



MAKERERE UNIVERSITY

COLLEGE OF AGRICULTURAL AND ENVIRONMENTAL SCIENCES (CAES)

PRINCIPAL'S 5TH QUARTELY REPORT

APRIL TO JUNE, 2015

Foreword

This is the Principal's 5th Quarterly report that highlights the major activities and achievements in the College of Agricultural and Environmental Sciences (CAES) between April and June 2015.

The college successfully conducted the major academic activities. The report also outlines some of the efforts by staff and students to reach out to the communities and strengthening collaboration both at national and international scene.

The report highlights some efforts geared towards improving on the training, research, resource mobilization and knowledge transfer to society.

Abbreviations

AGRA	Alliance for the Green Revolution in Africa
CAES	College of Agricultural and Environmental Sciences
CEES	College of Education and External Studies
CEDAT	College of Engineering, Design and Art
CoBAMS	College of Business and Management Sciences
CoVAB	College of Veterinary Medicine, Animal Resources & Bio security
CSRL	Centre for Sustainable and Rural Livelihoods
NARO	National Agricultural Research Organisation
NAADS	National Agricultural Advisory Services
NEMA	National Environmental Management Authority
SAS	School of Agricultural Sciences
SFTNB	School of Food Technology, Nutrition and Bio engineering
SFECS	School of Forestry, Environmental and Geographical Sciences
CAPSNAC	Regional Capacity building for Sustainable Natural Resource Management and Agricultural productivity under climate change
DRGT	Directorate of Research and Graduate Training
ELISA	Linked Immuno Sombet Assay Machine
MUARIK	Makerere University Research Institute Kabanyolo
MUBFS	Makerere University Biology Field Station (MUBFS).
NBDB	National Biodiversity Data Bank
NOKS	Norwegian Koner
IMCDA	The Improved Masters Project In Caltivar Development
PCR	Polimeris Chain Reaction Enzyme Machine
SEE	Solve the Equation East Africa
SUA	Sokoine University of Agriculture
USAID	United States Agency for International Development

Contents

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Foreword.....	2
Abbreviations.....	3
INTRODUCTION	6
Vision:	6
Mission:	6
1.0: TEACHING AND LEARNING.....	7
1.1: Programs	7
1.2: The University wide Curriculum Review process	7
1.3: Proposed Programmes	8
1.4: Proposal to Change Name of Department	8
1.5: Results of Semester 1	8
1.6: Semester II 2014 -2015 Examinations.	9
1.7: Recess Term.....	9
1.8: Students' population	9
2.0: INNOVATIONS IN TEACHING	10
2.1: An e - learning centre opened at the School of Food Technology	10
2.2: Students trained in Entrepreneurship	10
2.3: Staff trained to develop Multi-media E- learning Modules under the KOYOKA Project.....	11
2.4: Library Services.....	12
2.4.1: Collection	12
2.4.2: Library Staff.....	12
2.4.3: Services and Achievements.....	13
3.0: INFRASTRUCTURE DEVELOPMENT	14

3.1: Sida and Makerere University fund the centre for waste management in Kabanyolo	14
3.2: Research Grants Office opened	14
3.3: MUARIK Microbiology Laboratory equiped	15
4.0: RESOURCE MOBILISATION AND COLLABORATIVE EFFORTS	16
4.1: AGRA funded program worth USD 2.6 million towards training of Plant Breeders for Uganda and other countries Launched	16
4.2: Building the Alumni data base.....	16
4.3: New projects	17
4.4. New Collaborations /MoUs	19
4.5: Visits	19
4.5.1 CAES hosts the EU Ambassador H.E. Mr. Kristian Schmidt	19
4.5.2: A team from University of Gezira visits Makerere	19
5:0 INFRASTRUCTURE DEVELOPMENT /EQUIPMENT ACQUIRED	21
5.1: MUARIK Bio technology laboratory boosted.....	21
5.2: SEE Students Entreprenuership club get computers and TV screens.....	21
5.3 : eLEFANS procures 23 computers and other equipment for the e –learning centre	21
5.4: Update on the process of purchasing a generator for CAES	21
6.0: OUTREACH ACTIVITIES	23
6.1. Entrepreneurship Students’ Club under SEE project hold first exhibition.....	23
6:2 :NBDB Stakeholders hold Consultative Meeting.	23
6.3 The 2015 CAES Students Exhibition held.....	24
7.0: Progress at MUARIK	25

INTRODUCTION

Makerere University College of Agricultural and Environmental sciences (CAES) is one of the nine colleges of Makerere University. It was formed by the integration of the Faculty of Agriculture, Faculty of Forestry and Nature Conservation, Makerere University Institute of Environment and Natural Resources (MUIENR) and the Department of Geography.

Currently, CAES comprises three schools, i.e. School of Agricultural Sciences, School of Food Technology, Nutrition and Bioengineering and the School of Forestry, Environmental and Geographical Sciences.

Each of the Schools is made up of departments which administer and deliver academic programmes at undergraduate and graduate level as tabulated below:

CAES Schools and Departments

College	Schools	Departments
College of Agricultural and Environmental Sciences (CAES)	School of Agricultural Sciences	<ul style="list-style-type: none">• Agricultural Production• Agribusiness and Natural Resource Economics• Extension & Innovation Studies
	School of Forestry, Environmental and Geographical Sciences	<ul style="list-style-type: none">• Forestry, Bio-Diversity and Tourism• Environmental Management• Geography, Geo Informatics and Climatic Sciences
	School of Food Technology, Nutrition and Bio-engineering	<ul style="list-style-type: none">• Agricultural & Bio systems Engineering• Food Technology and Human Nutrition

The college has two institutes that handle research. These are Makerere University Research Institute Kabanyolo (MUARIK) and Makerere University Biology Field Station (MUBFS). The college has 14 centers serving as a base for knowledge transfer partnerships.

Vision: “To be a leading institution of academic excellence and innovations in Africa”.

Mission: “To advance training, knowledge generation and service delivery in order to enhance agricultural development, sustainable natural resource utilization and environmental management.”

1.0: TEACHING AND LEARNING

1.1: Programs

CAES is one of the largest and certainly the most multidisciplinary offering Agriculture (both Crop and Animal) programs, Agribusiness and Agricultural Economics, Agricultural Extension and Innovations, Horticulture, Agricultural Engineering, Food Science and Technology, Nutrition, Forestry, Biodiversity, Environmental Sciences, Geography and Tourism.

The college offers a total of 14 Undergraduate and 28 graduate programs and recently graduated 10 PhDs-highest in the University

1.2: The University wide Curriculum Review process

It is a University policy requirement that academic programmes are regularly reviewed (after every completion of a cohort. This is most relevant in responding to the changing demands for the type of graduates by the end users. Other purposes for the review included removing any duplication in programmes and course units; removing any redundant course units and/or programmes; enriching the content of the curricula to address current and emerging national and global challenges; and harmonising course units including the minimum graduation load.

CAES started the process of reviewing its curriculum in October 2014. The process has been in phases involving Convening School Academic Board meetings to plan the review process. The Boards formed discipline sub-committees to identify any overlaps and duplications in the programmes and course units; identify any redundant programmes and courses units; suggest appropriate levels (year and semester) when a course unit should be offered, consult staff in the various disciplines and departments and give recommendations to the School Board.

The second process involved school Sub-committees making presentations to the School Academic Board which discussed and enriched their recommendations.

This was followed by Schools holding Stakeholders' retreat including participants from sister Schools in the College of Agricultural Sciences, representatives from the Directorate of Quality Assurance Makerere University, Directorate of Research and Graduate Training (DRGT), and Academic Registrar's Department. Participants from outside Makerere included representatives from Ministry of Agriculture, Animal Industries and Fisheries (MAAIF), NAADS, NARO, ASARECA, Sasakawa Global 2000, Centenary Bank and other NGOs and Private sector. The general objective of the retreat was to engage stakeholders in agreeing on what the curriculum of the School should look like in order to produce graduates with the required profile.

Smaller committee of School academic staff were formed and held retreats to synthesise the input from the Stakeholders' retreat, realign the programmes and course units in a way that addresses the desired profiles of the graduates, and produce a draft revised curriculum.

Draft revised curriculum have been produced and the next stage is assigning codes to the various course units and Reviewing/developing the content of the course units, mode of delivery, and structuring the curriculum to the standards of National Council for Higher Education.

1.3: Proposed Programmes

The curriculum review process also identified new Programmes that need to be developed in order to address the current national and global issues in the agricultural sector. The proposed Programmes are listed below.

Proposed Programme in the School of Agricultural Sciences	Duration
BSc. Water and Irrigation Engineering	3 Years
BSc. Bioprocessing Engineering	3 Years
BSc. Animal Science and Husbandry	3 Years
BSc. Agricultural Economics	3 Years
Bachelor of Rural Economy and Cooperative Management	3 Years
MSc. Integrated Animal Production Systems	2 Years
MSc. Horticulture	2 Years
MSc. Natural Resource Economics	2 Years

1.4: Proposal to Change Name of Department

Based on the review of course units and related Programmes, it was noted that the name of one of the Departments; Department of Agribusiness and natural Resource Economics, does not well reflect and describe the current and the proposed mandate. A new name has therefore been discussed and agreed upon as Department of Agribusiness, Agricultural and Applied Economics.

1.5: Results of Semester 1

All semester I results were handed in on time and CAES has been commended as one of the colleges giving in results in time due to the efforts of the instructors, coordinators and registrars. No major issues were recorded during the examinations. However, CAES was accused by the Academic Registrar for permitting students who have not cleared their fees to sit for examinations

1.6: Semester II 2014 -2015 Examinations.

Semester II 2014-2015 Examinations started on 5th May 2015 and ended on 30th May 2015. 2038 students registered for Semester II examinations. The examinations were generally well conducted. This was the first time the permit system was done at the college level unlike the previously done at Senate. This provided easy access to students to reprint permits alleged to have been lost. However, the college recorded one case of permit forgery. The accused student is to be summoned by the School's Academic Irregularities Committee for interrogation.

1.7: Recess Term

The recess term officially opened on 1st June 2015 for those students who went to MUARIK. Other students who go for internship in other public and private companies were dispatched off on 8th June, 2015 including those from the School of Forestry, Environmental and Geographical Sciences who left for Nyabyeya Forest College and Budongo Conservation Forest. Although the students had already been dispatched to the field, some had not received their recess term money from the centre. The total budget for internship was 260 million shillings but only 40 million was released by the centre. Students and instructors have to adjust and work within that budget as they wait for more releases.

1.8: Students' population

The College has a large and diverse student population totaling 2497 students. Of these 60% are male and 40% female. 1149 are from the School of Forestry, Environmental and Geographical Sciences (SFEGS), 1050 from the School of Agricultural Sciences (SAS) and 298 are from the School of Food Technology, Nutrition and Bio engineering (SFTNB).

2.0: INNOVATIONS IN TEACHING

2.1: An e - learning centre opened at the School of Food Technology

An e- learning centre fully furnished with equipment worth 42, 000 Euros was opened at Makerere University's School of Food Technology, Nutrition and Bio engineering (SFTNB). The centre was unveiled during the opening ceremony of the one week's e- training workshop held at the SFTNB held on Tuesday 23rd June, 2015.

The establishment of the e-learning center at Makerere University was funded by the European union funded project titled, “ *Capacity building for, “ E-learning Network on Food and Nutrition Security with partner universities in Eastern Africa and Europe (eLEFANS).*”

The overall objective is to create and strengthen capacity of target institutions by improving access to quality and affordable higher education in the area of Food and Nutrition Security through internet based learning.

eLEFANS is a three year ACP EU Cooperation Program in Higher Education (EDULINK II) implemented by six universities : Makerere, Egerton, Kenyatta, JKUAT, and Hawassa (East Africa) and University of Ulm, Germany (Coordinating University) Europe. The project has purchased 23 desktop computers, a laptop, scanner , projector, a printer and a video camera for the e-learning centre.

The center was opened by the Ag. Principal CAES, Assoc. Prof. Gorettie Nabanoga, the Dean SFTNB Prof. John Muyonga and EU Project Coordinator, Prof. Micheal Leichsenring. Other special guests included the Eastern Africa Co ordinator Prof. Aselimo Makokha and Dr. Susanne Dreschl-Bogale.

2.2: Students trained in Entrepreneurship

Solve Equation East Africa (SEE) Project conducted its first one -week's training for students on Applied Entrepreneurship and Practical Business Management. The training which started on Monday 1st June 2015 was officially closed by the Dean, School of Agricultural Sciences Prof. Johnny Mugisha on 5th June, 2015.

19 students from BSc. in Agriculture, Agribusiness, Horticulture and BSc. in Agriculture and Rural Innovations were given certificates of attendance. The objective of the training was to equip students with knowledge and skills to enable them start their own businesses instead of moving on streets looking for employment.

This first course titled, “Applied Entrepreneurship and Practical Business Management”, had two components starting with theory. Practical lessons involved taking students to the business incubation centre to practically engage in ice cream making to help them break the fear of selling. After the field experience students will

be required to prepare sales details including profit and loss accounts.

The trainings prepared in modular form covered a number of topics including Introduction to Entrepreneurship, Business Plan Writing, Establishment of a Small and Medium enterprises and Sourcing finances. Other topics include Business Management, Economic Policy and Trade Instruments, Value Chain Analysis, Strategic Marketing and Customer Service.

Small teams of five students will be provided mentors in reorienting business in 6 months. The project has planned a total of 12 trainings to be delivered once in every two months to enable students get the best business practices and advise.

Plans are underway to digitalise the course on the website and using multi media. Three IT students and two business school students have been brought on board to start on the digitisation of the course to increase the project outreach and this would be ready in the next three months.

SEE is a collaborative project within the member universities in East Africa trying to change the mindset of University graduates from thinking about job seeking to job creation by imparting several skills including entrepreneurship. SEE Project and the Makerere University Students' Entrepreneurship Club were launched in at Makerere University in March, 2015 at the School of Agricultural Sciences.

The project structure involves a training component, curriculum development and linkages with banks to give start up loans to students. Other activities according to the project coordinator include mentoring activities for all students who would have started a business and outreach programs to different people within their localities who would have already started businesses

2.3: Staff trained to develop Multi-media E- learning Modules under the KOYOKA Project

A multidisciplinary team of 11 members of staff from Makerere University had an intensive two weeks training to build their capacity to develop multi - media supported e - learning materials. The team comprised education engineers, teachers, audio visual, ICT and graphic experts from different units.

The training was organised by the Department of Extension and innovation studies together with European partners and the Department of Distance and Open Learning under the project titled, "*Listen and Understand: International Network for Co-operative Production of On-Line Teaching Materials (KOYOKA project)*".

The training took place from 18th - 29th May, 2015 at the Makerere University Main

Library Extension Multi Media room. Three instructors from France namely Mailys Luye , Pierre Aragon and Didier Pilot were in the country to conduct the training.

The training involved hands on training in the production of multimedia supported e-learning materials using the PhD field - based module in Agricultural and Rural Innovation (ARI) which was implemented by Makerere University in January 2014 for a start. The training also involved going to the field to record materials, editing and organising the materials for educational purposes in line with the course learning objectives.

The project also procured modern state - of -the -art equipment worth 8,160 Euros installed at the Department of Extension and Innovations Studies. The equipment includes a professional video camera and all its accessories, two MAC computers and TV monitors to be used in the production of multimedia e - learning materials.

The equipment is part of the KOYOKA project donated by the Graduate French Research Institute and Montpellier SupAgro in partnership with Makerere University mainly to develop a shared e-learning module between European PhD Module and ARI PhD in Agriculture based in Makerere University.

2.4: Library Services

The College of Agricultural and Environmental Sciences Library is part of the University Library system. CAES Library serves the entire college academic and administrative community. CAES Library has branches in the different schools and departments i.e. Forestry Library, DEM Library, DAP Library, MUARIK Library, Geography Library, Food Science Library and MUBFS Library.

2.4.1: Collection

The Library resources include; Textbooks, Theses and Dissertations, Reports, Newspapers, E-resources (such as TEEAL, AGORA, OARE and CAB compendia) and many other materials.

Many departmental book banks have been amalgamated to consolidate the Library Collection in areas with better service delivery. The Animal Science book bank and Agricultural Economics book bank have been shifted to Soil Science (DAP) and Forestry Libraries.

2.4.2: Library Staff

CAES Library has 6 members of staff on permanent terms and 2 staff on Contract basis. Among the Library staff, 1 is an academic Librarian and 1 is administrative.

2.4.3: Services and Achievements

The Library provides Reference services, book lending, and information literacy services to the user community. During the first half of the year 2015, the Library has successfully conducted E-resources and Reference Management trainings to the Undergraduate and postgraduate students, as well as staff.

Through CAES Librarian's participation in Mendeley certification programme, the University received 500 upgraded accounts for Mendeley Reference Management tool.

As part of the TEEAL Leadership programme, the Library has done outreach services to different institutions, including Busitema University, Uganda Christian University, Gulu University, Kyambogo University, Uganda Martyrs University, and Ankole Western Institute of Science and Technology (AWIST).

3.0: INFRASTRUCTURE DEVELOPMENT

3.1: Sida and Makerere University fund the centre for waste management in Kabanyolo

SIDA injected 100 million shilling towards buying the equipment for this Waste Management centre. Similarly, Makerere University during its Management meeting held on 25th February, 2015 approved the release of 35.2 million shillings as top up to complete the rehabilitation of the centre of excellence in Waste Management at MUARIK. Prof. Sabiiti is taking up the necessary follow up action.

3.2: Research Grants Office opened

CAES opened the Research Grants Office to assist staff in securing resources to support cutting edge research, innovation and outreach to the community. This is third pilot Grants office in Makerere University including the College of Health Sciences and the College of Humanities and Social Sciences.

The CAES Research Grants office has been renovated and furnished with financial support from SIDA Carnegie Foundation through the Directorate of Quality Assurance and the Directorate of Graduate Research and Training (DGRT) at an estimated cost of \$7000. The cost also covers remuneration of the Desk Officer for one year. The office space was offered by the Dean, School of Forestry, Environmental and Geographical Sciences (SFECS) Prof. Mnason Tweheyo.

The office was opened on 26th May, 2015 by the Vice Chancellor who was represented by the Ag. Deputy Vice Chancellor, Academic Affairs Prof. Fred Masagazi at the SFECS. The function was also graced by officials from Makerere University's Directorates of Quality Assurance and the DGRT, CAES student leaders and other university staff.

The Principal identified a senior staff Prof. Moses Tenywa Makooma as Grants Office Coordinator to champion this initiative and has offered services with no salary.

The CAES Grants office is timely for building resource mobilisation capacity and guiding proposal development process, improving ability of staff to identify and respond to funding opportunities, prepare and submit quality proposals and manage resources to provide value for money.

This institutional initiative is envisioned to complement ongoing individual efforts to use the state of the art technologies, internet and mobile phones for communication and organise trainings for writing winning proposals. The office will also help in editing proposals developed by staff; promoting dissemination of research products and satisfy requirements of development partners.

3.3: MUARIK Microbiology Laboratory equipped

The college acquired the modern state-of-the-art equipment for the Microbiology laboratory at MUARIK under the new project dubbed, “ *The Improved Masters Project In Cultivar Development (IMCDA)*” funded by the Alliance for a Green Revolution in Africa (AGRA) coordinated by Dr. Richard Edema.

The acquired equipment includes the Geno grinder worth USD 21,000. This is an automated system to study genetics and DNA. It has a capacity to grind 380 plant samples in three minutes. Previously, lab scientists used a manual motor to grind and this would take 3 weeks to grind the same amount of plants.

The other equipment acquired are the Polymerase Chain Reaction (PCR) that allows the multiplicity of DNA and the Enzyme Linked Immunosorbent Assay (ELISA) for routine detection of pathogens that affect plants like bacteria, fungi and viruses.

4.0: RESOURCE MOBILISATION AND COLLABORATIVE EFFORTS

4.1: AGRA funded program worth USD 2.6 million towards training of Plant Breeders for Uganda and other countries Launched

A five year project worth USD 2.6 Million was on 10th April, 2015 launched by the Deputy Director, Directorate of Research and Graduate Training (DRGT) Prof. David Owinyi Okello at Makerere University Research Institute Kabanyolo. Also present was AGRA Program Officer Dr. Rufaro M Madakadze, the Principal CAES Prof. Bernard Bashaasha, staff and students of the Cohort IV.

The new project dubbed, “ *The Improved Masters Project In Cultivar Development (IMCDA)*” funded by the Alliance for a Green Revolution in Africa (AGRA) is coordinated by Dr. Richard Edema and implemented in the Department of Agricultural Production. The goal is to train (30) scientists at a Masters level in Plant Breeding and Biotechnology and /or Seed Systems and Technology and Business from Rwanda, Ethiopia, Kenya, Tanzania and Uganda.

The other goal is to provide shorter term skills enhancement course for staff, support visiting instructors in specialised programs, review the curriculum for wide scale use and accessibility for improving post BSc. training in breeding, establish a cow pea breeding program and manage an internship program for completing students in reputable seed companies.

The project will also focus on development of e-learning materials in cooperation with IOWA State University, Kwame Nkuruma University of Science and Technology (Ghana) and KwaZulu Natal University (S. Africa)

The project also secured the modern state-of –the - art equipment for the Microbiology laboratory at MUARIK includeing the Geno grinder, the Polimeris Chain Reaction (PCR) that allows the multiplicity of DNA and the Enzyme Linked Immuno Sombet Assay (ELISA) for routine detection of pathogens that affect plants like bacteria, fungi and viruses.

4.2: Building the Alumni data base

In a bid to tap into the college Alumni, the Principals office funded an advert in the both the New Vision and the Daily Monitor requesting old alumni under faculties and new alumni under the collegiate system to register with the college. An online registration link and email were created. About 450 alumni with full details have so far registered. The college plans to hold a stakeholders meeting to brainstorm on the successes, challenges and way forward on how to improve on teaching research outreach and resource mobilisation.

4.3: New projects

NO.	PROJECT TITLE	PRINCIPAL INVESTIGATOR (PI)	TOTAL BUDGET	FUNDER	STAR T DATE	END DAT E
	Knowledge Management Systems for Climate Change Adaptation in Six Cattle Corridor Districts	Dr.Michael Mboga Department of Forestry, Bio diversity and Tourism	UGX 349, 155,000	Food and Agricultural Organisation (FAO)	1st April 2015	31 st Aug 2015
	Improving pig Productivity: Diversifying piglet nutrition options and upscaling Artificial Insemination in Uganda(DIVERSE - PIG)	Dr. Donald Rugira Kugonza Department of Agricultural production	UGX 225,517,500	National Agricultural Research Organisation (NARO)	2 nd May 2014	2 nd May, 2016
	Putting Nitrogen fixation in Africa Phase II (N2 Africa II)	Dr. John Baptist Tumuhairwe Department of Agricultural production	US \$ 20,000	International Institute of Agriculture (IITA)	1 st April 2015	31 st March 2016
	Video for Farmers (VFF)	Dr. Haroona Seguya and Assoc. Prof. Paul Kibwika Department of Agricultural Extension and Innovation Studies	35, 520 Euros	Access Agriculture Kenya	30 th May 2013	December 2016

	International Initiative for Impact Evaluation	Prof. Bernard Bashaasha and Dr. Fredrick Bagamba Department of Agribusiness and Natural Resource Economics	US \$ 746,055	Global Development Network	15 th April 2013	14 th April , 2016
	Reduction of post harvest and Value Addition	Dr. Susan Balaba Department of Forestry, Biodiversity and Tourism	264, 000 Euros	University of Kassel Germany	June 2013	June , 2017
	Domestication of Tetra Pleuratetra for livelihood improvement in Tropical Africa	Esther Kemigisha	USD\$ 15,300	International Foundation for Science(IFS)	15 th April 2015	15 th April 2017
	New Africa Brazil market place research project titled , “Enriching livelihoods of small scale hot pepper farmers through partnerships for germplasm improvement and adaptation”	Assoc. Prof. Jeninah Karungi Department of Agricultural production	US \$ 80,000		May 2015	2017

4.4. New Collaborations /MoUs

Collaborating institutions	Area of Cooperation	Month/Year
FAO Global Climate Change Alliance (GCCA)	Uganda Agriculture Adoption to Climate change	May, 2015
Tegemeo Institute of Agricultural Policy and Development, Egerton University and CAES	Collaboration in research and provision of measurement learning and evaluation (MLE) Services	March, 2015

4.5: Visits

4.5.1 CAES hosts the EU Ambassador H.E. Mr. Kristian Schmidt

The European Union (EU) in collaboration with Makerere University and RUFORUM hosted the EU Ambassador H.E. Mr. Kristian Schmidt on the 8th May, 2015. This event served to debrief the university about Erasmus Mundus Programme Scholarships for students & academics and also to profile and market the European Union support to Makerere University.

As part of this endeavor, Makerere University and RUFORUM hosted a half day visibility event from 9 am -12pm. The event included an exhibition of European Union Supported projects in agricultural related fields at Makerere University and other RUFORUM member universities. Speeches and presentations were also delivered.

The event was officiated by the European Union Delegation Ambassador H.E. Mr. Kristian Schmidt together with the Vice Chancellor Makerere University and other members of senior management.

This event was an opportunity for the university to profile its achievements as a center of excellence and tap into the scholarships opportunity for students and academics from the Erasmus Mundus program. Erasmus Plus is a new European Commission funding mechanism for higher education including scholarships for graduate students and staff mobility.

4.5.2: A team from University of Gezira visits Makerere

As part of implementation process of the Memorandum of Understanding between Makerere University (Uganda) and University of Gezira (Sudan), a delegation from the University of Gezira led by the Vice Chancellor Prof. Mohammed Warrag Omer

visited Makerere University on 27th April to 1st May 2015 to explore opportunities for strengthening collaboration between the two Universities.

In 2014, Makerere University (Uganda) and University of Gezira (Sudan) signed a Memorandum of Understanding (MOU) to foster cooperation in the field of research and higher education.

During the visit, the two parties discussed how the signed Makerere-Gezira MOU can be implemented. Agreed areas of collaboration included research, outreach and training (staff exchange, Graduate Teaching Assistantship, and graduate training).

5:0 INFRASTRUCTURE DEVELOPMENT /EQUIPMENT ACQUIRED

5.1: MUARIK Bio technology laboratory boosted

The new project dubbed, “ *The Improved Masters Project In Caltivar Development (IMCDA)*” funded by the Alliance for a Green Revolution in Africa (AGRA) secured the modern state-of –the - art equipment for the Microbiology laboratory at MUARIK. This includes the Geno grinder worth USD 21,000. This is an automated system to study genetics and DNA. It has a capacity to grind 380 plant samples in three minutes. Previously, lab scientists used a manual motor to grind and this would take 3weeks to grind the same amount of plants. The other equipment acquired are the Polimeris Chain Reaction (PCR) that allows the multiplicity of DNA and the Enzyme Linked Immuno Sombet Assay (ELISA) for routine detection of pathogens that affect plants like bacteria, fungi and viruses

5.2: SEE Students Entrepreneurship club get computers and TV screens

The students Entrepreneurship Club under the project, “ *Solve the Equation East Africa*”, (SEE) funded by Master Card in the United States procured two computers and TV screens to show successful entrepreneurs to interest the youth to use their own skills to create their own jobs rather than seeking for employment after graduation. The preliminary stage of the project (2014-2016) has a budget of \$ 350, 000 and \$ 21,000,000 for the next eight years for follow up activities. The project structure involves a training component, curriculum development and linkages with banks to give start up loans to students.

5.3 : eLEFANS procures 23 computers and other equipment for the e –learning centre

The project code-named eLEFANS purchased 23 desktop computers, a laptop, scanner , projector, a printer and a video camera for the e-learning centre. The overall objective is to create and strengthen capacity of target institutions by improving access to quality and affordable higher education in the area of Food and Nutrition Security through internet based learning.

eLEFANS is a three year ACP EU Cooperation Program in Higher Education (EDULINK II) implemented by six universities : Makerere, Egerton, Kenyatta, JKUAT, and Hawassa (East Africa) and University of Ulm, Germany (Coordinating University) Europe.

5.4: Update on the process of purchasing a generator for CAES

The contract is now with the solicitor general (as required by law) given the amount of funds

1. Wrote to Estates Department to provide Specifications of the Generator and bills of Quantities for Installation on **17th December 2014**.
2. Estates Department responded on **12th Jan 2015** with the Specifications of a Generator and the Bills of Quantities.

3. On **14th Jan 2015**, forwarded the requisition for Purchase and Installation of the Generator to the University Secretary with the specifications and Bills of Quantities for Authorization of Purchase.
4. The University Secretary Authorized the Purchase of the Generator on **27th Jan 2015**.
5. The Requisition was sent to Procurement Unit on **27th Jan 2015** after authorization by the US to Procure the Generator.
6. Procurement Unit wrote **4th Feb, 2015** to the University Contracts Committee to approve the Procurement Method to be used for purchase of the Generator.
7. Procurement Unit issued A Solicitation Document (Bid Document) on **11th Feb 2015** bidding period was 12 working Days and closure of bidding period was on **26th Feb, 2015**
8. Bid Opening was done on **27th February, 2015**.
9. Evaluation of the Bids was done on **10th March, 2015**
10. An Evaluation Report was presented to University Contracts Committee for Approval on **19th March, 2015** by the Procurement Unit.
11. After approval of the Evaluation Report, the **Best Evaluated Bidder Notice** was displayed for 12 working days from **30th March to 14th April, 2015**
12. After display period **A draft Contract** was prepared by the Procurement Unit and sent to the Solicitor General's Office for approval on **21st April, 2015** (since the purchase exceeds UGX200 million); they were expecting it back on **30th April, 2015**. When the draft contract is approved then the final copy is drafted and signed.
13. The Generator is then supplied after the supplier has signed the contract.

6.0: OUTREACH ACTIVITIES

6.1. Entrepreneurship Students' Club under SEE project hold first exhibition

The Makerere University Students' Entrepreneurship Club under the Solve the Equation East Africa (SEE) held its first innovators exhibition at the School of Agricultural Sciences.

The students' enterprise on the production of Liquid Organic Fertilisers led by Owachgiu Job emerged as best exhibitor and was awarded a prize. The Liquid Organic Fertiliser is made from the composition of droppings of farm animals, fresh leguminous leaves harvested before flowering mixed with water. This fertilizer is applied to plants at their critical stages like at the beginning of flowering to supply Nitrogen, Potassium and Calcium. The advantage with this technology is that it is cheap to prepare, environmentally friendly and readily supplies nutrients to plants.

The students exhibited various technologies including the Aesthetics of Horticulture in Sub-saharan Africa, the Urea Molasses Block with different ingredients, local salt from banana peelings both in liquid and powdered form that can be used in animal feeds. Exhibition goers were also treated to a drink of the Instant sorghum porridge whose aroma and taste has been enhanced by adding soya bean flour and caffeine, the Sweet spok cookies with a unique taste and appearance that appeals to the consumer at the first glance. Other value added products exhibited included natural honey without additives, Purely unsalted paste from Rosemary powder, Gnuts and Simsim. Also unique was the localised non- electric aquarium that can be used on limited space and homes to produce fish or used as beautifiers on the balcony and indoors.

The Makerere University Students' Entrepreneurship Club was launched at the School of Agricultural Sciences on 7th March, 2015. The club is an initiative under the project, "Solve the Equation East Africa (SEE). SEE is a collaborative project within the member universities in East Africa trying to change the mindset of University graduates from thinking about job seeking to job creation by imparting several skills including entrepreneurship.

6.2 :NBDB Stakeholders hold Consultative Meeting.

The meeting held on 9th April, 2015 at Protea Hotel Kampala, jointly sponsored by USAID together with the Government of Uganda was aimed at reviewing the challenges facing the National Bio-Data Bank (NBDB), proposing strategies for revitalising its operation. The bio-data bank paused its operations for over a year due to inconsistent funding and management issues.

The meeting attracted various key players in the biodiversity and nature conservation sector, with a spectrum of members coming from various organisations such as; Makerere University, Wildlife Conservation Society (WCS), National Environmental Management Authority (NEMA), Total E&P, Nature Uganda, National Agricultural Research Organisation (NARO). USAID TETRA-TECH project among others.

The meeting was as a timely act to review and strengthen the centre's position and usefulness in the wake of global climatic challenge and biodiversity loss. Stakeholders were called upon to renew their support and corporation as the university moves to resolve the issues that led to halting of its operations.

Stakeholders expressed the need for standards to check for accuracy and regulate the quality of data gathered for biodiversity data bank and to recruit skilled and qualified staff. The meeting resolved to form a board and a committee with the role of overseeing and advising on the operations of the bio-data bank to ensure its sustainability and growth. Representatives from several organisations pledged their organisations' support

6.3 The 2015 CAES Students Exhibition held

The 2015 CAES Students two days exhibition was on 9th April 2015 opened at the Makerere University Freedom Square by the Deputy Vice Chancellor Academic Affairs (DVC AA) Dr. Okello Ogwang.

This year's exhibitions sought to disseminate and showcase the different research and innovation products of the students and inspire the youth to take on agriculture as a business under the theme, "*Youth Innovations in Agricultural and Environmental Management: A Panacea to Food Insecurity and Expansion of Small and Medium size Enterprises in the Agricultural Sector*".

Students from the School of Forestry, Environmental and Geographical Sciences exhibited less utilized timber products such as bamboo products and handmade paper and clean energy utilization. In tourism, they exhibited Gorilla conservation and Cultural tourism while in environment, they showcased the recycling and reuse of polythene bags to enhance solid waste management.

From the School of Agricultural Sciences, students exhibited mushroom production and products, Beetroot production and juice making, urea molasses mineral blocks for livestock, fish farming and modern packing for smoked fish and pumpkin products.

A variety of value added products were showcased from the School of Food Technology, Nutrition and Bioengineering. The students also set and demonstrated various nutritional practices, diets and practically carried out tests and raised awareness on obesity, diabetes and blood pressure.

7.0: Progress at MUARIK

Following the recruitment of the Director MUARIK Dr. Phinehas Tukamuhabwa and the recruitment of the Farm Manager Mr. Jimmy Wesiga, a number of activities have been undertaken .

The following have been renovated

- The Parvillion
- Dairy unit
- Farm Managers block
- Directors block including lecture theatre 1
- Fencing (half of the institute been fenced)
- Piggery unit funded by Prof. Jacob Agea
- Farm Managers house

The following activities have been undertaken

Unit	Activities undertaken
Coffee	Fresh pruning and gap filling by replacing near the road
Demonstration site	Have established permanent demonstration site for different innovations at the main gate entrance. Currently have vegetables, fruits and soya bean
Piggery	Stocked with female pigs from zero, four have already produced, currently have a stock of 30 piglets Dr. Donald Kugonza plans to renovate one piggery unit for his project
Poultry	Restocked from zero with 1000 layers and 1000 broilers
Horticulture	Initiated horticultural gardens. A mango and orange nurseries have been established
Maize	There is ongoing production of maize and soya bean. Have the capacity of producing maize and soya bean which are well weeded for the first time.
Feed Mill	Now running and soon to process maize flour
Forest	Forest of Eucalyptus being established
Water tanks	Have been renovated after leaking for ten years
Animals	24 animals have been maintained and diseases controlled. The farm has utilised the services of a vet doctor and drastically reduced on the loss of the dairy animals.
Earthworm breeding	Dr. Fred Kabi is constructing a structure near the parvillion
Hostels	Most of them been renovated
Hay	Pasture garden being established

Plans

- Expand on maize and soya bean production to feed into the feedmill
- Work on the roads
- More labourers needed
- Move from manual weeding and planting to machine operations