of Food Technology, Nutrition & Bioengineering (SFTNB)	<b>Undergraduate</b>			
		Bachelor of Science in Food Science and Technology	FST	4 Years	
		Bachelor of Science in Agricultural Engineering	AGE	4 Years	
		Bachelor of Science in Human Nutrition and Dietetics	HUN	3 Years	
		Bachelor of Science in Water and Irrigation Engineering	BWE	4 Years	
		Bachelor of Science in Bioprocessing Engineering	BBP	4 Years	
		<b>Graduate (Masters)</b>			
		Master of Science in Agricultural Engineering		2 Years	
		Master of Science in Food Science and Technology		2 Years	
		Master of Science in Applied Human Nutrition		2 Years	
		Master of Science in Food Safety and Quality Management		2 Years	
		<b>Doctoral Degrees by research only</b>			
<b>1</b>		Ph.D. degrees tenable in the School of Agricultural Sciences			
<b>2</b>	Ph.D. degrees tenable in the School of Forestry, Environmental & Geographical Sciences				
<b>3</b>	Ph.D. degrees tenable in the School of Food Technology, Nutrition and Bio-Engineering				

## 2.5 The 75th graduation ceremony



**562**  
Graduates



**19**  
PhDs



**97**  
Master's



**11**  
Postgraduate Diplomas



**435**  
Bachelor's



**42**  
First Class Degrees

At the CAES, our strategic focus is to foster a culture of innovation among students and faculty, thereby equipping graduates with the competencies needed to thrive in a dynamic global job market and entrepreneurial landscape through a wide range of programmes. The programmes that have been reviewed include; BSc Horticulture, BSc Agricultural Land Use and Management, BSc Agriculture, Bachelor of Agribusiness Management, Bachelor of Agricultural and Rural Innovation, MSc Crop Science, MSc Animal Sciences, MSc Soil Science and Agrology, Master of Agribusiness Management, and Master of Agricultural Extension and Rural Innovation, MSc. Agricultural Engineering, MSc. Food Safety and Quality Management, BSc. Agricultural Engineering, BSc. Water and Irrigation Engineering, and BSc. Bioprocessing Engineering. A new program MSc Environment and Natural Resource Economics was approved by the University Council and in pipeline of accreditation by the NCHE.



The College presented 562 students for the award of degrees and diplomas at the 75th Graduation Ceremony of Makerere University. Among the 562 graduates, 19 earned PhDs, 97 received Master's degrees, 11 were awarded postgraduate diplomas, and 435 graduated with Bachelor's degrees.

The college presented a total of 42 First Class Degree recipients in 7 undergraduate programs.

## 2.6 PhD Graduates 2025

No.	Name	Photo	Department	Research topic
1	Dr. Habtemariam Assefa		Department of Extension and Innovation Studies	Strategies for climatic risk adaptation by smallholder livestock farmers in North Wollo Zone. Amhara Region, Ethiopia
2	Dr. Fentaw Abate Asmamaw		Department of Agricultural Production/Department of Crop and Horticulture	Genetic Resistance to Stem Rust ( <i>Puccinia Graninis</i> F. SP. <i>Triticici</i> ) in Ethiopia Wheat Germplasm
3	Dr. Sophie Nansereko		Department of Food Technology and Nutrition	Jackfruit characterization and drying using Refractance Window Technology
4	Dr. Owen Emmanuel Sseremba		Department of Forestry Biodiversity and Nature Conservation/ Department of Forestry Biodiversity and Tourism	Within tree and tree age variation in properties of <i>Eucalyptus Grandis</i> W. Hill Ex Maiden Wood grown in Kabarole District, Western Uganda
5	Dr. Pauline Birungi		Department of Extension and Innovation Studies	Socio-behavioural factors influencing collective marketing of rice among smallholder farmers in Mid-Western Uganda
6	Dr. Rosemirta Birungi		Department of Extension and Innovation Studies	Gender-based determinants of commercial behaviour among primary actors in pig value chains of Masaka District, Central Uganda
7	Dr. Twase Ismail		Department of Extension and Innovation Studies	Socio-psychological determinants of perceived transfer of hard and soft agricultural skills training among smallholder farmers of Central Uganda
8	Dr. Henry Massa Makuma		Department of Extension and Innovation Studies	Effectiveness of bylaws related to sustainable intensification of potatoes in South Western Uganda

No.	Name	Photo	Department	Research topic
9	Dr. Julius Baguma Karubanga		Department of Agricultural Production/Department of Crop and Horticulture	Flowering Biology and fruiting enhancement in elite cassava genotypes of Uganda
10	Dr. Juventine Boaz Odoi		Department of Agricultural Production/Department of Crop and Horticulture	Farmer Retention, characterization and genomic selection in shea tree ( <i>Vitella Paradoxa</i> C.F. Gaertn.) for high oil yield
11	Dr. Ochen Morris		Department of Extension and Innovation Studies	Farmers' perceptions towards involvement of soldiers in agricultural inputs and extension services delivery in Uganda. A case of Nakaseke District in Central Uganda
12	Dr. Charles Musoke		Department of Extension and Innovation Studies	Innovation determinants of certified sweet potato seed uptake among smallholder farmers: A case of Mpigi and Omoro Districts in Uganda
13	Dr. Nabasumba Sylvia		Department of Extension and Innovation Studies	Influence of socio-psychological factors on smallholder farmers' investment behaviour in seed potato production: A case of seed potato producer typologies in South-Western Uganda
14	Dr. James Mbaziira		Department of Geography Geo-informatics and Climatic Sciences	Evaluation of Agro-pastoral resilience to drought dynamics in Uganda's cattle corridor
15	Dr. Idd Ramathani		Department of Agricultural Production/Department of Crop and Horticulture	Characterization, epidemiology and management of rice yellow mottle virus disease in Uganda
16	Dr. Toby Akecha		Department of Extension and Innovation Studies	Influence of actors interactions on the competitiveness of improved cowpea (SECOW 38) in Oyam District, Lango Sub Region
17	Dr. Achola Esther		Department of Agricultural Production	Phenotypic selection and genomics of resistance to groundnut Rosette disease in cultivated groundnut

No.	Name	Photo	Department	Research topic
19	Dr. Immaculate Mugisa		Department of Agricultural Production/Department of Crop and Horticulture	Genetic analysis of sweet potato resistance to the African sweet potato weevils, <i>Cylas</i> spp
20	Dr. Sylvia Nalubwama		Department of Agricultural Production/Department of Crop and Horticulture	Integration of Dairy cattle into organic pineapple production in Central Uganda

## 2.7 The CAES Doctoral Symposium

The College of Agricultural and Environmental Sciences (CAES) at Makerere University held its inaugural Doctoral Symposium from 10th to 11th September 2025. Convened at the School of Food Technology, Nutrition, and Bioengineering, the event brought together over 50 PhD students, academic supervisors, and university leaders to enhance doctoral training, strengthen research quality, and promote interdisciplinary collaboration. University leaders including the Director of Research and Graduate Training, Prof. Julius Kikooma, the Principal of CAES, Prof. Gorettie Nabanoga, and the Deputy Principal, Prof. Yazidhi Bamutaze emphasized the need for research to move beyond academic publication toward generating tangible societal impact, particularly in addressing challenges such as food security, climate change, environmental degradation, and social inequality. They urged doctoral students to align their work with national and continental development priorities, while embracing applied and problem-solving

research approaches. The symposium provided a platform for doctoral candidates to present research across diverse thematic areas, including engineering and prototyping, crop science and biotechnology, forestry and environmental management, soil science, and food and nutrition systems. Academic sessions featured key contributions on research communication and writing, aimed at improving the quality and visibility of doctoral outputs. The event also highlighted institutional reforms to support graduate training, including digital systems such as the Research Information Management System (RIMS) and GRADCARE, designed to improve efficiency and timely completion of PhD programmes. Overall, the symposium strengthened academic engagement, reinforced the importance of impact-driven research, and supported Makerere University's strategic goal of expanding and enhancing postgraduate training to better contribute to sustainable development outcomes.



*Some of the doctoral students presenting their research at the symposium*



*CAES doctoral students together with the Principal, Prof. Gorette Nabanoga, the Director of Graduate Training, Prof. Julius Kikooma, the Deputy Principal, Prof. Yazidhi Bamutaze, and some of their supervisors at the symposium*

## 2.8 CAES Agrostudies Internship Programme



*The CAES Deputy Principal, Prof. Yazidhi Bamutaze flagging off 50 Students for a year-long Agro-studies apprenticeship program in Israel*

In 2025, the College of Agricultural and Environmental Sciences (CAES) continued to strengthen its international training initiatives through the Agrostudies Internship Programme in Israel. A total of 50 students were selected from Makerere University (CAES and COVAB) and Busitema University to participate in the year-long apprenticeship. The programme provides hands-on agricultural training and exposure to advanced farming technologies and practices in Israel, aimed at enhancing students' practical skills and global competitiveness in the agricultural sector. The cohort was officially flagged off in December 2025 by the Deputy Principal of CAES, Prof. Yazidhi Bamutaze.

## 2.9 Strengthening Digital Learning Infrastructure at CAES through Enhanced e-Learning Studio

The Institute of Open, Distance, and e-Learning (IODeL) at Makerere University, under the leadership of Dr. Paul B. Muyinda, facilitated the acquisition and installation of equipment for the e-Learning studio at the College of Agricultural and Environmental Sciences (CAES). The procurement was supported by the Mastercard Foundation through its e-Learning initiative, aimed at strengthening digital learning infrastructure within partner institutions. The upgraded e-Learning studio is intended to enhance the development and delivery of digital learning content, support academic staff in producing interactive online courses, and improve the overall quality of blended and online teaching within CAES. This development contributes to Makerere University's broader agenda of advancing innovative teaching and learning practices through the integration of technology. The initiative is expected to significantly improve student engagement and learning continuity, while reinforcing the university's capacity to deliver flexible and accessible education in an increasingly digital academic environment.



*The team from (IODeL) handing over e-learning equipment to the CAES leadership*

## 2.10 Strengthening mobility for academic excellence: CAES receives two buses from University Management



*CAES Management team led by the Principal, Prof. Gorettie Nabanoga with the Vice Chancellor, Prof. Barnabas Nawangwe after the handover ceremony*

In a significant step toward improving operational efficiency within CAES, the University Management, in March 2025, donated two buses to the College. This strategic intervention was aimed at easing transportation challenges faced by both staff and students, particularly given the field-based nature of CAES programs. As a field-oriented College, CAES frequently requires coordinated movement between the main campus, research sites, and field training locations. Prior to this support, transportation constraints occasionally limited timely access to practical learning environments and research activities. The donation has greatly improved mobility, ensuring smoother and more reliable travel arrangements for academic and field engagements.

## 2.11 CAES Seminar Series

As part of its ongoing commitment to advancing knowledge and fostering intellectual engagement, CAES in 2025 hosted a number of academic and research seminars. These seminars brought together scholars, researchers, and students from diverse disciplines to share findings, exchange

ideas, and discuss emerging trends in their respective fields. The events also provided a platform for early-career researchers to present their work, receive feedback, and build professional networks, thereby strengthening the institution's research culture and academic excellence.



**SEMIMAR IN CAES**

*Organized by:* The Department of Agribusiness and Natural Resources Economics (DANRE-Mak)

**GUEST SPEAKER**  
Prof. Guido Van Huylenbroeck  
Director of Internationalization  
Ghent University, Belgium

**MODERATOR**  
Dr. Elizabeth Ahikiriza,  
DANRE, Makerere University

**TOPIC**  
Institutional Economics

**DATE, TIME & VENUE**  
Wednesday, February 12, 2025, 2:00 pm  
SAS CONFERENCE ROOM & ZOOM

**Meeting ID:**  
834 0236 7990  
**Passcode:**  
434811

**SEMIMAR IN CAES**

*Organized by:* Department of Crop Science and Horticulture (DeCSH) and MaRCCI

**TOPIC 1: Prof. Christoph**  
*Essential Roles of Plant Lipids in Photosynthesis and Plant Resilience*

**TOPIC 2: Prof. Susanne**  
*Lipids on the Move: How the plant phloem may hold the answer to drought and pathogen infection*

**MONDAY, 3 MARCH, 2025 2:00 PM**  
MAKERERE UNIVERSITY AGRICULTURAL RESEARCH INSTITUTE, KABANYOLO (MUARIK)

**MEETING ID PASSCODE**  
870 1084 4495 758611

## 2.12 First Year students' orientation

The College of Agricultural and Environmental Sciences (CAES), Makerere University conducted its First Year students' orientation on 7th August 2025 to induct new students into academic life and familiarise them with the College's structures, programmes, and support services. During the event, the College leadership emphasised the importance of discipline, clear academic goals, and focus, while encouraging students to fully utilise available academic resources, mentorship, and practical training opportunities. The College reaffirmed its commitment to producing competent graduates equipped to address global challenges such as climate change, food security, and sustainability, and to contribute as future leaders and job creators in the agricultural and environmental sectors. The orientation programme also provided comprehensive guidance on academic processes, institutional policies, and student support systems,

including registration, examinations, ICT and library services, fee payment procedures, and safeguarding frameworks such as the Anti-Sexual Harassment and Safeguarding Policies. Students were introduced to counselling and guidance services aimed at promoting wellbeing and inclusion in a safe learning environment. The programme concluded with tours of key College facilities to enhance students' familiarity with the learning environment and available resources.



*Left: CAES Principal welcoming freshers to the College. She cautioned them to set clear goals from the start of their academic journey and to work diligently*

## 2.10 Teaching and learning achievements at School level

### 2.10.1 School of Agricultural Sciences (SAS)

#### 2.10.1.1 Message from the Dean SAS

It gives me great pleasure to present the achievements and milestones of the School of Agricultural Sciences (SAS) for the 2025 reporting period. The year 2025 was marked by significant progress in our core mandates of teaching, learning, research, innovation, and community engagement, further strengthening our contribution to agricultural transformation and sustainable development in Uganda and the region.

The School continued to provide high-quality academic training to over 1,126 students through six undergraduate and 11 graduate programmes. We are particularly proud of our students' academic excellence, as reflected in the outstanding performance of our graduates. In 2025, 15 students from the School graduated with First-Class Degrees. The successful conduct of 15 PhD defenses further reflects our commitment to nurturing the next generation of researchers, innovators, and leaders in agriculture.

Our research portfolio expanded considerably through strategic partnerships and innovative projects addressing pressing agricultural and environmental challenges. Notable among these were the signing of a Memorandum of Understanding with Nanjing Agricultural University, the launch of the Healthy Soy Initiative aimed at combating child malnutrition, the establishment of the Agricultural Policy Research Centre (APRC), and the implementation of the TORCH Project promoting clean energy and green growth in East Africa. These initiatives demonstrate our dedication to generating knowledge and technologies that improve livelihoods, strengthen food systems, and enhance climate resilience.



**Dr. John Baptist Tumuhairwe**  
Dean, School of Agricultural Sciences

The School also strengthened its engagement with communities and stakeholders through revitalized internship programmes, capacity-building initiatives for agricultural practitioners, community outreach projects, and policy engagement activities. Our students and staff continued to work closely with farming communities, government agencies, development partners, and international collaborators to co-create solutions that respond to local and global challenges.resilience.

We are equally encouraged by the recognition received by our staff and researchers at national and international levels. Awards for research excellence, innovation commercialization, professional fellowships, and distinguished service underscore the impact and quality of work being undertaken within the School. The continued growth and institutionalization of the Makerere University Regional Centre for Crop Improvement (MaRCCI) further reinforces our position as a regional leader in agricultural research, plant breeding, and capacity development.

These achievements would not have been possible without the dedication and hard work of our academic staff, administrative teams, students, alumni, partners, and stakeholders. I extend my sincere appreciation to all who contributed to the success of the School during the year under review.

As we move forward, the School of Agricultural Sciences remains committed to excellence in teaching, cutting-edge research, innovation, and service to society. We shall continue to strengthen partnerships, promote inclusive and sustainable agricultural development, and contribute meaningfully to national, regional, and global development agendas.

I invite you to explore the highlights presented in this report and join us in celebrating the remarkable achievements of our staff, students, and partners.



## 2.10.1.2 Academic programs offered, enrolment and key achievements

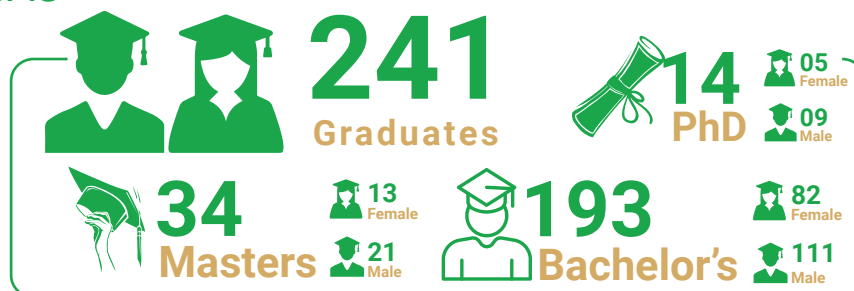
SAS offered 6 undergraduate programs, 11 graduate programs, three of which were at PhD level. A total of 1,126 students were enrolled as presented in the table below.

### Academic programs offered at SAS

SN	PROGRAMMES	DURATION	ENROLMENT- 2024/25 (female)		
			M	F	T
<b>UNDERGRADUATE</b>					
1	Bachelor of Science in Agriculture (BAGR)	4 Years	121	58	179
2	Bachelor of Agricultural and Rural Innovation (BARI/BAEI)	3 Years	137	81	218
3	Bachelor of Agricultural and Rural Innovation (External)(BAXI/BAEX)	4 Years	178	68	246
4	Bachelor of Science in Agricultural Land Use & Management (under reconsideration) (BLUM)	3 Years	2	2	4
5	Bachelor of Science in Horticulture (BHOT)	3 Years	0	0	0
6	Bachelor of Agribusiness Management (BAGM)	3 Years	142	94	236
<b>Sub total</b>			<b>580</b>	<b>303</b>	<b>883</b>
<b>GRADUATE</b>					
<b>MASTERS</b>					
1	Master of Science in Agricultural Extension Education (MAEE)	2 Years	10	7	17
2	Master of Science in Crop Science (MSc Crop)	2 Years	21	8	29
3	Master of Science in Animal Science (MSc Animal)	2 Years	7	6	13
4	Master of Science in Soil Science (MSc Soil)	2 Years	9	3	12
5	Master of Science in Integrated Watershed Management (MIWM)	2 Years	4	2	6
6	Master of Agribusiness Management (MABM)	2 Years	19	12	31
7	Master of Science in Plant Breeding and Seed Systems (MPBS)	2 Years	9	4	13
8	Master of Science in Agricultural and Applied Economics (MAAE)	2 Years	16	12	28
<b>Total</b>			<b>95</b>	<b>54</b>	<b>149</b>
<b>PhD</b>					
9	Ph.D. Plant Breeding and Biotechnology (Coursework & Dissertation) (PPBB)	3 Years	18	9	27
10	Regional PhD program in Agricultural and Applied Economics (PAAE)	4 Years	23	7	30
11	Ph.D. Agricultural and Rural Innovations (Coursework & Dissertation) (PARI)	3 Years	8	4	12
12	PhD in Agriculture	3 Years	14	11	25
<b>Sub total</b>			<b>63</b>	<b>31</b>	<b>94</b>
<b>Total</b>			<b>738</b>	<b>388</b>	<b>1,126</b>

### 2.10.1.3 Graduation at SAS

SAS presented 241 students for the award of degrees at the 75th graduation ceremony of Makerere University held on Friday 17th January 2025.



### Number of students graduated per program at SAS

NO	PROGRAMME	F	M	TOTAL
<b>Undergraduates</b>				
1	Bachelor of Agribusiness Management	27	32	59
2	Bachelor of Agricultural and Rural Innovation	32	50	82
3	Bachelor of Science in Agricultural Land Use and Management	1	4	5
4	Bachelor of Science in Agriculture	19	23	42
5	Bachelor of Science in Horticulture	3	2	5
	<b>Sub-total</b>	<b>82</b>	<b>111</b>	<b>193</b>
<b>Masters</b>				
1	Master of Science in Agricultural and Applied Economics	2	6	8
2	Master of Science in Agricultural Economics	0	0	0
3	Master of Science in Agricultural Extension Education	2	1	3
4	Master of Science in Crop Science	2	1	3
5	Master of Agribusiness Management	2	3	5
6	Master of Science in Plant Breeding and Seed Systems	3	4	7
7	Master of Science in Soil Science	0	4	4
8	Master of Science in Animal Science	2	2	4
9	Master of Science in Integrated Watershed Management	1	3	4
	<b>Sub-total</b>	<b>13</b>	<b>21</b>	<b>34</b>
	<b>PhD</b>	<b>5</b>	<b>9</b>	<b>14</b>
	<b>Total</b>	<b>100</b>	<b>141</b>	<b>241</b>

### 2.10.1.4 SAS First Class Degree Recipients 2025 per programme

#### BSc. Agriculture

S/N	NAME	Gender	CGPA
1	Asako Samalie Acou	Female	4.53
2	Awor Priscilla Akiiki	Female	4.56
3	Kunihira Rachael	Female	4.56
4	Mugajju Robert David	Male	4.46
5	Mututa Cyrus	Male	4.45
6	Nabakooza Juliet	Female	4.50
7	Nakabugo Tendo Sidney	Female	4.64
8	Oketch Jacob	Male	4.44

## Bachelor of Agribusiness Management

S/N	NAME	Gender	CGPA
1	Bamanyisa Carol	Female	4.65
2	Nabbanja Angel	Female	4.45
3	Nasira Habib	Female	4.55
4	Poni Diana Gombura	Female	4.43
5	Ssabiiti David	Male	4.52

## Bachelor of Agricultural and Rural Innovation

S/N	NAME	Gender	CGPA
1	Kyompaire Shivan	Female	4.51
2	Tukashaba Pellon	Female	4.43

### 2.10.1.5 PhD defences in SAS

During the year 2025, the school successfully conducted 15 PhD defenses in preparation for the 76th graduation ceremony that was held in February 2026.

#### SAS PhD defences 2025

NO.	NAME	GENDER	TITLE OF THESIS
<b>PhD in Agricultural and Rural Innovation</b>			
1.	Roland Ainebyona Rwambuka	Male	Unraveling the drivers to uptake of potata ( <i>Solanum tuberosum</i> L.) crop intensification innovations among smallholder farmers in Southwestern Uganda
2.	Evans Martin Nakhokho	Male	Financial innovation and its influence on consumption and agricultural finance by smallholder farmers; the case of Centenary Bank, Uganda
3.	Shimali Fred	Male	Influence of women empowerment on children's dietary diversity in Eastern Uganda
4.	Kalimunjaye Samuel	Male	Scaling out Research Innovations in Cassava Seed System in Uganda
5.	Richard Ssebuliba- Mutumba	Male	Antecedents of innovations among smallholder farmers working in poultry groups in Wakiso District
6.	Dickson Biryomumaisho	Male	Determinants of quality of propolis tincture produced in Uganda
	Apil Jennifer	Female	Ethno-Sociology of Cassava processing practices, Quality and Safety among the Lugubara of Terego district, North-Western Uganda
<b>PhD in Plant Breeding and Biotechnology</b>			
1.	Musondolya Mathe Lukanda	Male	Genetics of soybean resistance to <i>Coniothyrium glycines</i> , the causal agent of red leaf blotch disease

2.	Peninah Wambui Nyenga	Female	Genetic diversity and inheritance of Beta-Carotene in Cassava
3.	Astatke Dejene Kebede	Male	Genetics of resistance to Ergot ( <i>Claviceps africana</i> ) in Sorghum in Uganda
4.	Kesiime Vasiter Eunice	Female	Genetics of cooking time and canning quality traits in common bean
5.	Stella Bigirwa Ayesiga	Female	The resistance of tropical maize germplasm to ear rot caused by <i>Fusarium Verticillioides</i> in Uganda
6.	Winnyfred Among	Female	Optimising genomic selection models for reduced cooking time, increased available iron and high zinc in East African common bean
7.	Gelase Nkurunziza	Male	Genetics of Biological Nitrogen Fixation Efficiency in Cowpea
<b>PhD Animal Science</b>			
1.	Asizua Denis	Male	Effect of feeding system on feed utilization and meet yield of selected beef cattle genotypes
2.	Zainah Nampijja	Female	Vulnerability of Indigenous Chicken Scavenging Production System to Climate Variability

## 2.10.2 School of Food Technology, Nutrition & Bioengineering (SFTNB)

### 2.10.2.1 Message from the Dean SFTNB

The School of Food Technology, Nutrition and Bioengineering continued to register significant achievements in teaching and learning, research, outreach, innovation, and student development during the reporting period. The School successfully implemented its academic programmes with teaching, practical training, assessments, and mentorship activities conducted in line with the University academic calendar. Through strengthened experiential learning approaches, students benefited from practical sessions, industry visits, innovation activities, mentorship engagements, and exposure to real-world problem solving. The School further enhanced student support through orientation programmes, academic and



 **529**  
Students Enrolled

 **05**  
Undergraduate Programs

 **04**  
Graduate Programs

professional mentorship sessions, entrepreneurship training, quiz competitions, and career guidance initiatives that promoted holistic student development and employability.

In the area of research and graduate training, the School continued to strengthen its postgraduate supervision systems, research coordination, and scientific output. Staff and students produced several publications in reputable international journals, while multiple MSc and PhD proposal defenses, viva voce examinations, and graduate supervision activities were successfully conducted. The School also advanced efforts toward aligning research activities with the College research agenda and strengthening statistical and research support systems for graduate students. In addition, staff participated in capacity-building initiatives including Competence-Based Education training, supervision enhancement programmes, and digital scholarship development.

The School equally expanded its innovation and incubation ecosystem through the Food Technology Business Incubation Centre (FTBIC), which continued to support product development, practical training, short courses, enterprise incubation, and industry engagement. Several pilot plant equipment systems were repaired and restored to functionality, while students actively participated in entrepreneurship and product development activities. Notably, student innovation teams presented food and engineering innovations at entrepreneurship pitch events, with one group securing funding support for commercialization. The School also strengthened partnerships with

industry and development partners to support value addition, technology transfer, and innovation-driven skills development.

In outreach and community engagement, the School implemented several impactful training and capacity-building programmes targeting farmers, refugees, women groups, SMEs, and community-based organizations. These included trainings in mushroom value addition, soybean processing, food security in fragile contexts, irrigation technologies, and preparation of community enterprises for certification and market access. Through collaborations with local governments, industry, NGOs, and international partners, the School continued to contribute to agro-industrialization, food security, nutrition improvement, and community transformation. The School also maintained strong engagement with professional bodies, research institutions, and industry players to strengthen partnerships, visibility, and practical relevance of its programmes.

Overall, the School remained committed to its mission of providing transformative teaching, research, innovation, and outreach for sustainable development while nurturing competent, innovative, entrepreneurial, and industry-ready graduates capable of contributing meaningfully to national and global development priorities.

## 2.10.2.2 Teaching and learning achievements at the SFTNB

SFTNB offered 5 undergraduate programs, 4 graduate programs, one of which was at PhD level. A total of 529 students were enrolled.

### 2.10.2.3 Academic programs offered at SFTNB and Student enrolment

No.	PROGRAMMES	DURATION	ENROLMENT-2024/25		
			M	F	T
<b>UNDERGRADUATE</b>					
1.	Bachelor of Science in Food Science and Technology (BFST)	4 Years	59	47	106

2.	Bachelor of Science in Agricultural Engineering (BAGE)	4 Years	66	42	108
3.	Bachelor of Science in Human Nutrition (HUN)	3 Years	30	34	64
4.	Bachelor of Science in Water and Irrigation Engineering (BWIE)	4 Years	51	35	86
5.	Bachelor of Science in Bioprocessing Engineering (BBPE)	4 Years	44	32	76
<b>Sub total</b>			<b>250</b>	<b>190</b>	<b>440</b>
<b>GRADUATE</b>					
1.	Master of Science in Agricultural Engineering (MAEN)	2 Years	11	6	17
2.	Master of Science in Food Science and Technology (MFST)	2 Years	1	4	5
3.	Master of Science in Applied Human Nutrition (MHNU)	2 Years	11	6	17
4.	Master of Science in Food Safety and Quality Management (MFSQ)	2 Years	15	16	31
<b>Sub total</b>			<b>38</b>	<b>32</b>	<b>70</b>
5.	PhD by Research (PFST)	3 Years	13	6	19
<b>Total</b>			<b>301</b>	<b>228</b>	<b>529</b>

## 2.10.2.4 Graduation at SFTNB

SFTNB presented 114 students for the award of degrees at the 75th graduation ceremony of Makerere University held on Friday 17th January 2025. Of these, 1 female graduated with PhD, 11 with Masters Degrees (5 female, 6 male), and 102 with Bachelor's degrees (41 female, 61 male).



### Number of students graduated per program at SFTNB

NO.	PROGRAMME	Female	Male	TOTAL
<b>Undergraduates</b>				
1	Bachelor of Science in Agricultural Engineering	8	15	23
2	Bachelor of Science in Bioprocessing Engineering	5	4	9
3	Bachelor of Science in Food Science and Technology	9	14	23
4	Bachelor of Science in Human Nutrition	12	13	25
5	Bachelor of Science in Water and Irrigation Engineering	7	15	22
<b>Sub-total</b>		<b>41</b>	<b>61</b>	<b>102</b>
<b>Masters</b>				
1	Master of Science in Agricultural Engineering	1	3	4
2	Master of Science in Applied Human Nutrition	2	0	2
3	Master of Science in Food Safety and Quality Management	0	2	2
4	Master of Science in Food Science and Technology	2	1	3
<b>Sub total</b>		<b>5</b>	<b>6</b>	<b>11</b>
<b>PhD</b>		<b>1</b>	<b>-</b>	<b>1</b>
<b>Total</b>		<b>47</b>	<b>67</b>	<b>114</b>

## 2.10.2.5 SFTNB First Class Degree Recipients 2025

No.	Name	Gender	CGPA	Programme
1	Rugwisa Joshua Rwabinumi	Male	4.88	Bachelor of Science in Human Nutrition (BSHN)
2	Ssabika Gabriel	Male	4.82	Bachelor of Science in Food Science & Technology (BFST)
3	Mayende Edrine Mark Wanje	Male	4.73	Bachelor of Science in Agricultural Engineering (BAGE)
4	Amoit Florence	Female	4.66	Bachelor of Science in Food Science & Technology (BFST)
5	Ariyo Fatuma	Female	4.65	Bachelor of Science in Human Nutrition (BSHN)
6	Letasi Hope Maurine	Female	4.64	Bachelor of Science in Food Science & Technology (BFST)
7	Nakasumba Victoria	Female	4.63	Bachelor of Science in Food Science & Technology (BFST)
8	Ssemakula Savio	Male	4.63	Bachelor of Science in Food Science & Technology (BFST)
9	Abaasa Daisy	Female	4.62	Bachelor of Science in Human Nutrition (BSHN)
10	Uwera Angel	Female	4.61	Bachelor of Science in Agricultural Engineering (BAGE)
11	Ayebale Charity	Female	4.50	Bachelor of Science in Bioprocessing Engineering (BBPE)
12	Kule Kasimu	Male	4.49	Bachelor of Science in Food Science & Technology (BFST)
13	Ayesigye Bruce	Male	4.48	Bachelor of Science in Water & Irrigation Engineering (BWIE)
14	Kabenge Rayhaan	Male	4.47	Bachelor of Science in Water & Irrigation Engineering (BWIE)
15	Akampurira Ronah	Female	4.44	Bachelor of Science in Food Science & Technology (BFST)
16	Gasyowere Emmanuel	Male	4.43	Bachelor of Science in Food Science & Technology (BFST)

## 2.10.2.6 PhD defences in SFTNB

During the year 2025, the school successfully conducted 2 PhD defences in preparation for the 76th graduation ceremony that was held in February 2026.

### SFTNB PhD defences 2025

NO.	NAME	GENDER	TITLE OF THESIS
1.	Innocent Hope Tinka Mukama	Male	<b>PhD in Food Science and Technology</b> Safety of ready-to-eat foods in highway tourist stopover food service establishments in Uganda
2.	Amina Nalweyiso	Female	<b>PhD in Agricultural and Biosystems Engineering</b> Green Synthesis of Zero-Valent Iron Nanoparticles from Cape Gooseberry (Physalis Peruviana) Biomass for Oil Spill Remediation in the Albertine Graben, Uganda

## 2.10.3 School of Forestry, Environmental & Geographical Sciences (SFECS)

### 2.10.3.1 Message from the Dean SFECS

The year 2025 marked another important milestone in advancing the mission of the School of Forestry, Environmental and Geographical Sciences (SFECS) to generate knowledge and train professionals capable of addressing pressing environmental, geographical, forestry, climate, and sustainability challenges at national, regional, and global levels. Throughout the year, we remained steadfast in our commitment to academic excellence, research, innovation, and community engagement.

Our academic programmes continued to attract increasing numbers of students, reflecting growing confidence in the quality and relevance of our training. During the 2024/2025 academic year, the School enrolled a total of 603 undergraduate and graduate students, reaffirming our role as one of the leading centres for environmental and geographical sciences in the region.

I am particularly pleased that the School presented 227 graduates during Makerere University's 75th Graduation Ceremony, comprising PhD, Master's, undergraduate, and postgraduate diploma graduates. This achievement reflects the dedication of our students, the commitment of our academic and administrative staff, and the strong culture of excellence that defines our School. We also celebrate our First Class Degree graduates whose exceptional academic performance exemplifies the high standards and competitiveness of our programmes.

Research and innovation remained central to our mandate. During the year, our staff and students implemented several impactful research projects addressing climate resilience, urban sustainability, disaster risk reduction, food systems, biodiversity conservation, forestry, and environmental governance. Notable initiatives included the Resilient Urban Food Systems (RUFFS) Project, the Nature-based Solutions for Tea (NbS4Tea) Project, the MERIT Project, the Urban Futures Project, and the African Cities Research Consortium. These initiatives strengthened collaboration with local communities, government institutions, development partners, and international



*Dr Revocatus Twinomuhangi*  
Deans, SFECS

universities while generating evidence that informs policy, practice, and sustainable development.

The School also expanded its international collaborations through staff and student mobility programmes, joint field courses, collaborative research, and academic exchanges with partner institutions across Europe and other regions. These partnerships have enriched experiential learning, fostered intercultural exchange, strengthened institutional capacity, and enhanced the global visibility of our research and academic programmes.

I am equally delighted that the research excellence of our staff was recognised during Makerere University's 76th Graduation Ceremony, where members of the School received prestigious awards for outstanding research contributions. These achievements reflect the innovation, resilience, and dedication of our academic community and reinforce our position as a leading centre of excellence in environmental and geographical sciences.

Going forward, the School remains committed to strengthening the quality of teaching and learning, expanding interdisciplinary research, fostering innovation, enhancing community engagement, and contributing to national, regional, and global sustainable development agendas. We will continue to build strategic partnerships, promote transformative learning, and equip our graduates with the knowledge, skills, and leadership required to respond effectively to emerging environmental and societal challenges.

On behalf of the School Management, I extend my sincere appreciation to our students, staff, alumni, collaborators, development partners, and the leadership of Makerere University for their unwavering support and dedication. Your collective efforts continue to shape the growth and success of our School.

Together, we will continue to advance knowledge, inspire innovation, and build a more sustainable, resilient, and inclusive future.

## 2.10.3.2 Teaching and learning at SFEGS

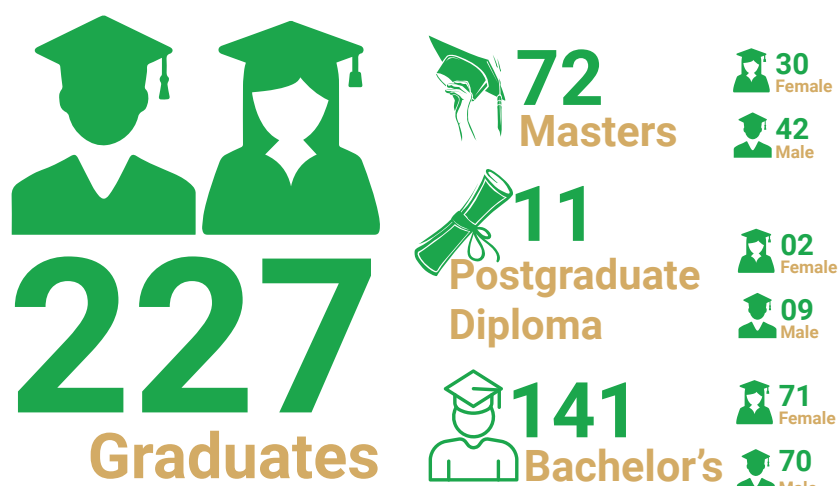
SFEGS offered 5 undergraduate programs, 10 graduate programs, one of which is at PhD level. A total of 603 students were enrolled as presented in the table.

### 2.10.3.3 Academic programs offered at SFEGS

NO.	PROGRAMMES (UNDERGRADUATE)	DURATION	ENROLMENT-2024/25		
			Male	Female	Total
<b>UNDERGRADUATE</b>					
1.	Bachelor of Science in Forestry (BFOR)	4 Years	102	65	167
2.	Bachelor of Science in Tourism and Hospitality Management (BTHM)	3 Years	52	92	144
3.	Bachelor of Geographical Sciences (BGES)	3 Years	41	37	78
4.	Bachelor of Science in Meteorology (BMTE)	3 Years	0	0	0
5.	Bachelor of Environmental Science (BEVS)	3 Years	9	6	15
	<b>Sub total</b>		<b>204</b>	<b>200</b>	<b>404</b>
<b>GRADUATE</b>					
1.	Master of Science in Forestry and Biodiversity Management (MFBM)	2 Years	11	8	19
2.	Master of Science in Disaster Risk Management (MDRM)	2 Years	9	3	12
3.	Master of Land Use and Regional Development Planning (MLRD)	2 Years	8	3	11
4.	Master of Science in Agroforestry and Community Development (MFCD)	2 Years	5	3	8
5.	Master of Geographical Sciences (MGES)	2 Years	7	4	11
6.	Master of Science in Environment and Natural Resources (MENR)	2 Years	27	23	50
7.	Master of Science in Applied Meteorology (MSAM)	2 Years	0	0	0
8.	Master of Science in Climate Change and Sustainable Development (MSCC)	2 Years	16	21	37
	<b>Sub total</b>		<b>83</b>	<b>65</b>	<b>148</b>
9.	Post Graduate Diploma in Environmental Impact Assessment (PGD-EIA)	1 Year	8	4	12
10.	PhD by Research	3 Years	27	12	39
	<b>Total</b>		<b>322</b>	<b>281</b>	<b>603</b>

## 2.10.3.4 Graduation at SFECS

SFECS presented 227 students for the award of degrees at the 75th graduation ceremony of Makerere University held on Friday 17th March 2025. Of the 227 students, 3 graduated with PhDs, 72 with Masters Degrees (30 female, 42 male), 141 with Bachelor's degrees (71 female, 70 male), and 11 (2 female and 9 male) with a Postgraduate Diploma in Environmental Impact Assessment.



### Number of students graduated per program at SFECS

NO	PROGRAMME	FEMALE	MALE	TOTAL
<b>UNDERGRADUATES</b>				
1	Bachelor of Conservation Forestry and Product Technology	0	1	1
2	Bachelor of Environmental Science	6	12	18
3	Bachelor of Geographical Sciences	9	8	17
4	Bachelor of Science in Forestry	15	25	40
5	Bachelor of Science in Meteorology	1	2	3
6	Bachelor of Science in Tourism and Hospitality Management	38	22	60
7	Bachelor of Social and Entrepreneurial Forestry	1	0	1
8	Bachelor of Tourism	1	0	1
	<b>SUB-TOTAL</b>	<b>71</b>	<b>70</b>	<b>141</b>
<b>MASTERS</b>				
1	Master of Arts in Geography	0	0	0
2	Master of Geographical Sciences	0	1	1
3	Master of Land Use and Regional Development Planning	0	3	3
4	Master of Science in Agroforestry and Community Development	0	1	1
5	Master of Science in Applied Meteorology	1	1	2
6	Master of Science in Disaster Risk Management	3	1	4
7	Master of Science in Environmental and Natural Resources	11	13	24
8	Master of Science in Forestry	0	0	0
9	Master of Science in Forestry and Biodiversity Management	0	1	1
		15	21	36
	<b>Sub-total</b>	<b>30</b>	<b>42</b>	<b>72</b>
<b>POSTGRADUATE DIPLOMA</b>				
1	Postgraduate Diploma in Environmental Impact Assessment	2	9	11
<b>PHD</b>				
		-	3	3
	<b>Total</b>	<b>103</b>	<b>124</b>	<b>227</b>

### 2.10.3.5 SFEGS First Class Degree Recipients 2025

	Name	Gender	Programme	CGPA
1.	Ainomugisha Raymond	Male	Bachelor of Science in Forestry	4.61
2.	Mujawimana Brenda	Female	Bachelor of Science in Forestry	4.43
3.	Nakagimu Molly Dorah	Female	Bachelor of Science in Forestry	4.55
4.	Namara Odeth	Female	Bachelor of Science in Tourism and Hospitality Management	4.42
5.	Oyella Dorcus	Female	Bachelor of Science in Tourism and Hospitality Management	4.47
6.	Kemigisha Lynn	Female	Bachelor of Science in Tourism and Hospitality Management	4.43
7.	Wasswa Allan	Male	Bachelor of Geographical Sciences	4.86
8.	Kateizi Tiffanie	Female	Post Graduate Diploma in Environmental Impact Assessment	4.97
9.	Mwangale Nabuti Michael	Male	Post Graduate Diploma in Environmental Impact Assessment	4.47
10.	Mwesige Gerald	Male	Post Graduate Diploma in Environmental Impact Assessment	4.79
11.	Nakayenga Munawalu	Female	Post Graduate Diploma in Environmental Impact Assessment	4.56
12.	Tembo Tom	Male	Post Graduate Diploma in Environmental Impact Assessment	4.84

### 2.10.3.6 PhD defences in SFEGS

During the year 2025, the school successfully conducted 6 PhD defenses in preparation for the 76th graduation ceremony in that was held in February 2026.

#### SFEGS PhD defences 2025

NO.	NAME	GENDER	TITLE OF THESIS
<b>PhD in Geography</b>			
1.	Nalwanga Faridah Ssendagire	Female	Evaluating effectiveness of gendered adaptation strategies to meteorological drought in Uganda cattle corridor
2.	Kasaija Peter	Male	An actor-oriented analysis of power relationship behind Heterogeneous sanitation infrastructure in Kampala, Uganda
3.	Harriet Cherotich	Female	Prospects of Reducing Vulnerability of Communities in Post-Disaster Resettlement, A Case of Bunambutye Camp, Eastern Uganda
4.	Kimbowa George	Male	Investing the forest - water- people nexus in the Mt. Elgon Region, Uganda: Impacts of forest cover and population changes on water availability
5.	Samuel Kaheesi Kusiima	Male	The Effect of Land Use Land Cover Change on the Supply of Ecosystem Services and Human Wellbeing in the Budongo – Bugoma Landscape, Western Uganda
<b>PhD in Environment</b>			
6.	Atuhaire Privah	Female	Behavior change communication strategies for use of water and sanitation facilities in selected secondary schools in Kanungu and Wakiso District

# 3

# RESEARCH & INNOVATION



## 3.1 Research projects supported by the Government and development partners

NO.	PROJECT TITLE	PRINCIPAL INVESTIGATOR	AMOUNT	FUNDER	TIMEFRAME
1.	Building Opportunity on Lesser-known Diversity in Edible Resources (BOLDER), a component of Biodiversity for Opportunities, Livelihoods and Development (BOLD) initiative led by the Crop Trust in close partnership with the Norwegian University of Life Sciences (NMBU)	Dr Isaac Dramadri	\$375,336	A three- year project funded by Funded by the Government of Norway (NORAD)	2025- 2028
2.	The Genotype x Environment x Management Innovation in Intelligence for climate adaptation (GEMINI) Project	Dr Isaac Dramadri	\$90,000	Gates Foundation	2023 to March 2026
3.	Capacity Building for Socially Just and Sustainable Energy Transitions. A joint Project between the Department of Geography, Geoinformatics and Climatic Sciences – Makerere University, NTNU - Norway, University of Juba - South Sudan and University of Nairobi - Kenya	Dr Frank Mugagga Co-PI	NOK20M	Funded by NORAD under NORHED II Programme (Energy Sub programme)	2021 – 2026
4.	Locally-driven Co-development of Plant-based Value Chains Towards More Sustainable African Food System with Healthier Diets and Export Potential - InnoFood Africa	Assoc. Prof. Yusuf Byaruhanga	Eur 280000	European Commission	2020 –2025
5.	Achieving the SDGs in East African Drylands: drylands transform	Dr Denis Mpairwe	USD 97,969.08		
6.	Improving Essential Oil Feedstocks and High-Value Products from Mentha SPP to Benefit Local Uganda Economies (MENUE)	Dr. Ivan Mukisa Muzira	USD108,088.51	Cardiff University from BBSRC - GCRF - IBBE UKRI	

7.	SUSTAINABLE OFF GRID SOLUTIONS FOR PHARMACIES & HOSPITALS IN AFRICA – SOPHIA PROJECT	DR. NICHOLAS KIGGUNDU	EUR421,187.5	EUROPEAN CLIMATE, INFRASTRUCTURE AND ENVIRONMENT EXECUTIVE AGENCY (CINEA)	2021 –2025
8.	Participatory analysis of the conventional-agroecological intensification continuum for increased productivity and sustainability in the coffee-banana systems of the Mt Elgon region of Uganda -	Dr Jeninah Karungi		A research grant to Makerere university from SIDA via AgriFoSe 2030 (Agriculture for Food Security 2030) programme coordinated by the Swedish University of Agriculture (SLU Global).	
9.	DESIRA (Development Smart Innovation through Research in Agriculture)	Prof. Samuel Kyamanywa	EUR 30,000	EU (France)	2022 –2025
10.	Refugee insect production for food and feed (REfiPRO)	Dr. Dorothy Nakimbugwe	EUR136,285.25	IMPACT DESIGNS Denmark	2022 –2026
11.	LOCUST 4 INDUSTRY	Dr. Dorothy Nakimbugwe	UGX63,100,000	National Research Fund - Uganda	2022 – 2025
12.	Revitalizing the Food technology and Business Incubation centre (FTBIC) to enhance the Innovative Capacity and Entrepreneurial profile of Makerere University students.	Dr Julia Kigozi	Funded by MakRIF - 300,000,000 Ugx		2025-2026
13.	"Solar driven Agri-food processes". - July 2023-2025.	Dr Julia Kigozi	Funded by OeAD-GmbH- Austria's Agency for Education and internationalization - 20,000 Euro		2023-2025

## Other Projects Funded by International Partners

14	FAO-KMS Climate Change	Dr Revocatus Twinomuhangi
15	Media Training and Mentorship on Climate Change	Dr Revocatus Twinomuhangi
16	UCC/UCUSAF Digital Skilling of Farmers	Dr Bernard Obaa
17	Co-creating Knowledge for Local Adaptation to Climate Change in Least Developed Countries COLOCAL	Dr Mfimumukiza David
18	TORCH (Towards a Clean Energy and Zero Emission Society in East Africa)	Dr Patrick Musinguzi
19	Environmental and Social Risks Impact	Dr Justine Namaalwa
20	Include to Restore	Prof. Denis Mpairwe
21	Healthy Soy Initiative	Prof. Phinehas Tukamuhabwa (Ugandan Coordinator)
22	Sustainable Off-grid Solutions for Pharmacies and Hospitals in Africa (SoPHIA)	Dr Nicholas Kiggundu
23	Resilient Urban Food Systems (RUFSS)	Prof. Frank Mugagga
24	Urban Futures Project	Dr Paul Mukwaya Isolo
25	The Advancing Sustainable Agricultural Value Chains through Strengthening Trans-disciplinary Skills and Cooperation in East African Doctoral Education (ADVALUE)	Prof. John Tabuti

## 3.2 RIF Round 6 Grant Recipients

S/N	Name	Project title	Theme
1.	Dr. Donald Kugonza Rugira	Developing a Competitive Local Chicken Value Chain in Teso Sub-region	Agricultural Transformation, Food Security and Livelihoods
2.	David Mwesigye Tumusiime	Diversifying Uganda's Tourism: Integrating Ankole Cow Heritage into the Wildlife Tourism Circuit for Sustainable Growth	Cultural, Heritage and Creative Arts
3.	Amos Ochieng	Profiling rare , keystone bird species and bird watching sites in West Nile and Karamoja regions - Uganda	Natural Resources Management, Urbanization and Climate Change
4.	Kizito Simon	Repurposing Landfill waste into bioengineered products for energy recovery, soil management, soil management and water treatment	Natural Resources Management, Urbanization and Climate Change
5.	Gerald Eilu	Integrating smart technologies with scientific and indigenous knowledge to improve management of invasive species in Uganda's Rangelands	Natural Resources Management, Urbanization and Climate Change
6.	Prossie Nakawuka	Development of an automated canopy temperature-based irrigation scheduler in tea production in Uganda	Natural Resources Management, Urbanization and Climate Change
7.	Denis Nsubuga	Development of a Hybrid Biogas-Solar System for Sustainable Milk Cooling in Off-Grid Communities: Advancing a Circular Economy through Co-Digestion of Cow Dung and Organic Market Waste in Uganda.	Natural Resources Management, Urbanization and Climate Change
8.	Revocatus Twinomuhangi	Strengthening locally-driven financing for nature-based solutions in Uganda: putting people, ecosystems and climate resilience at the centre.	Natural Resources Management, Urbanization and Climate Change

9.	Erion Bwambale	Development of a real-time farm mapping software application that integrates underground sensing, satellite imagery with Artificial Intelligence: SatFarm-AI	Science and Technology
10.	Robert Kambugu Kyeyune	Smart Bioengineered Vertical Farms for Climate resilient Agriculture and Sustainable Livelihoods in Urban and Peri-Urban Uganda	Science and Technology
11.	John Sempiira	Accelerating Refractance Window Dryer (RWD) Technology Uptake among Off-grid Dry food processors	Agricultural Transformation, Food Security and Livelihoods
12.	John Bosco Lamoris Okullo	Adapting Vegetative Propagation To Wild Edible Bamboo For Enhancing Food Security And Climate Change Resilience In Uganda	Agricultural Transformation, Food Security and Livelihoods
13.	Gaston Tumuhimbise	Valorization of East African Highland Banana (matooke) peel waste to produce a novel flour for use in the bakery and confectionery industry	Agricultural Transformation, Food Security and Livelihoods
13.	Agnes Nabubuya	Enhancing Food Safety Through Field Assessment and Optimization of Application Rates of a Novel Organic and Biofertilizer: A Case Study of Vegetable growing in Mukono District.	Agricultural Transformation, Food Security and Livelihoods

### 3.3 Research and Innovation Highlights at School level

#### 3.3.1 School of Agricultural Sciences (SAS) -Research activities and innovations

##### 3.3.1.1 Mak Signs MoU with NAU China to Boost Agricultural Research and Innovation



*Prof. Barnabas Nawangwe (Right) and Prof. Zhu Yan (Left) with the signed MoU*

Makerere University on 28th July 2025, signed a Memorandum of Understanding (MoU) with Nanjing Agricultural University (NAU) of China, aimed at strengthening institutional collaboration in agricultural research, training, innovation, and capacity building. The agreement, to be implemented at Makerere University's College of Agricultural and Environmental Sciences (CAES), marks a major milestone in the university's efforts to foster global partnerships that support sustainable agricultural development and academic excellence.

The five-year MoU outlines collaboration in various areas including:

1. Joint research projects in agriculture, environmental sciences, food systems, and biosystems engineering;
2. Student and staff exchanges for training, internships, and fellowships;
3. Development of innovative teaching and learning technologies;
4. Joint resource mobilization and participation in global partnerships with bodies such as the UNDP and WHO;
5. Promotion of knowledge transfer and sustainable solutions to community challenges.

### 3.3.1.2 Combating Child Malnutrition in the Face of Climate Change: Mak-CAES Healthy Soy Initiative Offers Hope

Child malnutrition remains a major global public health challenge, with the World Health Organization reporting that over 148 million children under five were stunted in 2023. Efforts to achieve United Nations Sustainable Development Goal 2 are increasingly constrained by climate change, food insecurity, and inequality, particularly in vulnerable regions where smallholder farmers face declining productivity and limited adaptive capacity. Children and women are disproportionately affected, as nutritional needs and caregiving responsibilities intersect with strained food systems. Access to high-quality protein remains essential to addressing stunting, yet

animal-source foods are often unaffordable. Soybeans offer a viable alternative, though their nutritional potential is limited by anti-nutrients. To address this, Makerere University, in partnership with the University of Copenhagen and RECO Industries Limited, launched the Healthy Soy project in 2025 with support from the Danish International Development Agency. The initiative aims to develop climate-resilient, nutrient-rich soy-based solutions to improve child growth and health in Uganda and similar contexts. The overall PI of the Project is Prof. Benedikte Grenov from the University of Copenhagen. At Makerere University, the project is coordinated by Prof. Phinehas Tukamuhabwa.



*The project team led by Prof. Benedikte Grenov and Prof. Phinehas Tukamuhabwa during the inception meeting at CAES on 15th August 2025.*

### 3.3.1.3 TORCH Project to Spur Green Growth in East Africa



*The PI of the project, Dr. Patrick Musinguzi addressing participants at the launch held in June 2025*

The TORCH (Towards a Clean Energy and Zero-Emission Society in East Africa) Project is a two-year regional initiative led by Makerere University's College of Agricultural and Environmental Sciences (CAES), launched in

June 2025. Funded by the Austrian Partnership Programme in Higher Education Research for Development (APPEAR) through OeAD-GmbH, the project promotes green growth and sustainable development across East Africa by advancing clean energy solutions, reducing carbon emissions, and strengthening collaboration between universities, communities, and stakeholders. A key feature of the project is the establishment of living labs in Central, South Western, and Eastern Uganda, which serve as platforms for co-creating and testing locally appropriate green technologies. The project also integrates green growth principles into university curricula, builds human capacity through training and research, and promotes gender inclusion in science and technology.

Implemented in partnership with regional universities and the University of Natural Resources and Life Sciences, Vienna, TORCH contributes to multiple Sustainable Development Goals, particularly in education, clean energy, climate action, and sustainable production. Through its research and

community engagement approach, the project is expected to generate evidence-based solutions and policy-relevant insights that support long-term environmental and socio-economic transformation in East Africa.



*The TORCH project team*

### 3.3.1.4 TORCH Project Training on Clean Energy & Green Growth



*Participants at the training held on 1st September 2025 at Makerere University*

The Department of Soil Science and Land Use Management at the CAES, Makerere University conducted a stakeholder training workshop under the TORCH Project on 1st September 2025. The workshop brought together academics, students, policymakers, and community leaders to strengthen collaboration on clean energy,

green growth, and environmental sustainability in East Africa. The project is a regional academic partnership supported under the APPEAR programme of the Austrian Development Cooperation and implemented with partner universities across Uganda and the region. The workshop focused on advancing the concept of green growth as a pathway to inclusive, low-carbon development. Participants explored how universities can play a stronger role in integrating sustainability into teaching, research, and community engagement, in line with Uganda's national development frameworks, including Vision 2040 and the Uganda Green Growth Development Strategy. Key discussions highlighted the growing pressure on natural resources and the impacts of climate change, alongside opportunities presented by green technologies such as solar energy systems, biogas, improved cookstoves, rainwater

harvesting, and drip irrigation. The training emphasized the need to scale up adoption of these technologies, given their potential to improve livelihoods, enhance climate resilience, and reduce emissions. A central outcome of the workshop was renewed commitment to the Living Labs approach, which links universities and communities

in co-creating and testing practical solutions for sustainable development. Participants emphasized the importance of embedding green growth principles into university systems and strengthening academic-community partnerships to accelerate climate-smart innovation.



*Some of the stakeholders and Makerere staff that participated in the workshop.*

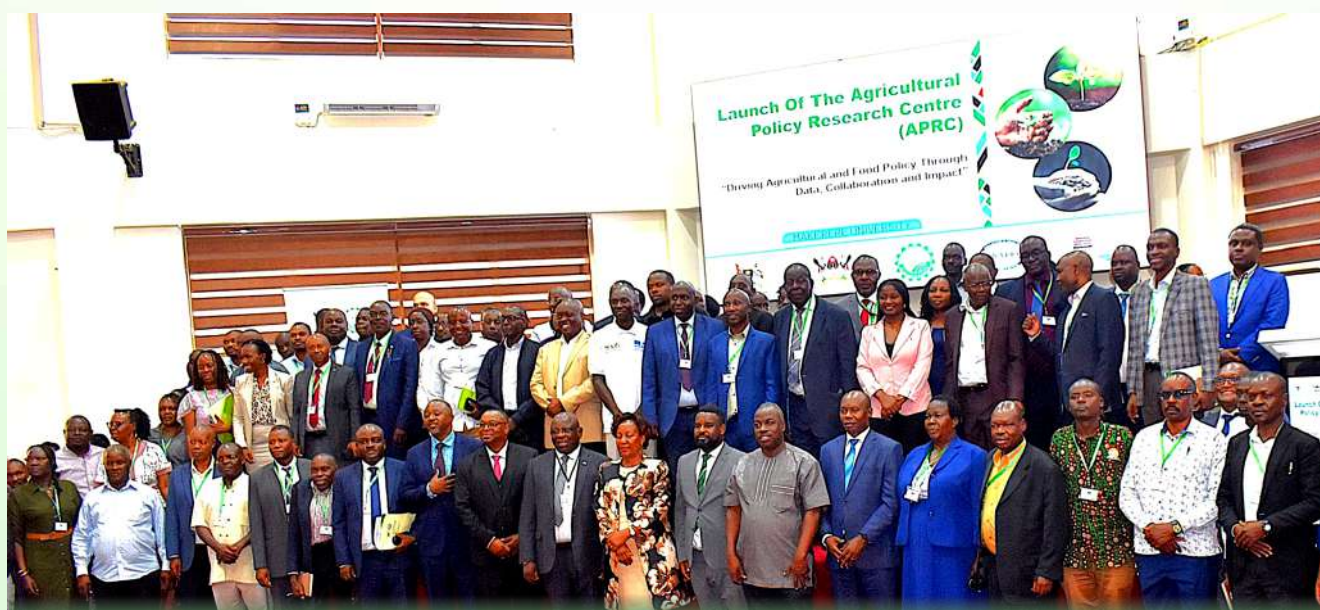
### 3.3.1.5 Establishment of the Agricultural Policy Research Centre (APRC)



*CAES Principal, Prof. Gorette Nabanoga appending her signature in affirmation of the launch of the APRC*

The Agricultural Policy Research Centre (APRC) hosted by the College of Agricultural and Environmental Sciences (CAES) was officially launched on 24th February 2025. The Centre was established to strengthen evidence-based agricultural policymaking in Uganda by generating robust empirical research and analytical insights to inform national agricultural transformation, agro-industrialization, and Vision 2040 objectives. The APRC is designed to bridge the gap between research and policy by using nationally representative datasets and applied analytical methods to address challenges in Uganda's agri-food systems. Its core purpose is to support improved food and nutrition security, enhance agricultural productivity, strengthen value chains, and promote inclusive economic growth, particularly for farmers, youth, and women. The Centre is coordinated by

Prof. Bernard Bashaasha under the Department of Agribusiness and Natural Resource Economics (DANRE). The initiative was developed with support from the Africa Network of Agricultural Policy Research Institutes (ANAPRI) and the APEX platform (Office of the President of Uganda), alongside collaboration from government ministries, particularly the Ministry of Agriculture, Animal Industry and Fisheries (MAAIF), development partners, academia, and other stakeholders. Key expected outcomes include improved integration of research into policy processes, strengthened capacity of government institutions in data and policy analysis, enhanced stakeholder collaboration, expanded training opportunities for students, and improved use of evidence in national decision-making. The Centre was inaugurated by MAAIF, represented by Mr. Steven Byantwale, the Commissioner for Crop Protection, on behalf of the Minister.



*Stakeholders in the Agricultural Sector at the launch of the Agricultural Policy Research Centre at Makerere University on 24th February 2025*

### 3.3.1.6 APRC Training on the African Agriculture Adaptation Atlas (AAAA)

The Agricultural Policy Research Centre (APRC) at CAES, Makerere University, conducted a two-day intensive training workshop on the African Agriculture Adaptation Atlas (AAAA) on 25th–26th June 2025. The purpose of the training

was to strengthen the capacity of researchers, policymakers, students, and development practitioners to use the AAAA—a web-based decision-support tool that integrates climate data into agricultural planning. The training aimed

to enhance evidence-based policymaking by enabling participants to assess climate risks, identify adaptation strategies, analyze vulnerabilities (including gendered impacts), and evaluate the economic returns of climate-smart investments in agriculture. The workshop was supported and delivered under the leadership of the APRC, with emphasis on advancing climate resilience and data-driven agricultural transformation in Africa. It featured hands-on sessions on using the AAAA for research translation, risk assessment, investment prioritization, and understanding climate impacts such

as heat stress on agricultural productivity. The participants were divided into two cohorts: graduate students attended the first day of training, while university faculty members, government officials, and development practitioners participated on the second day. This structure ensured tailored learning experiences for both emerging and established professionals in the agricultural sector. The training was coordinated by Dr. Florence Rwiza, Lecturer in the Department of Agribusiness and Natural Resource Economics at CAES.



*The participants during the training sessions at the School of Agricultural Sciences, CAES, Makerere University*

### 3.3.1.7 Revitalization of CAES Internship Programme

In 2025, the College of Agricultural and Environmental Sciences (CAES) at Makerere University revitalized its internship programme to strengthen practical training, community engagement, and collaboration with agricultural stakeholders. The initiative aims to equip students with hands-on experience while supporting government

frameworks such as the Parish Development Model (PDM) and the 4-Acre Model. A total of 51 students were deployed to Mpigi and Masaka Districts, where they participated in field-based training across key agricultural enterprises, including coffee, poultry, banana, and maize farming. The programme was implemented in



*Students attached to Mpigi District showcasing some of the projects they worked on during their training. This was during the Field Day ceremony held at Mbulamu Integrated Farm on*

partnership with host farms - Mbulamu Integrated Farm (Mpigi) and Green Valley Farm (Masaka)- and coordinated by faculty from the Departments of Soil Science and Land Use Management, and Extension and Innovation Studies. Students gained practical skills in sustainable agriculture, modern irrigation, renewable energy production, and farm record keeping, while also sharing innovations with local farming communities. The experience contributed to mindset transformation, improved technical competencies, and enhanced adaptability to rural work environments. The programme also

delivered mutual benefits to host communities, with farmers adopting improved agricultural practices and strengthening linkages with the University. District stakeholders in Mpigi and Masaka commended the initiative for fostering effective collaboration between academia, local governments, and grassroots communities. Overall, the revitalized internship programme has enhanced experiential learning, strengthened community impact, and reinforced CAES' role in advancing agricultural development.



*CAES interns at Green Valley Farm in Masaka*



*Mr. Tonda, proprietor of Mbulamu Integrated Farm, appreciating intern Amany Jordan for inventing a solution that eliminated ticks from their animals*

### 3.3.1.8 Training of Animal Health Practitioners in Artificial Insemination in Pigs

The Department of Animal and Range Sciences conducted specialized training in pig artificial insemination to enhance the skills of animal health practitioners. Supported by AICAD, the initiative reflects ongoing efforts to strengthen community-oriented capacity building and improve pig production through modern reproductive technologies. The training attracted participants from various regions and was officially opened by a

representative of the Permanent Secretary from the Ministry of Education and Sports, who commended the University and AICAD for promoting practical training and community development. The AICAD Country Director and the representative of the Principal of CAES, Dr Julia Kigozi also emphasized the importance of collaborative partnerships and called for the expansion of similar initiatives.



*The Animal Health Practitioners during the training at MUARIK in November 2025*

### 3.3.1.9 Mak Hosts International Conference on Food Systems Transformation

In October 2025, Makerere University hosted the International Conference and Training Workshop on Food Systems Transformation for Climate Actions (ICTW-FSTCA 2025) under the COMSTech Forum for Environment and Ecosystem Restoration. The event brought together international and national stakeholders to advance dialogue on climate-resilient and sustainable food systems.

The conference aimed to strengthen collaboration, research, and policy action on food systems transformation in response to climate change challenges affecting agriculture, public health, and food security. It also provided a platform

for sharing knowledge and promoting innovation in sustainable agricultural practices.

Key figures in attendance included the High Commissioner of Pakistan to Uganda, H.E. Muhammad Hassan Wazir; the Vice Chancellor of Makerere University, Prof. Barnabas Nawangwe; keynote speaker Dr. Logan Cochrane of Hamad Bin Khalifa University; representatives from Uganda's Ministry of Agriculture, Animal Industry and Fisheries including Mr. Alex Bambona; and Ms. Angela Atukunda representing the Uganda National Commission for UNESCO/ICESCO.

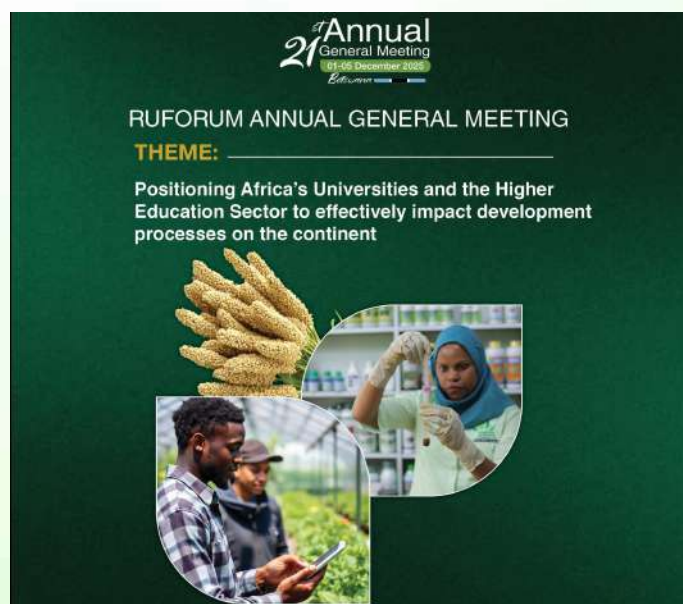


*Prof. Barnabas Nawangwe (Left) presents a Makerere Coffee Table book to Ms. Angela Atukunda. At the Centre is H.E. Muhammad Hassan Wazir, the High Commissioner of Pakistan to Uganda*

### 3.3.1.10 RUFORUM Annual General Meeting

The Regional Universities Forum for Capacity Building in Agriculture (RUFORUM) held its 21st Annual General Meeting (AGM) from 1st to 5th December 2025 in Gaborone, Botswana. The AGM themed “Positioning Africa’s Universities and the Higher Education Sector to effectively impact development processes on the continent” brought together over 500 participants, including university leaders, policymakers, development partners, private sector actors, young innovators, students, and researchers from across Africa and beyond. It was hosted in collaboration with the Government of Botswana and the Botswana University of Agriculture and Natural Resources (BUAN). It served as a platform for strategic dialogue and collective action aimed at strengthening the role of African universities in delivering sustainable development outcomes. The event focused on the following sub-themes:

- (1) Strategic partnerships for growth: Building bridges for the future
- (2) Science for development: Generating contemporary and relevant solutions at scale
- (3) Capacity sharing to train the next generation of leaders in agri-food systems transformation
- (4) RUFORUM Governance Meetings



### 3.3.1.11 Strengthening longstanding academic partnership between Makerere University and Iowa State University to advance rural livelihoods in Uganda

On 3rd September 2025, Prof. Francis Owusu, Director of the Centre for Sustainable Rural Livelihoods at Iowa State University, met with senior leadership at Makerere University, including Vice Chancellor Prof. Barnabas Nawangwe and Principal of the College of Agricultural and Environmental Sciences (CAES), Prof. Gorettie Nabanoga, to review the Centre's progress and ongoing operations in Uganda. This engagement highlighted a longstanding collaboration of over two decades between Makerere University and Iowa State University, focused on transforming communities in Kamuli District through integrated programmes in agriculture, education, nutrition, and

environmental conservation. As a result of this partnership, CAES has contributed to improved school retention rates, enhanced child and maternal nutrition, and increased household incomes through strengthened livestock and crop enterprises. Additionally, through the Centre for Sustainable Rural Livelihoods, Iowa State University has hosted 350 students drawn from across all departments within CAES, further strengthening academic exchange and capacity building.



*On 3rd September 2025, Prof. Francis Owusu, Director of the Centre for Sustainable Rural Livelihoods at Iowa State University, met with senior leadership at Makerere University, including the Vice Chancellor, Prof. Barnabas Nawangwe and the Principal of the College of Agricultural and Environmental Sciences (CAES), Prof. Gorettie Nabanoga, to review the Centre's progress and ongoing operations in Uganda.*

### 3.3.1.12 APCCO Coffee Agroforestry Project Training, Research and Community Outreach Activities

The DANIDA-funded APCCO Coffee Agroforestry Project, implemented at Makerere University in collaboration with national and international partners including NARO, the University of Copenhagen (UCPH), National Coffee Research Institute Uganda (NaCORI), Mukono Zonal Agricultural Research and Development Institute (MuZARDI), CURAD Incubator, GrowGrounds, NewForesight, and Regen Farmer, continues to advance research, training, and community engagement in sustainable coffee systems. The project has recruited four PhD students undertaking interdisciplinary research on

socio-economic and agronomic dimensions of coffee agroforestry. In alignment with Makerere University's mission, the project contributes to transformative teaching, research, and service by generating knowledge that bridges science, policy, and practice in sustainable agriculture and climate adaptation. Its research documents farmers' indigenous knowledge and management practices, providing insights into ecosystem services while supporting evidence-based, research-led solutions for agroforestry sustainability. The findings further inform national and global policy frameworks, including Uganda's development and climate

strategies and relevant Sustainable Development Goals, while promoting climate resilience among smallholder coffee farmers. Complementing its academic outputs, the project emphasizes strong community outreach and engagement through fieldwork in Nakaseke and Mukono districts, involving coffee farming households, farmer groups, and local leaders. These interactions foster co-production of knowledge, validation of research findings, and trust-building between researchers

and communities. Planned feedback sessions and dissemination activities have enhanced farmer awareness of agroforestry practices, encouraged informed decision-making, and supported locally grounded approaches to sustainable coffee production and rural development. The project is coordinated by Dr. Jenipher Bisikwa from Department of Crop Science and Horticulture at CAES.



### 3.3.1.13 Strengthening Agricultural Education and Innovation Systems through FAO TAP AIS e-Learning Integration at Makerere University



The College of Agricultural and Environmental Sciences (CAES), through the Department of Extension and Innovation Studies in partnership with the Food and Agriculture Organization of the United Nations (FAO), hosted a high-level hybrid seminar aimed at strengthening institutional capacity through the integration of the FAO TAP AIS e-Learning Course into agricultural extension and innovation curricula at Makerere University. The seminar brought together key stakeholders from FAO, Makerere University, MAAIF, AFAAS, and UFAAS to promote collaboration, knowledge exchange, and the advancement of Agricultural Innovation Systems (AIS) in teaching, research, and extension. The engagement highlighted the FAO e-Learning Academy as a key global platform for inclusive and accessible capacity building in agriculture, food systems, and sustainable development. Participants were oriented on the TAP AIS e-learning course, which provides structured training on innovation systems, stakeholder engagement, and monitoring and evaluation, with certification upon completion. FAO emphasized the importance of strengthening

linkages between research, education, and extension through participatory, systems-based approaches, while promoting digital tools to enhance scalability and policy integration. Makerere University reaffirmed its commitment to integrating FAO e-learning resources into academic programmes to enhance curriculum relevance, student engagement, and practical skills development, despite challenges in providing adequate field-based learning opportunities. AFAAS underscored the need for continuous capacity building of extension professionals to address emerging agricultural challenges, while stakeholders collectively emphasized the critical role of ICT in strengthening extension systems, improving accountability, and supporting national development priorities. Overall, the seminar strengthened institutional collaboration and reaffirmed a shared commitment to leveraging digital learning, ICT innovations, and multi-stakeholder partnerships to enhance agricultural education, extension service delivery, and sustainable agricultural transformation.

### 3.3.1.14 Participation in the Makerere University Research and Innovations Week 2025

CAES actively participated in the Makerere University Research and Innovations Week 2025 - an annual event that serves as a dynamic platform for showcasing ground-breaking research and innovations. The 2025 edition brought together a diverse group of stakeholders, including researchers, policymakers, and industry leaders, all united by a shared vision of shaping Uganda's sustainable future. Through its innovation intentional agenda, CAES continues to lead vital initiatives focused on driving sustainable change in

Africa's agricultural and environmental sectors, particularly addressing the challenges of climate change and the need for inclusive sustainable agri-food systems. It is also significantly contributing to efforts to transform Makerere into a research-led university. During the exhibition, CAES Faculty and students presented research findings, demonstrated innovative solutions, and engaged in thought-provoking discussions aimed at addressing some of the country's most pressing challenges.



*CAES researchers from the Department of Crop Science and Horticulture, and the Department of Soil Science and Land Use Management at the exhibition*

### 3.3.1.15 Advancing Gender-Responsive Agricultural Education for Inclusive and Sustainable Development



In 2025, Makerere University through its partnership with the CGIAR GENDER Impact Platform made significant progress in strengthening gender-responsive agricultural education as a pathway to more equitable and inclusive agrifood systems. Recognizing that gender inequality remains a major barrier to agricultural productivity, food security, and rural development in Sub-Saharan Africa, the university focused on revising and modernizing existing gender and agriculture curricula. Through the Gender-responsive Researchers Equipped for Agricultural Transformation (GREAT) Phase 3 program, course content was updated to reflect current knowledge, best practices, and emerging global challenges, while also supporting the development of new postgraduate programs, including a Master's degree and Postgraduate Diploma, aimed at building a skilled workforce capable of addressing complex gender dynamics in agriculture. The curriculum development process was highly consultative, involving both local and international stakeholders from academia, research institutions, NGOs, and development organizations. Input from over 70 experts across 22 countries informed the integration of key thematic

areas such as gender and climate change, women's empowerment, intersectionality, gender-responsive research and monitoring, and inclusive seed systems. These updated materials have been made openly accessible to encourage broader adoption and impact. Stakeholders strongly emphasized the importance of long-term postgraduate training over short-term courses, highlighting the need for deeper theoretical grounding and practical expertise to drive systemic change. The proposed programs adopt an interdisciplinary approach, combining agriculture, gender studies, sociology, and rural development, and will leverage existing global resources while maintaining continuous updates to remain relevant. In collaboration with other Ugandan institutions, including Mountains of the Moon University, University of the Sacred Heart Gulu, and Muni University, this initiative contributes to building a critical mass of gender-responsive professionals. The enhanced curricula and forthcoming academic programs position Makerere University as a leader in advancing inclusive, equitable, and sustainable agricultural development through higher education. The GREAT Programme at Makerere University is coordinated by Dr Florence Kyazze from the Department of Extension and Innovation Studies.

### 3.3.1.16 Livestock research, poultry sector analysis, and community outreach initiatives

Led by Dr Donald Kugonza Rugira, staff from the Department of Animal and Range Science implemented several collaborative research and community engagement initiatives aimed at strengthening Uganda's livestock and poultry sectors. In partnership with the Food and Agriculture Organization of the United Nations and the African Union – InterAfrican Bureau for Animal Resources, a comprehensive livestock breed survey was conducted across the districts of Moyo District, Zombo District, Nakasongola District, and Wakiso District. This exercise involved the development of a structured data collection questionnaire for selected Ugandan livestock resources, creation and internal validation of an ODK-based digital data collection tool, preparation of a training manual, and the training of 25 enumerators alongside pretesting of the tool. The team further provided technical support during the field pilot survey, undertook data extraction and

analysis from the ODK server, and disseminated findings through reports, stakeholder meetings, and multimedia platforms. Additionally, in collaboration with the Parliament of Uganda, an extensive review of Uganda's poultry sector was conducted, focusing on production systems, value chain dynamics, and livelihood impacts, culminating in the development of a technical paper. Community engagement efforts under the native chicken improvement initiative included focus group discussions in Kole District, Apac District, and Lira District, with emphasis on selective breeding of MAK chickens. Furthermore, training and outreach activities were conducted in Serere District under the Local Chicken Value Chain in the Teso sub-region project, incorporating vaccination campaigns and farmer empowerment interventions to enhance productivity and resilience.

### 3.3.1.18 Research, Genetic Resource Conservation, and Professional Engagements – Dr. Isaac Dramadri

In the period under review, Dr. Isaac Dramadri made significant contributions to crop improvement and genetic resource conservation. In collaboration with the Ministry of Agriculture Animal Industry and Fisheries, he conducted National Performance Trials (NPT) to support the release of three candidate cowpea varieties. Additionally, he successfully assembled and conserved over 2,000 plant genetic resources—including cowpea, sorghum, amaranthus, pumpkin, pepper, tomato, pigeon pea, and okra—at the gene bank of Makerere University Regional Centre for Crop Improvement, strengthening the institution's role in biodiversity preservation and breeding research. Dr. Dramadri actively engaged in professional development and knowledge exchange through participation in several international conferences, workshops, and training programs. He attended the Annual Review Meeting of the Australian Centre for International Agricultural Research project on rapid breeding for improved cooking time and nutritional quality in common bean, held in Kampala, Uganda. He also participated in the International Molecular Biology Laboratory Training Programme (MoBioLab) Summer School on Gene Editing, as well as the International Congress on Arabidopsis Research

(ICAR), both hosted by Ghent University. Further capacity building included the MoBioLab Advanced Molecular Biology Course at Makerere University. Additionally, Dr. Dramadri contributed to regional and continental scientific discourse by attending the African Plant Breeders Association Conference in Victoria Falls, Zimbabwe, and the BOLD Pathways to Sustainable Impacts Workshop in Arusha, Tanzania. These engagements enhanced his expertise in plant breeding, molecular biology, and sustainable agricultural innovation.

### 3.3.1.19 Local and International Appointments, Fellowships, and Professional Memberships (2025)



In 2025, Dr Donald Kugonza Rugira received international recognition from Association of Commonwealth Universities for his contributions as a central review panel member. He was also inducted as a Fellow of the African Academy of Sciences, in recognition of his outstanding scholarly achievements, including a strong publication record, innovations, leadership roles, and significant contributions to science and society across Africa. Additionally, he was appointed Executive Editor at Elsevier B.V., further demonstrating his leadership in academic publishing. He also took on the role of Adjunct Research Scientist at African Institute for Capacity Development, contributing to research and capacity-building initiatives on the continent.

### 3.3.1.20 Research Excellence and Innovation Commercialization Awards

During the 76th graduation ceremony, Makerere University recognized the top researchers and innovators from the 10 Colleges. From the School of Agricultural Sciences and the School of Food Technology, Nutrition and Bioengineering at CAES,

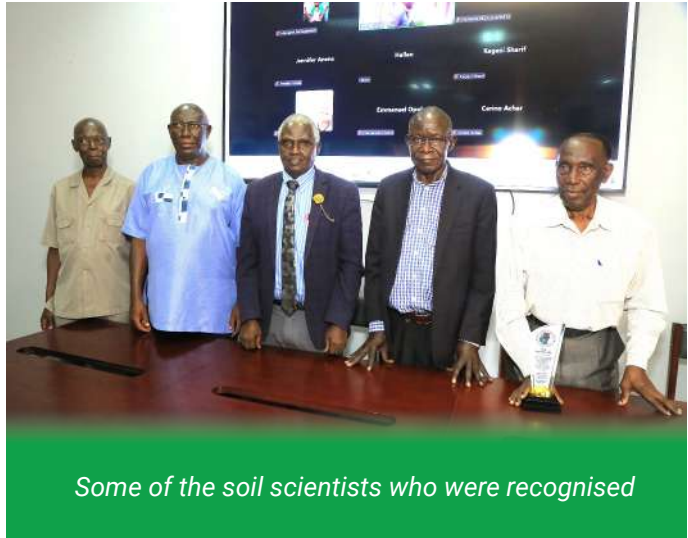
Prof. Phinehas Tukamuhabwa, Dr Ephrahim Nuwamanya, Assoc. Prof. Ahamada Zziwa, and Dr Ssempijja John Edson were recognized among the best innovators.



*Prof. Phinehas Tukamuhabwa and Dr Ephrahim Nuwamanya receiving their awards from the Minister of Science, Technology and Innovation, Hon. Dr. Monica Musenero Masanza*

### 3.3.1.21 Recognition of Distinguished Soil Scientists

During the celebration of World Soil Day 2025, the Soil Science Society of East Africa honored a number of leading scientists and esteemed elders for their outstanding contributions to the field of soil science. The event was held at the School of Agricultural Sciences, Makerere University. A highlight of the ceremony was the presentation of a prestigious golden award to Prof Julius Y.K. Zake. This award had originally been conferred by the Chairperson of SSEA during the 29th SSEA Regional Conference, recognizing his exceptional service and long-standing commitment to advancing soil science in the region. Other awardees included: Prof. Mateete Bekunda, Dr. Mary Silver Rwakaikara, Dr. Mathias Maggunda, Mr. Charles Nkwine, Dr. Henry Ssali, Mr. C.K. Saali, Ms. Joy Tumuhairwe, and Prof John Stephen Tenywa.



### 3.3.1.22 The Makerere University Regional Centre for Crop Improvement (MaRCCI)

Makerere University Regional Centre for Crop Improvement (MaRCCI) was formed as a Centre of Makerere University in 2016 with funding from the World Bank.

The Centre started from a very successful Regional Programme in Plant Breeding training at Makerere University (2008 to 2014) with initial curricula done by RUFORUM and funding of initial cohorts by RUFORUM and AGRA.

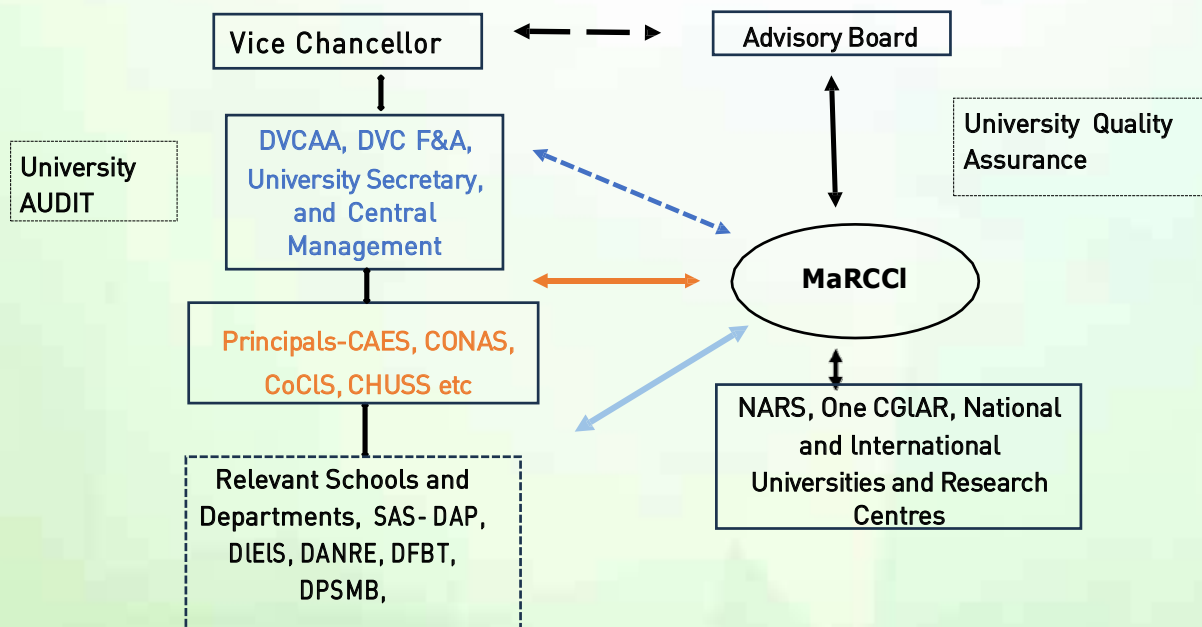
MaRCCI’s goal is to address food security challenges in Uganda and the region through three elements:

- i. Excellence in educating plant breeders and seed scientists
- ii. Research to support such trainings and contribute to improved crop varieties for all regions of Uganda its neighbors
- iii. Services to strengthen the Nation’s Agricultural industry; Including scientists, technicians, extension staff, seed producers and farmers.

After closure of ACE II Project on 31st December 2025, the University has continued to take deliberate action to institutionalize MaRCCI into the Makerere administrative structures with direct oversight of the Vice Chancellor and University Council. The most recent meeting with the University Council was on 25th April 2026 to review alignment of the centre’s structures with applicable university policy framework.

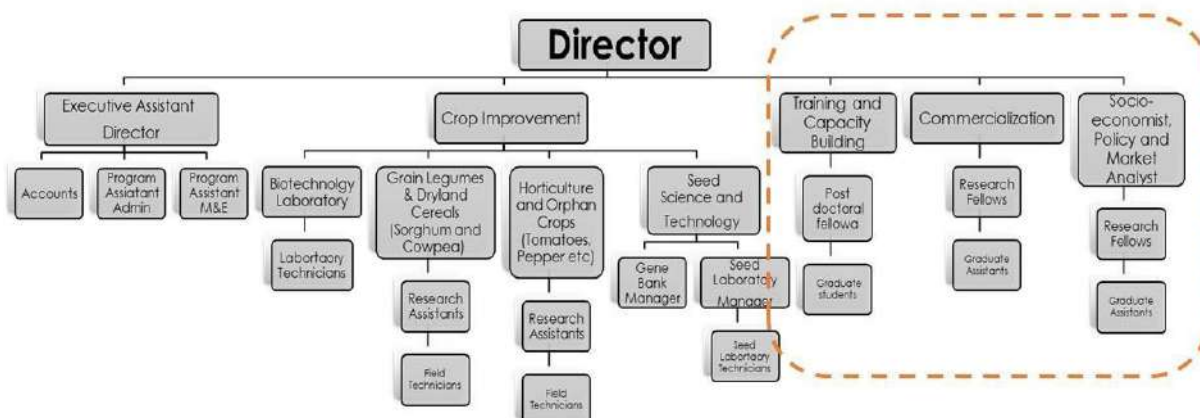
#### A) MARCCI HAS BEEN INSTITUTIONALISED & STRUCTURED FOR EFFICIENCY

##### External Organogram



## MaRCCI Structure for Efficiency

### Internal Structure



### b) Members of the MaRCCI Advisory Board – 2025 to 2027

SN	NAME	NATIONALITY	GENDER	TITLE	ROLE ON THE BOARD
1.	Dr. Yona Baguma	Uganda	Male	Director General National Agricultural Research Organization (NARO) – Uganda	Board Chairman
2.	Prof. Craig Yencho	United States	Male	William Neal Reynolds Distinguished Professor Program Lead, Sweet potato and Potato Breeding and Genetics Programs North Carolina State University, USA	Member
3.	Prof. Patrick Okori	Ugandan	Male	Executive Secretary - Regional Forum for Capacity Building in Agriculture (RUFORUM) Uganda	Member
4.	Prof. Gorettie N. Nabanoga	Uganda	Female	Principal, College of Agricultural and Environmental, Makerere University Kampala	Member
5.	Dr. Rufaro Madakadze	Zimbabwean	Female	Senior Program Officer Extension and Capacity Building Alliance for a Green Revolution in Africa (AGRA) Nairobi Kenya.	Member
6.	Prof. John Derera	Zimbabwean	Male	Senior Director Plant Breeding and Pre-Breeding at ONE - CGIAR	Member
7.	Prof. Jeffrey C. Dunne	United States	Male	Associate Professor, North Carolina State University, Raleigh,	Member
8.	Prof. Allen E. Van Deynze	United States	Male	Director Seed Biotechnology Associate Director Plant Breeding Center, University of California, Davis	Member
9	Dr. Gordon Mabuyaye	Zimbabwean	Male	Global Head of Research and Development	Member

### c) Human Capital Development

- i. **PASET RSIF**- A total of 16 PhD students have joined the Plant Breeding and Biotechnology and are at various stages of their study. One student developed ill health and had to abandon the programme.
- ii. **BOLDER – Norwegian government** - 4 PhD students for 2025/26.
- iii. **EU Mobility grant COLABERA** - 101234551 - GAP-101234551 for Six partners (Total grant EUR 1,449,390; MaRCCI component EUR 354,391.2)

### d) Current MaRCCI PhD Students and their research projects funded by PASET- RSIF

S/N	Name	Gender	Nationality	Thesis Crop	Thesis Title
1.	Djanta Mahoussi K. Arnaud	Male	Benin		Genetic Analysis of Yield and Nutritional Traits of Vegetable Soybean in Benin
2.	Macaringue Aurelio Salvador	Male	Mozambique	Soybean	Identification of Candidate Genes Conditioning Drought Tolerance in Soybean ( <i>Glycine max L</i> )
3.	Emmaculate Akinyi Ogotu	Female	Kenya	Soybean	Genetics of anthracnose ( <i>Colletotrichum sublineolum</i> ) resistance in Tropical Sorghum
4.	Murenju Doreen Chelangat	Female	Uganda	Sweet Potato	Genetic diversity and genome wide prediction of sweetpotato weevil resistance in Uganda germplasm
5.	Norberto Jose Palange	Male	Mozambique		Genetic Analysis of Antinutritional Factors in Ugandan Soybean Germplasm
6.	Aliou BA	Male	Senegal	Soybean	Genomic Prediction for Important Agronomic Traits in Pearl millet [ <i>Pennisetum glaucum</i> (L.) R. Br.] In Senegal
7.	Kaku Catherine Santilino Kenyi	Female	South Sudan	Pearl millet	Characterization, resistance and genome wide mapping of early blight disease in tomato germplasm of Uganda
8.	Maquil Antonio Daniel Pedro	Male	Mozambique	Tomato	Genetic Potential of Uganda Soybean Germoplasm for Rust Resistance
9.	Oshotoyin Beatrice	Female	Nigeria	Soybean	Genetic dissection of yam ( <i>Dioscorea spp.</i> ) Genetic Resource in Uganda for Resistance to Mosaic Virus Disease

10	Nuvunge Stelio Boaventu Paulino	Male	Mozambique		Genetic analysis of candidate genes for phosphorus efficient use in maize ( <i>Zea mays</i> L)
11.	Erastus DUSHIMEYESU	Male	Rwanda	Banana	Genetic Analysis of Resistance to Weevils ( <i>Cosmopolites sordidus</i> ) and Nematodes ( <i>Radopholus similis</i> ) in a BC1 Mchare Diploid Banana ( <i>Musa</i> spp.) Population
12.	Ibrahim Isiaka Abiodun	Male	Nigeria		ABANDONED PROGRAM DUE TO ILL HEALTH
13.	Sharon Valerie Kweyu	Female	Kenya	Amaranthus	Incoming students for 2025/26
14.	Onesmus Mwaura Muigai	Male	Kenya		Incoming students for 2025/26
15.	Jacob Manyiwa Shume	Male	Kenya		Incoming students for 2025/26
16.	Benat Osman ABDULKADIR	Female	Ethiopia		Incoming students for 2025/26
17.	Marcio Avelino Sinoia Luis	Male	Mozambique		Incoming students for 2025/26

### e) MaRCCI Research Highlights: Commencement of National Performance Trial for Cowpea Pre-Entry (NPT & DUS)

The Ministry of Agriculture, Animal Industry and Fisheries (MAAIF) inspector conducted a pre-entry visit to MaRCCI fields in Kabanyolo as part of preparations for the National Performance Trial (NPT) and Distinctness, Uniformity, and Stability (DUS) evaluations for cowpea candidate lines. Following the inspection, MAAIF provided guidance on the next steps for advancing the evaluation process. The MaRCCI project team has been advised to proceed with harvesting four candidate lines - Entry 6, Entry 7, Ebelat × NE 51, and Ayiji - and to prepare seed for upcoming DUS testing scheduled to commence next week. For DUS evaluation, the selected lines will be established at Namalere and NaSARRI over two consecutive

seasons to ensure proper assessment. In addition, MAAIF has confirmed that budgetary provisions for DUS activities and inspections will be communicated to MaRCCI for review and consideration. The inspector also cleared five sites for National Performance Trials, namely Abi (Arua), Ngetta (Lira), NaSARRI (Soroti), Mayuge (Busoga), and Kabanyoro (Buganda). MaRCCI has been authorized to initiate engagement with farm managers at these locations to secure land and finalize arrangements for NPT and on-farm experimental activities. This marks a key step forward in the evaluation and potential release process of improved cowpea lines under national testing protocols.



**f) MaRCCI Award at 21st Annual General Meeting of RUFORUM in Botswana**

CAES Principal Prof. Gorette Nabanoga, Deputy Principal, Prof. Yazidhi Bamutaze, Director MaRCCI, Prof. Richard Edema, and the Head, Department of Environmental Management, Prof. Justine Namaalwa during the AGM in Botswana. MaRCCI was recognised as the 3rd Best Exhibitor at the Conference.

**3.3.1.18 CAES Annual Awards and Staff Recognition Ceremony**

The CAES Annual Awards and Staff Recognition Ceremony celebrated the outstanding achievements of dedicated teaching, administrative, and support staff. During this special event, several members of staff were acknowledged and honoured for their exceptional performance, commitment, and contributions to

the College’s success. Commenting on the significance of the awards, Prof. Buyinza praised the initiative, emphasizing that such recognition serves as a powerful motivator. He highlighted how acknowledging excellence not only boosts morale but also inspires continued dedication and fosters a culture of high performance.



*Members of staff recognized for their exceptional performance*



## List of CAES staff recognised for exceptional performance

<b>Teaching Excellence Award</b>		
<b>No</b>	<b>Name</b>	<b>Department</b>
1.	Prof. Johnny Mugisha	Department of Agribusiness & Natural Resource Economics
2.	Assoc. Prof. Settumba Blasio Mukasa	Department of Crop Science & Horticulture
3.	Dr. Odong Thomas Lapaka	Department of Crop Science & Horticulture
4.	Prof. Fred Babweetera	Department of Forestry, Biodiversity and Nature Conservation
5.	Dr. Patrick Byakagaba	Department of Environmental Management
6.	Assoc. Prof. Nicholas Kiggundu	Department of Agricultural & Biosystems Engineering
7.	Dr. Robert Mugabi	Department of Food Technology & Nutrition
8.	Assoc. Prof. Yusuf. Byaruhanga	Department of Food Technology & Nutrition
9.	Assoc. Prof. Fred Kabi	Department of Animal and Range Sciences
<b>Research Excellence Awards</b>		
1.	Dr. Richard Edema	Department of Crop Science & Horticulture
2.	Dr. Simon Kizito	Department of Forestry, Biodiversity and Nature Conservation
3.	Prof. Fred Babweetera	Department of Forestry, Biodiversity and Nature Conservation
4.	Assoc. Prof. Anthony Egeru	Department of Environmental Management
5.	Assoc. Prof. Isa Kabenge	Department of Agricultural & Biosystems Engineering
6.	Dr. Joshua Wanyama	Department of Agricultural & Biosystems Engineering
7.	Assoc. Prof. Dorothy Nakimbugwe	Department of Food Technology & Nutrition
8.	Assoc. Prof. Donald Kugonza	Department of Animal and Range Sciences
<b>Community Outreach</b>		
1.	Dr. Tonny Obua	Department of Crop Science & Horticulture
2.	Assoc. Prof. Anthony Egeru	Department of Environmental Management
3.	Assoc. Prof. Donald Kugonza	Department of Animal and Range Sciences
<b>Early Career Academician</b>		
1.	Dr. Dramadri Isaac Onziga	Department of Crop Science & Horticulture
2.	Dr. Prossy Nakawuka	Department of Agricultural & Biosystems Engineering
3.	Dr. Robert Fungo	Department of Food Technology & Nutrition
4.	Dr. Kanifa Kamatara	Department of Animal and Range Sciences
5.	Dr. Stellah Byakika	Department of Food Technology & Nutrition
<b>Graduate Coordination</b>		
1.	Dr. Paul Aseete	Department of Agribusiness & Natural Resource Economics
2.	Dr. Alice Turinawe	Department of Agribusiness & Natural Resource Economics
3.	Dr. Peter Wasswa	Department of Crop Science & Horticulture
4.	Prof. John Bosco Lamoris Okullo	Department of Forestry, Biodiversity and Nature Conservation
5.	Dr. Kenneth Balikoowa	Department of Environmental Management
6.	Dr. Robert Kambugu	Department of Agricultural & Biosystems Engineering
7.	Dr. Kenneth Nyombi	Department of Environmental Management
8.	Dr. Robert Mugabi	Department of Food Technology & Nutrition
9.	Dr. Sadhati Walusimbi	Department of Animal and Range Sciences
10.	Dr. Justine Nambi-Kasozi	Department of Animal and Range Sciences
<b>Leadership Award</b>		
1.	Prof. Gabriel Elepu	Former Head, Department of Agribusiness & Natural Resource Economics
2.	Dr. Mildred Ochwo-Ssemakula	Former Head, Department of Agricultural Production
3.	Prof. Edward Nector Mwavu	Former Head, Department of Forestry, Biodiversity and Tourism
<b>Staff recognition</b>		

1.	Dr. Stephen Lwasa	Lecturer, Department of Agribusiness & Natural Resource Economics
2.	Dr. Frederick Bagamba	Associate Professor, Department of Agribusiness & Natural Resource Economics
3.	Dr. Felix B. Bareeba	Professor, Department of Agricultural Production
4.	Dr. Charles Muyanja	Professor, Department of Food Technology & Nutrition
5.	Dr. Johnny Mugisha	Professor, Department of Agribusiness & Natural Resource Economics
6.	Mr. Gerald Kyeyune	Chief Technician, Department of Agricultural Production
7.	Dr. Banana Y. Abwooli	Professor, Department of Forestry, Biodiversity and Nature Conservation
8.	Ms. Teddy Naggayi	Cleaner, Department of Environmental Management
9.	Dr. Joseph Balamaze	Chief Technician, Department of Food Technology & Nutrition
10.	Mrs. Ruth Mubiru	Chief Technician, Department of Animal and Range Sciences
11.	Ms. Harriet Hawa	Principal Human Resource Officer
12.	Ms. Christine Najjuma	Technical Assistant, Department of Agricultural Production
13.	Ms. Juliet Nassanga	Cleaner, Department of Food Technology & Nutrition
14.	Mr. John Tumwijukye	Farm Attendant, MUARIK
15.	Mrs. Gorreti Mayanja	Head Cleaner, School of Agricultural Sciences
16.	Mr. Samuel Balyejjusa	Farm Attendant, MUARIK
17.	Mr. Richard Okello	Assistant Foreman – Carpentry, MUARIK
18.	Mr. Samuel Banjwa	Assistant Foreman – Carpentry, MUARIK
19.	Ms. Peninah Nakaana	Stenographer Secretary, Department of Agricultural Production
20.	Ms. Annet Nanyonga	Stenographer Secretary, Department of Agricultural & Biosystems Engineering
21.	Ms. Deborah Nabimanya	Office Attendant, Department of Crop Science & Horticulture
22.	Mr. Andrew Otim	Technician, Department of Agricultural and Biosystems Engineering
23.	Mr. Ronald Nsohya	Farm Attendant, MUARIK
24.	Mr. Emmanuel Okalany	Principal Technician, Department of Food Technology, Nutrition & Bio-engineering
25.	Mr. Robert Natumanya	Principal Technician, Department of Agricultural Production
26.	Ms. Kella Sombi	Office Attendant, Department of Forestry, Biodiversity and Nature Conservation
27.	Ms. Sarah Namuddu	Lecture Room Attendant, School of Food Technology, Nutrition & Bio-engineering
28.	Ms. Imelda Nakalema	Office Attendant, School of Food Technology, Nutrition & Bio-engineering
29.	Mr. Isaac Anyaku	Chief Custodian, School of Food Technology, Nutrition & Bio-engineering

## 3.3.2 School of Food Technology, Nutrition and Bioengineering (SFTNB)

### 3.3.2.1 Launch of the SophiA Project Facility at Buvuma Health Centre IV

The Sustainable Off-Grid Solutions for Pharmacies and Hospitals in Africa (SophiA) is providing sustainable off-grid energy supplies and water free of bacteria and viruses for rural and remote health facilities in Africa, thereby accelerating the sustainable development, growth and economic transformation, and ensuring improved access to energy and health services for all.

Using various technologies, such as photovoltaics, solar thermal, electrical and thermal storage, water treatment, and natural refrigerants with low global warming potential, SophiA has developed and manufactured locally innovative, modular, affordable, and efficient solar powered systems for providing:

1. Safe and clean drinking water, free of bacteria and viruses, and deionised water for medical purposes.
2. Hot water and steam production for thermal requirements of the hospitals.
3. Cooling of medicines and food at +5°C.
4. Low temperature storage of blood plasma and vaccines at -30°C.
5. Ultra-low temperature storage of sensitive medication (e.g. some Covid-19 or Ebola vaccines) at -70°C.

In addition, PV MedPort, a simple and 100% solar-powered solution has been developed and tested as a mobile healthcare station in small remote areas in 4 different geographical conditions in Africa. SophiA systems have been manufactured in Africa and will provide, for the first-time, innovative solutions based on climate-friendly natural refrigerants to cover cooling demand for three different temperature ranges (-70°C, -30°C and +5°C). The systems have been tested and demonstrated at four rural hospitals in remote regions throughout the African continent covering the major geographical regions and different climatic conditions in Burkina Faso, Cameroon, Malawi and Uganda.

#### Launch of the SophiA Project Facility at Buvuma Health Centre IV

The SophiA Project facility installed at Buvuma Health Centre IV was officially commissioned on 30th September 2025, by the Vice Chancellor of Makerere University, represented by the Dean, School of Food Technology, Nutrition, and Bio-systems Engineering at CAES, Dr Julia Kigozi.

The advanced systems installed at Buvuma Health Centre IV include:



*The SophiA system installed at Buvuma Health Centre IV*



*The Principal Investigator, Prof. Nicholas Kiggundu showing the Scheffler shields concentrators for the outside cooking facility*

1. **Electricity Generation:** A 36 kWp photovoltaic (PV) solar system supported by a 13 kVA standby generator ensures continuous power supply.
2. **Water Systems:** Provision of safe drinking water through ultra-filtration and de-ionized water using membrane capacitive de-ionization technology.
3. **Thermal Energy:** Hot water and steam generation for cooking, bathing, and sterilization, using thermo-energy storage.
4. **Solar Cooking:** Outdoor cooking with Scheffler reflectors capable of reaching temperatures up to 200°C.
5. **Refrigeration:** Environmentally friendly cooling units maintain medicine at +5°C, blood plasma at -30°C, and vaccines, including for COVID-19 and Ebola, at required temperatures using natural refrigerants like propane (R290).
6. **Maternity Support:** Installation of Xsol water heaters to provide warm water in the maternity wing.

Additionally, a 2 kWp PV MedPort was installed at Lukale Health Centre III, offering reliable electricity for disease screening and youth outreach services.

### 3.3.2.2 SophiA Project: Strengthening Rural Healthcare Infrastructure and Technical Capacity

The European Union-funded Sustainable Off-Grid Solutions for Pharmacies and Hospitals in Africa (SophiA) project continued to enhance healthcare delivery in underserved regions through renewable energy innovations and capacity building. Implemented by Makerere University in partnership with 13 international organizations, the five-year initiative (2021–2025) focuses on deploying solar-powered, off-grid systems to improve energy access, water quality, and medical storage in rural health facilities. In Uganda, the project successfully upgraded infrastructure at Buvuma Health Centre IV, a remote facility serving over 120,000 people. The installed SophiA system provides reliable off-grid electricity, safe drinking water, hot water and steam for maternal care, solar-powered cooking, and advanced refrigeration for medicines and vaccines at temperatures ranging from +5°C to -70°C. To ensure

sustainability, a Training of Trainers workshop was conducted in June 2025 at Makerere University and Buvuma Island. The programme equipped a diverse group of engineers, technicians, and district officials with practical skills in solar energy systems, water treatment, refrigeration technologies, and system maintenance. The training emphasized hands-on learning, real-world applications, and knowledge transfer to support long-term system operation. Additionally, the project introduced the “SophiA Water” initiative as a local revenue-generating model to fund ongoing maintenance and operations. Overall, the SophiA project has demonstrated a scalable, climate-friendly approach to strengthening healthcare systems in off-grid communities, while building local technical capacity to sustain these interventions.



*Left: The team led by Dr. Nicholas Kiggundu, SophiA Project Coordinator at Makerere University during their tour of facilities at Buvuma Health Centre IV. Right: The trainees and the trainers with the Dean SFTNB, Dr Julia Kigozi at the workshop*

### 3.3.2.3 SFTNB Entrepreneurship Exhibition 2025



*Dr. Julia Kigozi (2nd Right) joins the Vice Chancellor on an inspection of the Agri Farm Team's exhibit.*

The School of Food Technology, Nutrition and Bio-Engineering (SFTNB), in partnership with the Makerere Innovation and Incubation Centre (MIIC), successfully held its third Entrepreneurship Exhibition on 12th November 2025. The event showcased student-led innovations developed under the SFTNB Entrepreneurship Program, which supports students through the full innovation cycle - from ideation and business training to prototyping, testing, and market readiness. Backed by a UGX7 million innovation fund from MIIC, the program engaged over 60 students organized into 15 innovation groups. The teams developed practical and sustainable solutions in food technology, nutrition, and bio-engineering, demonstrating strong potential for commercialization and societal impact. The exhibition provided a platform for students to

present prototypes and business concepts to university leadership, industry partners, and potential investors, strengthening linkages between academic innovation and market opportunities. It also reinforced Makerere University's commitment to fostering entrepreneurship and supporting student innovators. The Vice Chancellor, Prof. Barnabas Nawangwe, commended the School for producing innovations with strong commercial potential, noting that several projects could be patented, scaled, and exported with improvements in packaging, shelf life, and branding. He encouraged students to view their innovations as viable enterprises capable of creating jobs and transforming communities, and reaffirmed the University's support in company registration and product certification.



*Prof. Nawangwe (Left) interacts with the Green Farm Tractor Team*

### 3.3.2.4 Enhancing Food Safety and Nutrition through Capacity Building Initiatives

During the 2024/2025 recess term, the Department of Food Technology and Nutrition (DFTN) at Makerere University, College of Agricultural and Environmental Sciences (CAES), implemented a comprehensive outreach and training programme aimed at strengthening food safety, nutrition education, and the capacity of small-scale food processors. The initiative combined school-based nutrition awareness campaigns, diagnostic visits to local food processors, and a two-day hands-on training workshop held on 8th-9th September 2025 at the School of Food Technology, Nutrition, and Bioengineering (SFTNB). The programme targeted key gaps in Good Manufacturing Practices (GMP), product formulation, packaging and labelling, certification readiness, and market development. Nutrition outreach activities were conducted in selected schools, including Zainab Junior School, Hormisdallen Primary School, and Makerere Modern Secondary School, where learners and teachers were sensitised on balanced diets, hygiene, and the importance of locally available

nutritious foods, while also being exposed to career pathways in food science and nutrition. Diagnostic assessments of small-scale processors in the bakery and dairy sectors identified critical challenges such as short product shelf-life, inadequate fermentation control, packaging and labelling deficiencies, and limited documentation required for Uganda National Bureau of Standards (UNBS) certification. These findings informed the design of targeted training interventions. The subsequent workshop brought together processors from various enterprises across cereal, grain, dairy, and bakery value chains. Practical sessions covered GMP and hygiene, product development and optimisation, packaging and labelling compliance, waste management, marketing, and hands-on processing of products including yoghurt, soy- and millet-based formulations, fruit drying, flour blending, and baking. The training resulted in improved technical capacity among participants, enhanced understanding of regulatory requirements, and strengthened linkages between



*Left: The processors with the yogurt they processed during the practical training. Right: Some of the processors who participated in the training with the Dean of the SFTNB, Dr. Julia Kigozi (3rd R) and the team from the Department of Food Technology and Nutrition at CAES, led by Dr Robert Mugabi*

academia and industry. Participants developed 60-day action plans focusing on improved documentation, label standardisation, shelf-life testing, product innovation, and preparation for certification. The initiative further strengthened nutrition knowledge among school learners and stimulated interest in careers in food science and technology. It demonstrated the value of applied university engagement in improving food systems, supporting enterprise growth, and promoting

public health nutrition. Makerere University reaffirmed its commitment to continued collaboration with industry stakeholders through the Food Technology Business Incubation Centre (FTBIC), with its leadership emphasizing sustained technical support, innovation, and capacity development for food entrepreneurs.



*The team from the Department of Food Technology and Nutrition at Makerere University engaging learners of Hormisdallen Primary School on balanced diets, hygiene, and the importance of locally available nutritious foods*

### 3.3.2.5 Soybean Value Addition Training Programme



*The processors during the training at the School of Food Technology, Nutrition, and Bioengineering at Makerere University*

The Department of Food Technology and Nutrition (DFTN), Makerere University, in collaboration with Smart Foods Uganda Ltd, conducted a five-day intensive training on soybean value addition and product development from 24–28 November 2025 at the Food Technology and Business Incubation Centre (FTBIC), Kampala. The training was supported by IITA Uganda under the TAAT Soy Compact Project and aimed at strengthening agro-processing skills and promoting soybean utilization for improved nutrition and livelihoods.

The programme adopted a practical, hands-on approach, combining laboratory and pilot-scale processing activities at Makerere University with an industry exposure visit to Smart Foods Uganda Ltd. Participants gained practical experience in soybean processing, quality assurance, and commercial production systems. Key areas covered included soybean nutrition, quality assessment, Good Hygiene Practices (GHP), Good Manufacturing Practices (GMP), product development, and business-oriented skills such as branding,

marketing, and UNBS certification requirements. Participants were trained in producing a range of soy-based products including soymilk, tofu, yoghurt, soy flour, soy coffee, porridge flours, and bakery products. A total of 57 participants, comprising small-scale processors and graduating students, were trained. The programme resulted in the development of multiple soy-based product prototypes and strengthened practical skills in agro-processing, entrepreneurship, and regulatory compliance. Overall, the training contributed to

capacity building in soybean value addition, enhanced industry-academia collaboration, and supported the development of nutritious, market-ready soy products. It forms part of Makerere University's ongoing outreach efforts to promote food innovation, improve food security, and strengthen agro-industrial development in Uganda.

### 3.3.2.6 School of Food Technology, Nutrition and Biosystems Engineering End of Recess Exhibition

The School of Food Technology, Nutrition and Biosystems Engineering (SFTNB) at Makerere University held its annual end of recess exhibition on 24th July 2025. The event brought together students, academic staff, and industry stakeholders to showcase a wide range of student-led innovations developed during the 10-week recess programme. The exhibition highlighted practical, market-oriented solutions addressing key challenges in food systems, nutrition, and agro-processing. Innovations included solar-dried fruit products, nutrient-enriched baked goods targeting

malnutrition, biodegradable packaging derived from crop waste, and low-cost grain sorting technologies. Students also demonstrated applied research outputs such as microbial analysis of street-vended fruits, revealing critical food safety concerns, and low-cost water purification systems developed using locally available materials. Additional innovations focused on extending the shelf life of fresh produce using activated charcoal and beeswax, contributing to reduced postharvest losses. The experiences enhanced the students' technical competencies, problem-solving abilities, and communication skills.



*The students showcasing some of the products they made during their internship at the end-of-recess exhibition held at the School of Food Technology, Nutrition, and Biosystems Engineering on 24th July 2025*

### 3.3.2.7 The Conrad N. Hilton Africa Water Quality Testing Fellowship - Cohort Three Graduation

The Department of Agricultural and Biosystems Engineering at Makerere University, College of Agricultural and Environmental Sciences (CAES), successfully graduated the third cohort of the Conrad N. Hilton Africa Water Quality Testing Fellowship on 3rd October 2025. The ceremony, held at the School of Food Technology, Nutrition, and Bio-systems Engineering Conference Hall, marked a significant milestone in the University's efforts to strengthen capacity in water quality management and research. A total of 30 students completed the programme, bringing the cumulative

number of trained fellows to 90 since its inception. The trainees were drawn from diverse disciplines, including Agricultural Engineering, Bioprocessing Engineering, Civil Engineering, Industrial Chemistry, and Water and Irrigation Engineering. The fellowship, implemented in partnership with the Aquaya Institute and supported by the Conrad N. Hilton Foundation, provides practical and theoretical training in water quality testing, research methods, and project management. The curriculum covers six key modules: drinking water quality fundamentals, treatment technologies, field sampling, laboratory practices, data analysis, and

technical reporting. During the training, fellows applied their skills by surveying over 700 water points in Mukono District, contributing to improved understanding of local water quality conditions. On behalf of the University leadership, the Deputy Vice Chancellor in charge of Academic Affairs, Prof. Sarah Ssali commended the programme for its strong alignment with national development

priorities and the Sustainable Development Goals, particularly SDG 6 (Clean Water and Sanitation). Partners, alumni, and industry stakeholders praised the fellowship for producing highly competent water professionals and strengthening collaboration between academia, industry, and development partners.



*Left: Some of the fellows showcasing the skills acquired during the training. Centre: A trainee receiving his certificate from the DVCAA, Prof. Sarah Ssali. Right: The fellows, joined by Prof. Ssali and Prof. Gorette Nabanoga, Principal of CAES to cut cake in celebration of the achievement*

### 3.3.2.8 Revitalization of the Food Technology and Business Incubation Centre (FTBIC)

In July 2025, Makerere University launched a programme to revitalize the Food Technology and Business Incubation Centre (FTBIC), with the aim of strengthening innovation, entrepreneurship, and agro-industrial development in Uganda. The Centre is housed within the School of Food Technology, Nutrition and Bioengineering under the College of Agricultural and Environmental Sciences. The revitalization seeks to transform FTBIC into a national hub for food innovation by bridging the gap between academia and industry. Key objectives include supporting food-based start-ups, promoting commercialization of research, and enhancing graduate entrepreneurship. The programme is supported by the Makerere University Research and Innovations Fund. The launch event, held on 10 July 2025 under the theme “Revitalizing FTBIC to Unlock Innovation and Entrepreneurship Potential among Makerere

University Graduates,” attracted over 50 stakeholders, including students, innovation partners, and representatives from organizations such as Uganda Industrial Research Institute and StartHub Africa. During the event, the Centre’s new strategic vision and operational framework were unveiled, emphasizing practical training, enterprise development, and strengthened collaboration with industry and development partners. Stakeholders expressed strong commitment to supporting future research, product development, and innovation initiatives. The Vice Chancellor, Barnabas Nawangwe, highlighted the Centre’s potential to incubate numerous start-ups and generate employment opportunities for graduates. He reaffirmed the university’s commitment to initiatives that align with national development priorities and global goals.



*Left: Students attend a practical session in the Food Technology and Business Incubation Centre (FTBIC). Right: Participants, including students, partners, and innovation stakeholders, at the launch of the revitalization programme on 10th July 2025*

### 3.3.2.9 SFTNB Students' Entrepreneurship Exhibition

On 11 April 2025, the School of Food Technology, Nutrition, and Bioengineering held an entrepreneurship exhibition showcasing products developed by its students. The School actively engages students in producing a variety of goods as part of its efforts to strengthen their graduate competencies and enhance their entrepreneurial skills.



### 3.3.2.10 Research Excellence and Innovation Commercialization Awards

During the 76th graduation ceremony, Makerere University recognized the top researchers and innovators from the 10 Colleges. At the School of Food Technology, Nutrition and Bioengineering at CAES, Assoc. Prof. Mugabi Robert from the School of Food Technology and Nutrition received the Overall Top Researchers Award, 2026 and Mid-Career Research Award.

Assoc. Prof. Mugabi Robert receiving the awards from the Minister of Science, Technology and Innovation, Hon. Dr. Monica Musenero Masanza



### 3.3.3 School of Forestry, Environmental and Geographical Sciences (SFEGS) - Research activities and innovations

#### 3.3.3.1 Launch of Phase II of the Resilient Urban Food Systems (RUFFS) Project

In August 2025, Makerere University launched Phase II of the Resilient Urban Food Systems (RUFFS) project in Kasese Municipality and Mbale City. Supported by the AgriFoSe2030 Programme and led by Prof. Frank Mugagga, the project builds on earlier successes to further strengthen climate resilience and food security in urban and peri-urban communities. During Phase I, the project established inclusive food system platforms, strengthened collaboration among stakeholders, enhanced local technical capacity, and elevated the role of smallholder farmers in shaping urban food systems. These efforts contributed to improved coordination, increased policy engagement, and greater community participation in climate-resilient practices. Phase II focuses on addressing climate-related risks such as flooding and drought, enhancing community awareness and adaptive capacity, and integrating indigenous knowledge into planning processes. The project adopts participatory and data-driven approaches, strengthens partnerships with government and development actors, and

promotes co-creation of solutions through community engagement and knowledge sharing. Stakeholder engagements and capacity-building activities conducted in Kasese and Mbale have reinforced alignment between project interventions and local priorities. Training sessions, workshops, and exchange platforms have supported the adoption of climate-smart agriculture, improved emergency preparedness, and strengthened advocacy for sustainable urban food systems. The project continues to generate positive impact through farmer empowerment, growth of local agribusiness initiatives, and the formation of community-based organizations and cooperatives. These outcomes have enhanced livelihoods, improved food security, and fostered local leadership in climate resilience. Going forward, Phase II will emphasize sustainability and scalability through the establishment of demonstration sites, strengthened institutional partnerships, and replication of successful practices to ensure long-term resilience and inclusive urban food system development.



*Left: The project team led by Prof. Frank Mugagga, together with stakeholders, at the workshop in Kasese Municipality on 18th August 2025. Right: The project team in a meeting with Mobuku II Cooperative Society leaders to explore strategies for strengthening collaboration*

#### 3.3.3.2 RUFFS Project: Training of Smallholder Farmers in Mbale City in Smart Agronomic Practices

In October 2025, the Resilient Urban Food Systems (RUFFS) Project team with financial support from the AgriFoSe2030 Programme, conducted a two-day capacity-building training for over 20 smallholder farmers in Mbale City. The training aimed to enhance farmers' resilience to climate change impacts, including floods, drought, landslides, and waterlogging, which continue to threaten agricultural productivity and food security. The training, led by Prof. Frank Mugagga, focused on promoting climate-smart agricultural practices to improve productivity while conserving natural resources. Key areas covered included composting,

crop rotation, intercropping, use of drought-resistant crops, and environmentally friendly pest management strategies. A practical component of the training involved demonstrations on the production of organic fertilizers and pesticides using locally available materials such as animal waste, plant extracts, and ash. Conducted at Emilna Royal Mixed Farm, these demonstrations showcased low-cost and sustainable alternatives to chemical inputs, aimed at improving soil health and reducing production costs. The RUFFS Project also advanced its commitment to knowledge co-creation by integrating local and indigenous

knowledge into urban food system planning and fostering collaboration among stakeholders. This approach supports broader goals of strengthening climate resilience, promoting sustainable urban agriculture, and informing evidence-based decision-making in Mbale and Kasese. Participant feedback indicated strong relevance and positive impact of the training, particularly in reducing input costs, improving soil fertility, and optimizing land use efficiency. Farmers also expressed

interest in additional support, including irrigation technologies and livestock management training. Overall, the training represented a significant contribution to empowering smallholder farmers with practical, scalable climate-smart agricultural solutions, reinforcing the RUFs Project's mission to build resilient and sustainable urban food systems. A similar training was conducted in Kasese Municipality.



*Mbale City farmers learning how to mix different materials to make fertilizers*

### 3.3.3.3 Tea Production in Uganda: CAES' NbS4Tea Project Leverages Drone Technology to Enhance Data Collection

The Nature-based Solutions for Tea (NbS4Tea) project registered a significant milestone with the successful deployment of drones to strengthen environmental and agricultural data collection. Funded by the Danish Fellowship Centre under Denmark's Ministry of Foreign Affairs, NbS4Tea is a five-year initiative designed to enhance climate resilience and increase tea productivity in Uganda. The project aims to sustainably close the national tea yield gap by developing research-driven, nature-based solutions that improve the resilience of tea production systems. Key interventions include identifying climate-resilient tea varieties, integrating tea prunings and banana by-products, incorporating nitrogen-fixing agroforestry trees, and improving irrigation management. The project also prioritizes socio-economic viability, research capacity building, and market-oriented, multi-stakeholder collaboration to ensure long-term environmental and economic sustainability. NbS4Tea is implemented by a consortium of Ugandan and Danish institutions, including Makerere University, the National Agricultural Research Organization (NARO), the Uganda Tea Association, Aarhus University (Denmark), and Kick-start International. At Makerere University, the project is coordinated by Dr. Alex Nimusiima of the Department of Geography, Geo- Informatics, and Climatic Sciences at CAES. On 19 June 2025, the project team officially launched the drone technology at

the Rwebitaba Tea Research Centre in Kyenjojo District, the project's primary research site. The launch included practical training sessions conducted by Mr. Timothy Mutungi, a certified Remote Sensing Drone Pilot, who provided hands-on instruction in drone operation, safety procedures, and data acquisition methods tailored to the project's research needs. The training was attended by core NbS4Tea researchers and project-supported students. The integration of drone technology enables the collection of high-resolution imagery and detailed environmental data across large tea-growing areas. This advancement supports more precise assessments of biodiversity, soil health, water use, and ecosystem services. The resulting insights will guide the development of sustainable, nature-based agricultural practices with strong potential for adoption across Uganda's tea sector. The project supports one PhD and one Master's student in each of its five work packages: (1) climate change impacts on tea yield and quality; (2) screening and selection of tea genotypes for resilience to biotic and abiotic stresses; (3) evaluation of nature-based solutions for climate resilience, productivity, and biodiversity; (4) development of smart, scalable irrigate technologies for improved tea production; and (5) socio-economic assessment of tea-agroforestry systems and selected tea varieties.



*Mr. Timothy Mutungi, a certified Remote Sensing Drone Pilot, training the project team in drone operations.*

### 3.3.3.4 Strengthening Global Academic Partnerships: Mak & Rhein-Waal University Joint Field Course at Kibale National Park

In line with Makerere University's commitment to internationalisation and experiential learning, a successful collaborative field course was conducted in partnership with Rhein-Waal University of Applied Sciences (Germany) under a DAAD-funded project. The programme took place from 26th May to 3rd June 2025 at the Makerere University Biological Field Station (MUBFS) in Kibale National Park, Uganda. Kibale National Park, widely recognised for its exceptional biodiversity and high primate diversity, provided an ideal setting for interdisciplinary training focused on sustainability, conservation, and community engagement. The field course brought together over 50 participants, including Master's students and faculty from both institutions, fostering a rich environment for academic exchange and intercultural learning. The programme began with a preparatory week at Makerere University (26th–30th May 2025), which included an onboarding session and a series of capacity-building workshops on research ethics, methodological approaches, and reproducible research. Students were grouped into four thematic areas: Environmental Monitoring and Assessment, Natural Resource Management, Environmental Governance and Policy, and Environmental Pollution and Waste Management.

Each group was guided by experienced academic facilitators from Makerere University. The field phase (30th May–3rd June 2025) was conducted at Kibale National Park and surrounding communities, including Bigodi, Mabono, Kasiisi, and Kanyawara. Students engaged in biodiversity monitoring, household and stakeholder interviews, environmental assessments, and participatory community discussions. These activities strengthened practical research skills while enhancing understanding of the socio-ecological dynamics of conservation areas and promoting community-centred approaches to environmental management. Following fieldwork, participants returned to Makerere University for data analysis and report writing (9th–12th June 2025), culminating in the synthesis of research findings across thematic groups. The field course significantly enhanced students' interdisciplinary research competencies, intercultural understanding, and appreciation of sustainability challenges. It also reinforced the role of international academic partnerships in advancing the United Nations Sustainable Development Goals, particularly in quality education, climate action, and life on land. This collaboration between Makerere University and Rhein-Waal University demonstrates the value of experiential, field-based

learning in environmental education and research. The partnership, supported by DAAD and contributing institutions, is expected to continue strengthening in future years, building on the successes and lessons of this initiative.



*Left: Students from Rhein-Waal University of Applied Sciences interacting with the elderly about the impacts of forests towards the community. Right: Focused group discussions held with the male and female groups within Bigodi Trading Centre near Kibale Forest National Park*

### 3.3.3.5 Department of Tourism: International Collaboration and Academic Development

The Department of Tourism at the College of Agricultural and Environmental Sciences (CAES) on Thursday, 11th December 2025, hosted Prof. Sofia Asonitou from the University of West Attica, Greece. Prof. Asonitou serves as the Regional Coordinator for the Sub-Saharan Africa region under the Erasmus+ International Credit Mobility (ICM) framework at her institution. During her engagement with the Department team led by Prof.

Jim Ayorekire, discussions focused on strengthening international academic cooperation, with key outcomes including proposed student and staff exchange programmes, capacity building in tourism governance, and exploration of a joint masters degree. The meeting also initiated plans for micro-credit courses to address emerging skills gaps in the tourism sector.



*The Department team led by Prof. Jim Ayorekire during their engagement with Prof. Sofia Asonitou from the University of West Attica, Greece*

### 3.3.3.6 Research Excellence and Innovation Commercialization Awards

During the 76th graduation ceremony, Makerere University recognized the top researchers and innovators from the 10 Colleges. From the School of Forestry, Environmental and Geographical

Sciences, Dr. Nalwanga Sendagire Faridah received the Best Early Career Researcher Award, whereas Prof. Yazidhi Bamutaze got the Senior Career Research Award.



*Prof. Bamutaze and Dr. Nalwanga receiving their awards from the Minister of Science, Technology and Innovation, Hon. Dr. Monica Musenero Masanza*

### 3.3.3.7 New Project to Improve Relevance of CAES PhD Graduates

The Advancing Sustainable Agricultural Value Chains through Strengthening Trans-disciplinary Skills and Cooperation in East African Doctoral Education (ADVALUE) Project is a European Union co-funded initiative aimed at improving the relevance and quality of PhD training in agricultural sciences across Uganda and Kenya. Led in part by Prof. Heinrich Schüle and coordinated in Uganda by Prof. John Tabuti, the project responds to a critical gap in doctoral education, namely, the overemphasis on theoretical knowledge at the expense of practical, industry-relevant skills. Through partnerships involving institutions such as Makerere University and regional and international stakeholders, the project seeks to modernize curricula by integrating trans-disciplinary approaches, value chain analysis, and hands-on competencies that align with labor market demands and sustainable development goals. During the reporting period, a key milestone was the interim conference held from 17th- 19th March 2025 at Makerere University, which brought together academic staff, students, policymakers, and industry stakeholders to assess progress and refine doctoral education frameworks. The conference highlighted persistent challenges, including limited practical training, outdated supervision practices, weak industry linkages, insufficient funding, and inadequate research infrastructure. Contributions from sector

leaders such as Dr Joseph Nkandu and Prof. Mary Okwakol underscored the importance of aligning doctoral training with real-world agricultural value chain needs and national development priorities. Field engagement, including a farm visit in Matugga, further reinforced the necessity of grounding academic research in practical realities. In response, the ADVALUE Project is developing four specialized PhD training modules covering scientific work, trans-disciplinary research, rangeland management, and agricultural value chains, while also strengthening collaboration between universities, industry, and policymakers. Key recommendations emerging from the project include expanding funding opportunities, enhancing supervision quality, creating dedicated research environments, and promoting institutional collaboration. The initiative is expected to significantly improve the employability, innovation capacity, and societal impact of doctoral graduates, thereby contributing to more resilient and sustainable agricultural systems in East Africa.



*The project team led by Prof. Tabuti during the interim conference in March 2025.  
Top left: The project team visited the farm of Mr. Sam Mpiira, a smallholder farmer in Matugga, Nansana Municipality*

### 3.3.3.8 Strengthening Capacity and Shaping Policy: Mak Reviews Progress of MERIT and Environmental Risk Research Programs



*Participants at the review meeting for the MERIT project at the University Main Building*

Makerere University, through its College of Agricultural and Environmental Sciences (CAES), conducted a comprehensive review of the Environmental Risk Management Under Increasing Extremes and Uncertainty (MERIT) project,

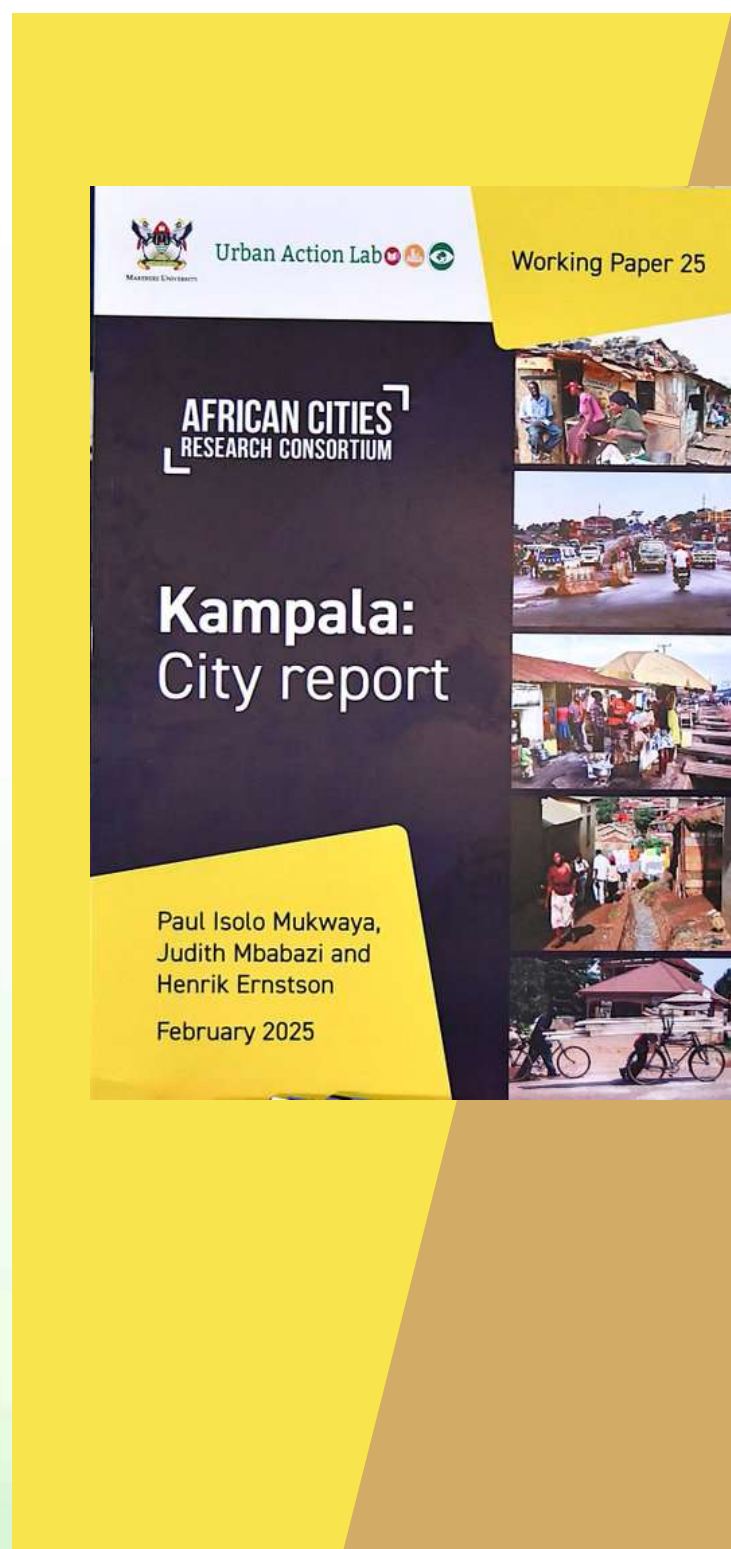
highlighting significant progress in research, capacity building, and policy influence. Funded by the Norwegian Agency for Development Cooperation (NORAD) under the NORHED programme, MERIT is a multi-institutional partnership involving Makerere University, Uganda Martyrs University, University of Dar es Salaam, Haramaya University, and Norwegian University of Science and Technology, aimed at strengthening environmental risk management through collaborative research, curriculum development, and academic exchange. Since its inception in 2021, the project has supported staff and student training, with over 30 beneficiaries, including Master's and PhD candidates conducting research on climate risk, disaster management, and sustainable land use. These research efforts are generating evidence to inform national and local

policy, particularly in areas such as flood forecasting, climate-resilient agriculture, and community-based adaptation strategies. The project has also prioritized community engagement in high-risk regions of eastern Uganda, using tools such as GIS mapping, remote sensing, and integration of indigenous knowledge to enhance early warning systems and resilience planning. Student and staff exchange programmes between Uganda and Norway have fostered cross-cultural learning and strengthened global academic collaboration. Institutionally, Makerere

has benefited from enhanced research capacity, improved infrastructure, increased funding, and stronger academic networks. Despite challenges related to administrative processes and multi-partner coordination, the project continues to demonstrate strong impact. Moving forward, emphasis will be placed on sustainability, scaling successful interventions, and ensuring that research outputs translate into practical policy and development outcomes, reinforcing Makerere University's role as a leader in environmental research and innovation.

### 3.3.3.9 Launch of the African Cities Research Consortium Report

In February 2025, Makerere University, through its Urban Action Lab under the African Cities Research Consortium (ACRC), released a comprehensive study on urban development challenges in Kampala, one of Africa's fastest-growing cities with an annual population growth rate of 5.6%. The report highlights significant pressures on infrastructure, governance systems, and service delivery arising from rapid urbanisation, with informal and low-income communities being most affected. The findings indicate persistent infrastructure deficits, weak coordination between key institutions such as Kampala Capital City Authority and central government, and growing inequality in access to essential urban services. Informal settlements face particularly severe challenges, including inadequate transport, unreliable electricity supply, poor sanitation, and insecurity. The study also notes that market-driven and fragmented service provision has left critical gaps, especially for vulnerable populations. Governance constraints—including corruption, political interference, and the influence of elite interests—further hinder effective urban planning and investment. Additional concerns include high youth vulnerability linked to unemployment and social risks, inefficiencies in land markets, poor nutrition and health outcomes, and the increasing socio-political significance of informal settlements. To address these challenges, the report proposes a set of reforms focused on upgrading informal settlements, strengthening land registration and tenure systems, improving waste management and public health services, and expanding youth skills development through vocational and apprenticeship programmes. It also calls for improved state capacity in urban management, enhanced financing mechanisms, and stronger collaboration between government, academia, and non-state actors, alongside greater community participation in decision-making. Pilot initiatives such as plastic waste recycling hubs in Kisenyi III and improved



sanitation infrastructure at Ggaba Market are highlighted as practical interventions to demonstrate impact at local level. The report was launched by Hon. Mario Obiga Kania, who emphasized the importance of viewing Kampala's challenges as opportunities for transformation and economic growth, while also prioritising youth employment, waste management, and financial literacy. City leaders, including the Lord Mayor, Erias Lukwago, pointed to ongoing challenges such as inadequate funding, weak physical planning systems, and political interference, while calling for the transformation of informal settlements into a more liveable urban environment. Overall, the report underscores the need for coordinated, inclusive, and evidence-based urban reforms to support sustainable development and improve living conditions in Kampala.

The project was coordinated by Dr Paul Isolo Mukwaya from the Department of Geography, Geo-Informatics and Climatic Sciences at Makerere University.



*Uganda's Minister of State for Urban Development, Hon. Mario Obiga Kania (in green) officially launched the report*

### 3.3.3.10 Launch of the Urban Futures Project

Makerere University, in collaboration with the University of Waterloo and the University of Manchester, launched the Urban Futures Project on 6th March 2025 at Fairway Hotel in Kampala. The initiative, titled "Toward Health Equity, Inclusive Governance and Climate Adaptation in African Informal Settlements," is designed as a learning lab to strengthen collaboration, knowledge exchange, and inclusive decision-making in addressing climate-related challenges in urban informal settlements. The project

focuses on improving urban resilience, particularly in relation to heat stress and associated health risks, through participatory research and co-generated solutions across Kampala, Freetown, and Bulawayo. A key output of the launch was the unveiling of the Urban Heat Management Handbook, which provides guidance on heat resilience, risk assessment, heatwave response, and long-term adaptation strategies. Stakeholders, including Kampala Capital City Authority and development partners, emphasized the urgency of addressing urban heat challenges, noting issues such as environmental degradation, limited green



*Stakeholders at the launch ceremony at Fairway Hotel, Kampala on 6th March 2026*

space, and vulnerabilities in informal settlements. The project brings together academic institutions, government agencies, and civil society organisations to foster South-South learning and develop equitable climate adaptation pathways that improve urban health outcomes and resilience. The project was coordinated by Dr Paul Isolo Mukwaya from the Department of Geography, Geo-Informatics and Climatic Sciences at Makerere University.

**4**

**MAKERERE UNIVERSITY**  
**AGRICULTURAL RESEARCH**  
**INSTITUTE KABANYOLO**  
**MUARIK**



## i. Introduction

MUARIK is a multidisciplinary facility committed to advancing agricultural training, research, innovation, outreach, and production. It provides a hands-on learning environment for integrated crop–livestock enterprises, supports knowledge generation through research, and facilitates outreach for effective knowledge transfer -contributing to sustainable agricultural development and improved smallholder livelihoods.

## ii. Refurbishment of the MUARIK Main Gate

In 2025, the College of Agricultural and Environmental Sciences (CAES) at Makerere University completed the refurbishment of the main gate at the Makerere University Agricultural Research Institute Kabanyolo (MUARIK). The project, implemented by students from CAES and the College of Engineering, Design, Art, and Technology (CEDAT) under academic supervision, enhanced the institute's aesthetics, security, accessibility, and sustainability. The refurbished gate was officially commissioned on 30th May 2025 by the University's leadership. MUARIK, established in 1953, continues to serve as a key hub for agricultural research, training, and innovation. The institute hosts multiple centres of excellence, research laboratories, training facilities, and student accommodation, supporting hands-on learning and multidisciplinary research. Its enterprises span crop and livestock production,

agro-processing, and emerging areas such as edible insect research and climate-smart agriculture. During the year, MUARIK advanced research and partnerships in areas including biotechnology, agroforestry, horticulture, and value addition. Collaborations with national and international partners, including the Uganda Flowers Exporters Association and global research institutions, contributed to innovation and commercialization efforts. A guided institutional tour conducted during the commissioning highlighted both strengths and operational challenges, notably land encroachment, which remains a key risk to sustainability. The University leadership reaffirmed commitment to strengthening infrastructure, expanding research capacity, and positioning MUARIK as a leading regional centre for agricultural innovation.



*Left: The Ag. DVCAA, Prof. Buyinza Mukadasi commissioning the refurbished gate. Right: Prof. Buyinza Mukadasi appreciating some of the students who did the refurbishment. At the bottom, CAES staff at the refurbished main gate at MUARIK*



### iii. Staff changes

On 15th January, Dr. Peter Ebanyat assumed the leadership of MUARIK from outgoing director Dr Okello Ongom. The handover was witnessed by the Principal of CAES and internal audit representatives.

Mr. David Tukasingura (white- blue checked shirt) took over as the new accountant of MUARIK on 12th September 2025 from Mr. Perez Airinaitwe. The handover was witnessed by Mr. Denis Okuk (Internal Audit) and the Team Leader Finance at CAES, Ms. Susan Kyamulabi among others.



Left to right: Mr Denis Okuk, Dr. Peter Ebanyat, Mr. Perez Airinaitwe, Mr. David Tukasingura, Ms Susan Kyamulabbi, Ms Annet Nanyonga and Mr Leo Nantamba

### iv. Departures/retirement

1. Mr Leo Natamba left after end of contract on 30th November 2025
2. Ms. Emmily Busingye Ndagahweire, office Attendant was granted an early retirement in August 2025
3. Mr. Nandulya- left upon reaching the retirement age in December 2025

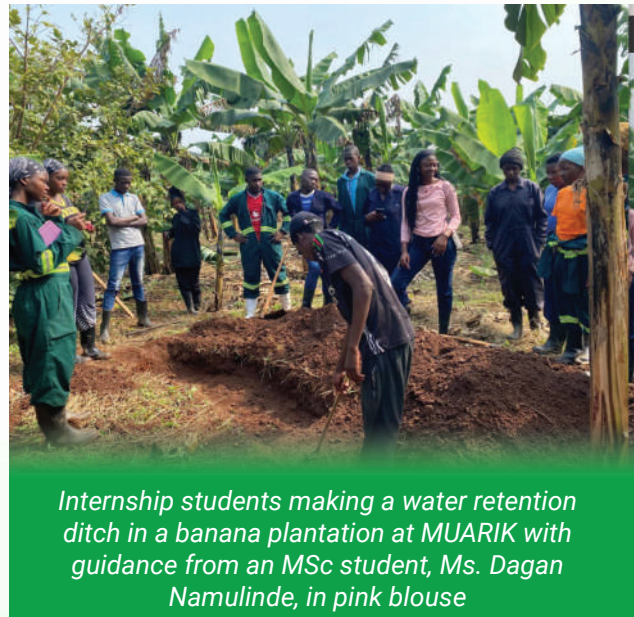
### v. Training highlights

#### Recess term training

First year undergraduate students of BSc Agriculture and Bachelor of Agribusiness Management underwent successful recess term training at MUARIK, acquiring competencies in various areas of crop, animal, soil and farm structures. At the end of the 10-week recess training, they had a fair/field day showcasing what they had learned. The occasion was graced by the Deputy Principal of CAES, Prof. Yazidhi Bamutaze. The recess term was coordinated by Dr. Deogratius Luyima from the Department of Soil Science and Land Use Management.

#### Internship training

Internship skills training covering Crop and Livestock Production, Agricultural Machinery, Farm Structures and Farm Records Management was also conducted for 99 students pursuing a Certificate in Animal and Livestock Production. The students came from various institutions, including Mityana Agrovet, Nawanyago Technical Institute, Kibale Technical Institute, Bukomero Technical Institute, Bugema University and Bobi Technical Institute. These internship trainings were delivered with the involvement of graduate students from CAES Departments.

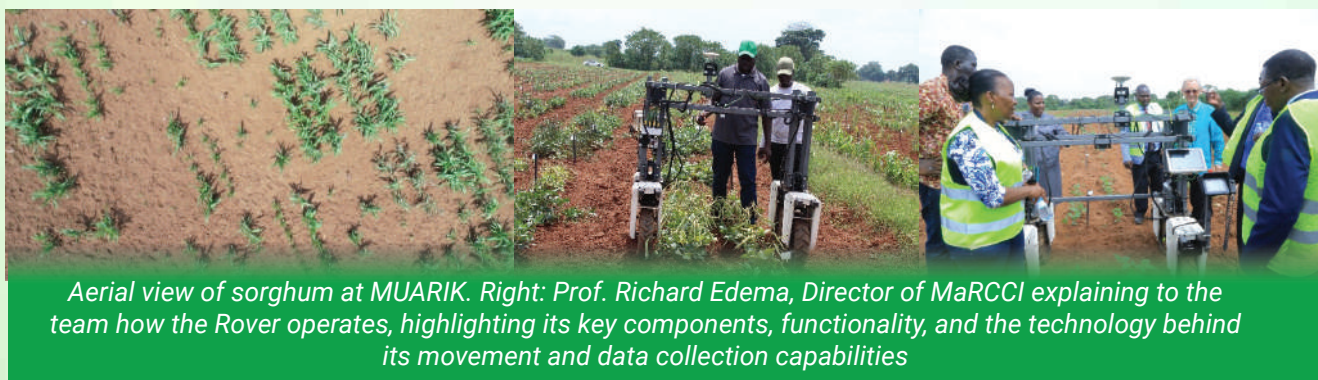


Internship students making a water retention ditch in a banana plantation at MUARIK with guidance from an MSc student, Ms. Dagan Namulinde, in pink blouse

## vi. Research highlights

Research at MUARIK is conducted by faculty and students from different departments from the college. In 2025 the following are some of the researches conducted/ongoing:

- » Differential nutrient uptake amongst grafted mango varieties on a common rootstock grown on a ferralsol at Kabanyolo - Brian Budidi Basembeza (Special project research)
- » Optimization of potassium application rate with inoculation and phosphorus for soybean production – Anna Violet Kataike (MSc. Research)
- » Genetic analysis of partial resistance to soybean rust disease – Antonio Maquil (PhD Research)
- » Identification of candidate genes conditioning drought Tolerance in soybean (Glycine max) – Aurelio Macaringue (PhD Research)
- » Genetic analysis of anti-nutritional factors in soybean (Glycine Max)- Norberto Palange
- » Genome-wide Association of drought tolerant soyabean genotypes with elevated protein content- Nashim Nassanga (PhD Research)
- » Anaysis of soyabean seed longevity under tropical conditions- Mercy Namara (PhD research)
- » Soybean genotype compatibility, yield stability and economics under minimum tillage systems – Herbert Oloka (PhD research).
- » The Effectiveness of high throughput phenotyping Tools for Selection of Agronomic Traits in Sorghum- Mr. Akoragye Jordan (MSc research)
- » Assessing the Efficiency of High-Throughput Phenotyping Tools in Optimal Selection of Agronomic Traits in Cowpea- Mr. Akena Gerald (MSc research)
- » Genetic Variability and Trait-Marker Association for Iron and Zinc contents in Sorghum- Said Mohamed Nur (MSc research)
- » Genetic Potential of Perennial Sorghum for food and feed in Uganda- Selma Ndapewa Nghituwamhata (PhD research)
- » Genetics of crude protein in grain amaranth- Nalule Habibah: (PhD research)
- » Efficacy of pre-emergence herbicides for sunflower – Prof Hebert Talwana
- » Evaluation of Silicon-based insecticide formulations on foliar pests of tomato - Prof. Herbert Talwana
- » Efficacy of Pheromones for reducing incidence of Fall armyworm – Prof Herbert Talwana
- » Efficacy of Agriphyt Contact Zn Mn, Controlphyt Cu, controlPhyt PK, Controlphyt Si, Fertigrain start, Tecamin Brix and Tecamin Raiz on crop yields- Prof. J. B. Tumuhairwe
- » Efficacy of imperium Opti Insecticide for the management of Lepidoptera pest – Fall army worm (Spodoptera Frugiperda) in maize – Dr J. Bisikwa
- » Efficacy of Magnus 250 OD herbicide for weed management in maize fields – Dr. j. Bisikwa
- » Efficacy of Nicogaurd herbicide for weed management in maize fields – Dr. j. Bisikwa
- » Efficacy of 240 EC herbicide for weed management in soyabean– Dr. J. Bisikwa
- » Efficacy of Glypho herbicide for weed management in fallow land– Dr. J. Bisikwa



*Aerial view of sorghum at MUARIK. Right: Prof. Richard Edema, Director of MaRCCL explaining to the team how the Rover operates, highlighting its key components, functionality, and the technology behind its movement and data collection capabilities*

### vii. Outreach highlights

MUARIK continued to be a sought-after institute for study tours. In 2025, the institute received over 7,000 pupils and students coming from various schools across the country.

### viii. Establishment of a Four-acre model Demonstration

A four-acre model is being established in a phased manner. It will be a demonstration site but also used for training and outreach, and data will be collected to assess the profitability of the enterprises over time. The selected enterprises, land allocation and their roles are summarised in Table 1 below. The land allocation was based on model optimization for a house of 5 members for incomes and food security and land evaluation.

### ix. Enterprises allocation and roles in the 4-acre model demonstration set up at MUARIK

<i>Enterprise</i>	<i>Acres</i>	<i>%</i>	<i>Primary Role</i>
<i>Banana–Coffee Intercrop</i>	1.2	30%	Perennial income + staple
<i>Legume–Cereal Rotation</i>	0.8	20%	Staple + soil fertility + partial feed
<i>Pasture &amp; Goat Unit</i>	1.0	25%	Livestock income + manure
<i>Local Poultry</i>	0.4	10%	High-turnover enterprise
<i>Apiary (boundary-integrated)</i>	0.2	5%	Honey + pollination
<i>Homestead + Kitchen Garden</i>	0.4	10%	Housing + vegetables + fruits
<b><i>Total</i></b>	<b>4.0</b>	<b>100%</b>	

5

**MAKERERE UNIVERSITY  
BIOLOGICAL FIELD STATION**

**MUBFS**



## 5. Overview

The Makerere University Biological Field Station (MUBFS), established in 1970, is a key research and training unit of Makerere University located at the edge of Kibale National Park in Kabarole District. Since its inception, the Station has served as a hub for high-quality, multidisciplinary research and education in tropical ecosystems. MUBFS provides a platform for both national and international scholars, supporting field-based teaching, research, and experiential learning. Within Makerere University, it regularly hosts field courses for students from the College of Agricultural and Environmental Sciences (CAES), College of Natural Sciences (CONAS), College of Veterinary Medicine, Animal Resources and Biosecurity (COVAB), and the College of Education and External Studies (CEES). The Station also supports training and research for other universities and institutions engaged in biological and natural resource sciences.



*CAES Management and members of staff led by the Principal, Prof. Gorettie Nabanoga during their visit to MUBFS in 2025*

## 5. Key achievements

### 5.1 Partnerships and collaboration (MoU signing)

During the reporting period, MUBFS strengthened existing partnerships and established new collaborations aimed at enhancing research and training. A notable milestone was the signing of a Memorandum of Understanding (MoU) between Makerere University and NorthWest University (China) in June 2025. The agreement formalizes institutional collaboration in research, training, and knowledge exchange, with a particular focus on biodiversity and global change research in and around Kibale National Park. The partnership is anchored at MUBFS and is expected to support long-term ecological research while leveraging complementary institutional strengths. This commitment was further reinforced through reciprocal visits between the two institutions.



*The Vice-Chancellor of Makerere University, Prof. Bernabas Nawangwe and the Vice-President of North-West University (NWU), China at the signing of the MOU in Chengdu, China, June 2025.*

## 5.2 Training and capacity building

### 5.2.1 MUBFS current Graduate students

#### PhD Students

1. **Mr. Wilson Kagoro:** Adaptive management as a tool for sustainable conservation of protected areas: Case study of Kibale National Park, Uganda.  
**Supervisors:** Prof. David M. Tumusiime; Prof. Abwooli Banana; Prof. Chapman Colin
2. **Ms. Kirumira Dorothy Nakabuye:** Spatial measures of protected area benefits and losses around Kibale National Park.  
**Supervisors:** Prof. David M. Tumusiime; Dr. Ellen Kayendeke; Prof. Dipto Sarkar
3. **Mr. Samuel Angedakin:** Conservation and livelihood impacts of long-term research presence in an African tropical rainforest.  
**Supervisors:** Prof. David M. Tumusiime; Prof. Mnason Tweheyo
4. **Emmanuel Abwa Onapito:** The potential of removal of invasive and hyper-abundant indigenous plants from a protected area: Promotion of clean energy, forest regeneration and wildlife use of the degraded areas in Kibale national park, Uganda  
**Supervisors:** Prof. Gerald Eilu; Assoc. Prof. Edward Nector Mwavu; Prof. Chapman Colin
5. **Martin Golooba:** starting PhD, coursework at University of Minnesota
6. **Leonie Gussone:** PhD student at University of Minnesota (Movement ecology and energetics in frugivorous monkeys)  
**Supervisor:** Michelle Brown
7. **Janine-Rose Klein:** PhD student at University of California (Personality and social reactivity in red-tailed monkeys)  
**Supervisor:** Prof. Amy Body

#### MSc students

1. **Aarakit Lydia:** Signs of stress in chimpanzees. Implications for behavioral conservation  
**Supervisors:** Dr. H. Kasozi; Dr. Aaron Sandel; Prof. Eric Sande
2. **Jombela Salmah:** Evaluating the trends in spatial and temporal distribution of snares in Kibale National Park, Uganda  
**Supervisors:** Dr. H. Kasozi; Prof John Mitani; Prof. Eric Sande
3. **Mercy Tike Chagara:** MSc: (Just starting, still developing proposal)

### 5.2.2 Field courses

MUBFS continued to support field-based teaching for both Ugandan and international universities. These field courses remain central to experiential learning in ecology, conservation, and environmental sciences. Some of the courses held in the year include a field course for (i) Msc

Environment and Natural Resources program; (ii) Biogeography course for Bachelor of Geographical Sciences I, II, III; (iii) Master of Geographical Sciences, (iv) Botany and Zoology; and (v) Tropical Biology Association (TBA).



*TBA students posing with their certificates at the end of the training*

### 5.2.3 Student internships



The Station hosted student interns from multiple institutions, including CAES (11 students), CONAS (1), COVAB (1), and Muni University (1). The internship program provided hands-on exposure to field research, conservation practice, and interdisciplinary collaboration. Feedback from participants indicates that the experience significantly shaped their academic and professional trajectories.

*The Director, Prof. David Mwesigye Tumusiime, debriefing a section of internship trainee students, July 2025.*

### 5.2.4 Specialized training



*Pl@ntNet training with Daniel Barthélémy and Murielle Simo-Droissart at MUBFS*

A specialized training on the use of the Pl@ntNet tool was also conducted, led by international experts. The training combined theoretical and practical components and brought together students, lecturers, and conservation practitioners

working in the greater Kabarole landscape. Participants created user accounts and contributed numerous species-level observations to the platform, enhancing local capacity in digital biodiversity monitoring.

## 5.3 Research

MUBFS continues to host a diverse portfolio of long-term and ongoing research programs.

### 5.3.1 Chimpanzee research

The Station supports two internationally recognized long-term chimpanzee research projects:

- 1) Kibale Chimpanzee Project (KCP) at Kanyawara (established in 1987)
- 2) Ngogo Chimpanzee Project (NCP) at Ngogo (established in 1995)

Both projects maintained continuous data collection throughout the year, contributing to globally significant datasets on chimpanzee ecology, behavior, and health.

### 5.3.2 Kibale Fish and Monkey project

This project integrates terrestrial and aquatic research programs. During the year, the project:

- Continued long-term ecological monitoring critical for understanding climate change impacts
- Conducted re-sampling of vegetation plots in Kanyawara and Ngogo
- Maintained phenological, behavioral, and demographic monitoring of red colobus monkeys
- Supported community health initiatives, including collaboration with local clinics and vaccination efforts

The project also contributed to academic training, with several PhD students making substantive progress in their research.

### 5.3.3 Conservation to Coexist

Conservation to Coexist is a participatory action project conceived of and carried out with local community members in the areas surrounding Kibale National Park in collaboration with the Department of Anthropology, Washington University in St. Louis. The work of the project over the year significantly reduced crop raiding, increased food security, improved perceptions of wildlife and the park, and decreased dangerous human-wildlife interactions in participating communities.

## 5.4 Conservation activities

MUBFS plays a central role in conservation through its long-term research programs and community engagement initiatives.

### 5.4.1 Snare removal

The KCP and NCP operate active snare removal programs within Kibale National Park and surrounding areas. In 2025, KCP alone removed 646 snares across 752 patrols. These efforts also generate data on illegal activities and wildlife presence. Beyond field operations, teams engage local schools and communities through conservation education initiatives and events such as World Chimpanzee Day.

### 5.4.2 Chimpanzee Health, Intervention, and Monitoring Program (CHIMP)

Established in 2020 in collaboration with the Jane Goodall Institute and the Uganda Wildlife Authority, CHIMP adopts a One Health approach to wildlife and ecosystem health. Operating from MUBFS, the program serves the wider Kibale Conservation Area.

#### In 2025, CHIMP:

- » Conducted six chimpanzee snare removal interventions
- » Relocated a problematic chimpanzee from Mubende to Uganda Wildlife Education Centre
- » Performed two chimpanzee necropsies
- » Monitored chimpanzee health during respiratory disease outbreaks
- » Continued wildlife health surveillance and emergency response

## 5.5 The Kasiisi Project

Through the Kibale Chimpanzee Project, MUBFS partners with The Kasiisi Project, a conservation education initiative targeting primary schools around Kibale National Park.

## In 2025, the program:

- » Reached approximately 9,000 students and 250 teachers across 16 schools
- » Supported 670 students in wildlife clubs and 640 in health clubs
- » Engaged 32 volunteer teachers in each program area
- » Delivered interventions focused on conservation awareness, health education, and support for vulnerable learners

Program evaluations indicate measurable improvements in environmental awareness and attitudes toward wildlife conservation within participating communities.

## 5.6 Corporate social responsibility

MUBFS continues to contribute to local community welfare through infrastructure support. The Station maintains the Kanyawara access road from Rusenyi to the Field Station, which serves surrounding communities and facilitates both local mobility and research operations.

## 5.7 Challenges and Outlook

- While MUBFS continues to perform strongly in research, training, and conservation, increasing demand for infrastructure, logistical support, and expanded research capacity remains a key challenge. Strengthening partnerships, investing in facilities, and enhancing student support systems will be critical priorities moving forward.
- The Station is well positioned to build on its strong foundation of long-term research and international collaboration to further contribute to Makerere University's mission in research excellence, community engagement, and global impact.

## CAES Professors inducted UNAS Fellows

In 2025, Professors Frank Mugagga, Anthony Egeru, Jackie Bonabana Wabbi, Fred Kabi and Grace Nakabonge were among the Makerere University staff inducted as Distinguished Fellows of the Uganda National Academy of Sciences (UNAS), a prestigious honor recognizing the exceptional contributions to science and national development. The Uganda National Academy of Sciences is Uganda's premier independent science

academy, bringing together distinguished scholars from the natural sciences, social sciences, arts, and humanities to provide evidence-based guidance on national development priorities. The Fellowship is conferred through a rigorous nomination and peer-review process and represents one of the highest recognitions of lifetime scientific excellence and impact in Uganda.



*Professors Anthony Egeru, Frank Mugagga, Fred Kabi and Grace Nakabonge*



*Makerere staff at the induction ceremony*

# Summary of CAES Budget Performance 2025/2026

Approved Budget	1	2,294,475,085
Revised Budget	2	2,374,475,085
Releases/Warranties		
Total Releases/Warranties	3	2,374,475,085
Expenditure		
Actual Expenditure	4	2,371,177,583
Balance	5	3,297,502

# 7

# CAES PUBLICATIONS



## School of Agricultural Sciences

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# 8

# HUMAN RESOURCES



## 8.1 Appointments, Promotions, Confirmations, & Resignations

### PROMOTIONS

NO	NAME	DEPARTMENT	RANK
1.	Dr. Jeninah Karungi	Crop Science and Horticulture	Professor
2.	Dr. Losira Nasirumbi Sanya	Extension and Innovation Studies	Senior Lecturer
3.	Dr. Abraham Rutabatiina	Forestry, Biodiversity and Tourism	Senior Lecturer
4.	Dr. Francis Mugizi	Forestry, Biodiversity and Tourism	Senior Lecturer
5.	Dr. Simon Kizito	Forestry, Biodiversity and Tourism	Senior Lecturer
6.	Dr. Enock Ssekuubwa	Forestry, Biodiversity and Tourism	Senior Lecturer
7.	Dr. Henry Semakula Musoke	Geography, Geo-Informatics and Climatic Sciences	Senior Lecturer
8.	Dr. Denis Nseka	Geography, Geo-Informatics and Climatic Sciences	Senior Lecturer
9.	Dr. John Ilukor	Agribusiness and Natural Resource Economics	Senior Lecturer
10.	Dr. Elizabeth Ahikiriza	Agribusiness and Natural Resource Economics	Lecturer
11.	Dr. Godwin Erima	Environmental Management	Lecturer
12.	Dr. Ezra Natumanya	Environmental Management	Lecturer
13.	Dr. Michael Bruce Byaruhanga	Forestry, Biodiversity and Tourism	Lecturer

### CONTRACT APPOINTMENTS

1.	Mr. John Edison Sempira	Agricultural and Bio Systems Engineering	Lecturer
2.	Ms. Zainah Nampijja	Agricultural Production	Assistant Lecturer
3.	Mr. Pius Lutakome	Agricultural Production	Assistant Lecturer
4.	Dr. Joel Kinobe	Environmental Management	Lecturer
5.	Ambrose Atwine	Food Technology and Nutrition	Technician
6.	Mr. Andrew Otim	Agricultural and Biosystems Engineering	Technician
7.	Mr. Simon JohnBright Habinshuti	Agricultural Production	Assistant Lecturer
8.	Mr. Hakim Sseviiri	Geography, Geo-Informatics and Climatic Sciences	Assistant Lecturer
9.	Mr. Amon Muhwezi	Agricultural Production	Assistant Technician
10.	Ms. Sarah Namayengo	Forestry, Biodiversity and Tourism	Assistant Lecturer
11.	Ms. Allen Nantongo	Forestry, Biodiversity and Tourism	Assistant Lecturer
12.	Mr. Yekosan Mitala	Extension and Innovation Studies	Assistant Lecturer

13.	Mr. Brian Ogenrwoth	Agribusiness and Natural Resource Economics	Assistant Lecturer
14.	Mr. Martin Mukasa	Makerere University Biological Field Station (MUBFS)	Trail Cutter
15.	Mr. John Musinguzi	Makerere University Biological Field Station (MUBFS)	Trail Cutter
16.	Mr. Charles Kusemererwa	Makerere University Biological Field Station (MUBFS)	Trail Cutter
17.	Mr. Muzzammil Muhwez	Makerere University Biological Field Station (MUBFS)	Trail Cutter

### CONFIRMATIONS

1.	Dr. Richard Bukenya	Food Technology and Nutrition	Lecturer
2.	Dr. Godwin Erima	Environmental Management	Lecturer
3.	Dr. Norman Kwikiriza	Agribusiness and Natural Resources Economics	Lecturer
4.	Dr. Paul Aseete	Agribusiness and Natural Resources Economics	Lecturer
5.	Ms. Babrah Kagaaga	School of Agricultural Sciences	Administrative Secretary III
6.	Mr. Ivan Goby	Agricultural Production	Technical Assistant
7.	Mr. Alex Tumusiime	Agricultural Production	Technical Assistant
8.	Mr. Pius Lutakome	Agricultural Production	Assistant Lecturer
9.	Ms. Zainah Nampijja	Agricultural Production	Assistant Lecturer

### POST-RETIREMENT CONTRACTS

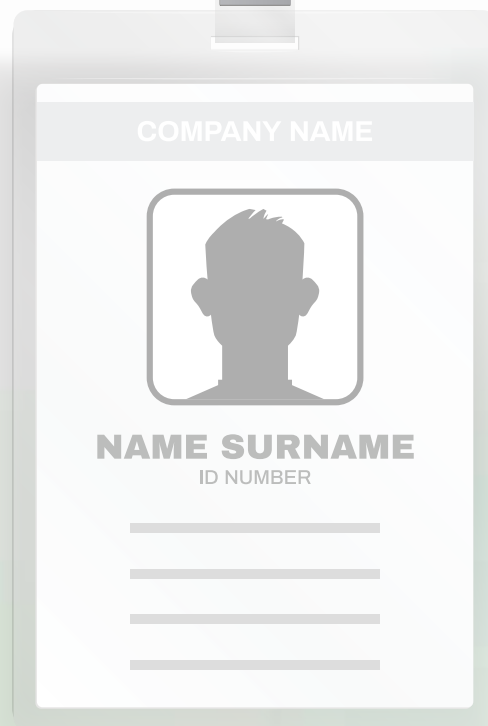
1.	Prof. John Robert Stephen Tabuti	Environmental Management	Professor
2.	Prof. Vincent B. Muwanika	Environmental Management	Associate Professor
3.	Dr. Fredrick Bagamba	Agribusiness and Natural Resource Economics	Associate Professor

### RESIGNATIONS

1.	Prof. Johnny Mugisha	Agribusiness and Natural Resource Economics	Professor
2.	Prof. Jacob Godfrey Agea Professor	Extension and Innovation Studies	Professor
3.	Dr. Wilber Manyisa Ahebwa	Forestry, Biodiversity and Tourism	Associate Professor
4.	Ms. Florence Presca Muheebwa	Forestry, Biodiversity and Tourism	Assistant Lecturer
5.	Dr. Erion Bwambale	Agricultural and Biosystems Engineering	Assistant Lecturer

8.2

# STAFF ESTABLISHMENT



NO	NAME OF STAFF	POSITION
<b>ADMINISTRATIVE STAFF</b>		
1	Jofrina Kyohairwe	College Registrar
2	Susan Kyamulabi	Senior Accountant/ College Bursar
3	Annet Naluyinda	Accountant
4	George William Opee	Accountant
5	Mary Nantale	Administrative Secretary
6	Joseph Musoke	Administrative Assistant
7	Kalungi Magdalene	Senior Assistant Registrar
8	Kabejja Hasifa	Principal Communications Officer
9	Kasemiire Mariam	IT Officer
10	Baine Albert	Administrative Assistant
11	Julius Lebo	Principal Human Resources Officer
<b>SUPPORT STAFF</b>		
12	Anyaku Isaac	Custodian
13	Jacob Were	Custodian
14	Peter Walusimbi	Driver
15	Ntambi Jimmy	Driver
16	Kibirango Charles	Security Guard
17	Kabanda Margaret	Library Assistant
18		Stenographer Secretary
19	Dorothy Nabakabya	Senior Technician
20	Ambrose Atwine	Technician
21	Jessica Kaahwa	Stenographer Secretary
22	Ponsiano Sendegeya	Lab Attendant
23	Elizabeth Baliremwa Banura	Cleaner
24	Namubiru Justine	Cleaner
25	Namudu Sarah	Cleaner
26	Ndagire Aidah	Sanitary cleaner
27	Nanozi Catherine	Sanitary Cleaner
28	Kisitu Daniel	Senior Assistant Technician
29	Nanteza Florence	Library Assistant
30	Namirembe Goretti	Sanitary Cleaner
31	Nalwanga Shiffah	Office Attendant
32	Kiggundu Habibu	Cleaner
33	Mwiyeretsi James	Sanitary Cleaner
34	Nassanga Costance	Lecture Room Attendant
35	Musaazi Mathias	Driver
36	Kato Tom	Driver
37	Buzimwa Muhammadi	Driver
38	Wairagala Bonny	Turn Boy

40	Mutebi Emmanuel	Senior Technician
41	Goby Ivan	Assistant Technician
42	Tumusiime Alex	Assistant Technician
43	Nabimanya Deborah	Office Attendant
44	Kyobutungi Edith	Office Attendant
45	Kabonesa Grace	Lecturer Room Attendant
46	Bukenya Joseph	Farm Attendant
47	Nanozi Margaret	Lecturer Room Attendant
48	Muhereza Richard	General Farm Worker
49	Nantale Agnes	Farm Attendant
50	Batiibwe Moses	Cleaner
51	Andrew Otim	Technician
52	James Kaddu Makubuya	Technician II
53	Ronald Nsohya	Ox-man
54	Nanyonga Annet	Senior Copy typist
55	Nambatya Ruth	Stenographer Secretary
56	Kasujja Geoffrey	Lab. Assistant
57	Ndagire Deborah	Lecture Room Attendant
58	Nankunda Bennet	Custodian
59	Nakiyemba Consolate	Assistant Administrative Secretary
60	Kagaaga Barbra	Administrative Secretary III
61	Namukwaya Ruth	Lab. Attendant
62	Ssentomero Dan	Technician
63	Kusemererwa Aggrey	Driver
64	Sombi Kella	Cleaner
65	Nagawa Maimuna	Office Attendant
66	Musoke Harriet	Office Attendant
68	Kiwanuka Robert	Tractor driver
69	Okello Richard	Carpenter
70	Musisi Vincent	Sanitary Cleaner
71	Ntongo Edith	Sanitary cleaner
72	Mutungire Bowers	Farm Attendant
73	Toko George	Farm Attendant
74	Nabwire Immaculate	Farm Attendant
75	Male Stuart	Farm Attendant
76	Nambaziira Harriet	Farm Attendant
77	Nambooze Joyce	Farm Attendant
78	Ssentamu Godfrey	Farm Attendant
79	Nabisubi Kasifa	Farm Attendant
80	Nuwagaba Abias	Farm Attendant
81	Ndezaho Godfrey	Farm Attendant
82	Nandawula Margret	Farm Attendant

83	Nanfuka Harriet	Farm Attendant
84	Zaguma Godfrey	Farm Attendant
85	Muyanja Denis	Farm Attendant
86	Wandwali Collin Arthur	Farm Attendant
87	Kukundakwe Apolo	Farm Attendant
88	Ssenyonga Lawrence	Messenger/cleaner
89	Tumwebaze Betty	General Farm Worker
90	Tumukunde Herbert	Clerical Officer - Accounts
91	Tumushabe Jannet	Library Assistant
92	Byaruhanga Andrew Simon	Security Guard
93	Nuwagaba Erias	Custodian
94	Namuyaba Scovia Prossy	Stenographer Secretary
95	Mulwanyi Edward	Security Guard

#### DEPARTMENT OF AGRICULTURAL PRODUCTION

96	Kyamanywa Samuel	Professor
97	Tukamuhabwa Phinehas	Professor
98	Basamba Ali Twaha Ateenyi	Associate Professor
99	Karungi Jeninah	Associate Professor
100	Talwana Herbert	Associate Professor
101	Kabi Fred	Associate Professor
102	Mukasa Settumba Blasio	Associate Professor
103	Kugonza Donald Rugira	Associate Professor
104	Mpairwe Denis R	Associate Professor
105	Tumuhairwe John Baptist	Associate Professor
106	Nambi-Kasozi Justine	Senior Lecturer
107	Tusiime Geoffrey	Senior Lecturer
108	Edema Richard	Senior Lecturer
109	Ebanyat Peter	Senior Lecturer
110	Katongole Constantine Bakyusa	Senior Lecturer
111	Bisikwa Jenipher	Senior Lecturer
112	Ochwo Ssemakula M K N	Senior Lecturer
113	Odong Thomas Lapaka	Senior Lecturer
114	Wasswa Peter	Senior Lecturer
115	Olupot Giregon	Senior Lecturer
116	Walusimbi Sadhat	Lecturer
117	Zziwa Emmanuel	Lecturer
118	Ongom O Robert Cyrus	Lecturer
119	Opolot Emmanuel	Lecturer
120	Taulya Godfrey	Lecturer
121	Musinguzi Patrick	Lecturer
122	Nuwamanya Epraim	Lecturer
123	Alou Isaac Newton	Lecturer

124	Mwije Anthony	Lecturer
125	Kamatara Kanifa	Lecturer
126	Dramadri Isaac Onziga	Lecturer
127	Obua Tonny	Lecturer
128	Luyima Deogratius	Lecturer
129	Tibezinda Mary	Assistant Lecturer
130	Magala Henry	Assistant Lecturer
131	Idibu Joachine	Assistant Lecturer
132	Simon John Bright Habinshuti	Assistant Lecturer
133	Lutakome Pius	Assistant Lecturer
134	Nampijja Zainah	Assistant Lecturer
135	Namara Mercy	Assistant Lecturer
136	Giibwa Lilian	Assistant Lecturer
139	Kiirya David	Chief Technician
140	Natumanya Robert	Principal Technician
141	Kakooza Lydia	Principal Technician
142	Aguttu Gorreti	Principal Technician
143	Joshua Ssebuufu	Principal Technician

#### DEPARTMENT OF AGRIBUSINESS AND NATURAL RESOURCE ECONOMICS

144	Gabriel Elepu	Associate Professor
145	Bernard Bashaasha	Professor
146	Johnny Mugisha	Professor
147	Dick Sserunkuuma	Professor
148	Mukadasi Buyinza	Professor
149	Jackline Bonabana-Wabbi	Associate Professor
150	Rosemary Isoto	Senior Lecturer
151	Ilukor John	Lecturer
152	Alice Turinawe	Lecturer
153	Alex Tatwangire	Lecturer
154	Florence Lwiza Nsereko	Lecturer
155	George Omiat	Lecturer
156	Paul Aseete	Lecturer
157	Norman Kwikiriza	Lecturer
158	Elizabeth Ahikiriza	Assistant Lecturer
159	Robert Asiimwe	Assistant Lecturer
160	Asha Nalunga	Assistant Lecturer

#### DEPARTMENT OF EXTENSION AND INNOVATION STUDIES

161	Turyahabwe Nelson	Professor
162	Agea Jacob Godfrey	Professor
163	Kibwika Paul	Associate Professor
164	Nabanoga Gorettie	Associate Professor

165	Miir Richard	Senior Lecturer
167	Isubikal Prossy	Senior Lecturer
168	Kyazze Florence Birungi	Senior Lecturer
169	Obaa Bernard Bonton	Senior Lecturer
170	Karuhanga Monica	Lecturer
171	Karubanga Gabriel	Lecturer
172	Mubangizi Narisi	Lecturer
173	Nasirumbi Losira	Lecturer
174	Akello Sarah	Lecturer
175	Orum Emuria Boniface	Lecturer
176	Okech Moses	Lecturer
177	Mulugo Lucy	Lecturer
178	Mawa Christopher	Lecturer
179	Mukebezi Rebecca	Assistant Lecturer

#### DEPARTMENT OF AGRICULTURAL AND BIOSYSTEMS ENGINEERING

180	Wanyama Joshua	Senior Lecturer
181	Isa Kabenge	Associate Professor
182	Allan John Komakech	Senior Lecturer
183	Ahamada Zziwa	Associate Professor
184	Ayaa Fildah	Asst. Lecturer
185	Peter Tumutegyereize	Senior Lecturer
186	Nicholas Kiggundu	Associate Professor
187	Robert Kyeyune Kambu	Lecturer
188	Julia Kigozi	Senior Lecturer
189	Sam Cherotich	Assistant Lecturer
190	Prossie Nakawuka	Lecturer
191	Francis Okori	Assistant Lecturer
192	Peter Mulamba	Lecturer
193	Kivumbi Hussein Balimunsi	Senior Lecturer
194	Erion Bwambale	Assistant Lecturer
195	Denis Nsubuga	Assistant Lecturer

#### DEPARTMENT OF FOOD TECHNOLOGY AND NUTRITION

196	John Muyonga	Professor
197	Archileo Kaaya	Professor
198	Charles Muanja	Professor
199	Yusuf Byenkya Byaruhanga	Assoc. Professor
200	Dorothy Nakimbugwe	Assoc. Professor
201	Ivan Muzira Mukisa	Professor
202	Abel Atukwase	Senior Lecturer
203	Margaret Kabahenda	Senior Lecturer
204	Gaston Ampe Tumuhimbise	Senior Lecturer

205	Agnes Nabubuya	Senior Lecturer
206	Acham Hedwig	Senior Lecturer
207	Robert Mugabi	Senior Lecturer
208	Denis Male	Lecturer
209	Robert Fungo	Lecturer
210	Stellah Byakika	Lecturer
211	Fred Brany Lukwago	Assistant Lecturer
212	Joseph Balamaze	Chief Technician
213	Emmanuel Okalany	Principal Technician
214	Richard Bukenya	Lecturer

#### DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

215	Frank Kansiiime	Professor
216	John R.S Tabuti	Professor
217	David Tumusiime	Professor
218	Vincent Muwanika	Associate Professor
219	Justine Namaalwa	Associate Professor
220	Anthony Egeru	Associate Professor
221	Kenneth Nyombi	Senior Lecturer
222	Patrick Byakagaba	Senior Lecturer
223	Ellen Kayendeke	Lecturer
224	Kenneth Balikoowa	Lecturer
225	Erima Godwin	Assistant Lecturer
226	Ezra Natumanya	Assistant Lecturer
227	Fred Yikii	Lecturer
228	Faridah Nalwanga	Assistant Lecturer
229	Paul Musali	Assistant Lecturer
230	Nsobya Joseph	Librarian

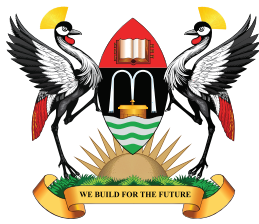
#### DEPARTMENT OF GEOGRAPHY, GEO-INFORMATIC AND CLIMATIC SCIENCES

231	Bamutaze Yazidhi	Professor
232	Mugagga Frank	Associate Professor
233	Twinomuhangi Revocatus	Associate Professor
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235	Isolo Mukwaya Paul	Senior Lecturer
236	Mfitumukiza David	Associate Professor
237	Nimusiima Alex	Senior Lecturer
238	Nanteza Jamiat	Lecturer
239	Twinorugyendo Penninah	Lecturer
240	Sabiiti Geoffrey	Lecturer
241	Musoke Semakula Henry	Lecturer
242	Ddumba Saul Daniel	Lecturer
243	Wasswa Hannington	Lecturer

244	Nseka Denis	Lecturer
245	Aboda Caroline	Lecturer
246	Mulinde Catherine	Lecturer

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251	Okullo John Bosco	Associate Professor
252	Babweteera Fred	Associate Professor
253	Ahebwa W Manyisa	Associate Professor
254	Mwavu Nector Edward	Associate Professor
255	Balaba Susan Tumwebaze	Associate Professor
256	Mugabi Paul	Associate Professor
257	Nakabonge Grace	Associate Professor
258	Ayorekire Jim	Associate Professor
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261	Nagawa Christine Betty	Lecturer
262	Muhwezi Deus Kamunyu	Lecturer
263	Rutabatiina Abraham Mwesigye	Lecturer
264	Mugizi Francis	Lecturer
265	Kizito Simon Savio	Lecturer
266	Ssekuubwa Enock	Lecturer
267	Ochieng Amos	Lecturer
268	Syofuna Agatha	Lecturer
269	Byaruhanga Micheal	Assistant Lecturer
270	Sseremba Owen Emmanuel	Assistant Lecturer
271	Brenda Boonabana	Lecturer
272	Florence Muhebwa	Assistant Lecturer



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