MAKERERE UNIVERSITY

P.O. Box 7062 Kampala Uganda
Cables: "MAKUNIKA"
Website: www.mak.ac.ug

Tel: +256-414-531202
Fax: +256-414-541068
E-mail: pro@admin.mak.ac.ug

OFFICE OF THE VICE-CHANCELLOR
PUBLIC RELATIONS OFFICE

3rd March 2010

To: Members of Staff

THE THIRD VICE-CHANCELLOR'S MONTHLY PRESS BRIEFING, HELD ON MONDAY 1st MARCH 2010

Introduction

The Ag.Vice-Chancellor, Professor Venansius Baryamureeba welcomed the journalists to the third monthly press briefing. He said the media briefing presents the University Management and participating units with an opportunity to showcase reforms at the University; groundbreaking research and projects; and innovations.

Professor Baryamureeba informed journalists that the Faculty of Agriculture and the Institute of Environment and Natural Resources were participating in the media briefing.

In attendance were:

(i) Prof. Lillian Tibatemwa-Ekirikubinza – Ag. DVC (Academic Affairs)
(ii) Prof. Samuel Kyamanywa – Dean, Faculty of Agriculture
(iii) Prof. Frank Kasiime – Director, MUIENR
(iv) Mr. John Wabwire – Director, Planning and Development Department
(v) Mr. Robert Kakembo – Representing the University Library
(vi) Dr. John R.S. Tabuti – Associate Professor, MUIENR
(vii) Dr. Phinehas Tukamuhabwa – Senior Lecturer, Faculty of Agriculture
(viii) Ms. Jane Frances Alowo – Member, Public Relations and Communications Advisory Board
(ix) Ms Rosemary Nakalanzi – Member, Public Relations and Communications Advisory Board
(x) Mr. G. Muhanguzi Muhumuza – Ag. Senior Legal Officer
(xi) Ms Ritah Namisango-Public Relations Office
(xii) Ms Mark Wamai- Public Relations Office
(xiii) Mr. Issa Agaba Mugabo-Public Relations Office

1.0 Acting Vice-Chancellor's briefing

1.1 A-Level leavers

Prof. Baryamureeba congratulated the Advanced level leavers upon the successful completion of their exams and subsequent release of their results. Citing media reports about candidates destined to miss out on University Admission, he encouraged the Media to refrain from publishing headlines that my cause prospective students to get anxious. He opined that A-level leavers through the media should be encouraged to apply to other institutions of higher education such as Degree awarding institutions, which require two principal passes; Diploma and Advanced Certificate awarding institutions in the categories of Business, Technical, Veterinary, Agricultural, Fisheries, Cooperative Colleges, Law Colleges – Law Development Center(LDC) and Teacher Training Colleges, which all require at least one principal pass; and Certificate awarding institutions, which require at least one O grade.

1.2 Update on upcountry campuses

The upcountry campus in Jinja opened its doors on 1st March 2010, initially offering one course, The Bachelor of Information Technology (BIT) with an intake of 10 students. However, applications would be exceptionally extended up to 30th March 2010 to give a chance to A-level leavers who sat for their exams in 2009 and are interested in pursuing the degree program at the Jinja campus.

The main focus will be on Jinja and in addition to the proposed Fort-Portal campus; another centre may be opened in Masaka, to cater for Central and Western regions. Below are the details of the courses to be offered.

Jinja: Faculty of Computing and IT – B.SC. in Computer Science; B. Info Technology
Faculty of Arts – Bachelor of Development Studies; Bachelor of Tourism
Fort Portal: Faculty of Technology- B.Sc. Land Economics; B.SC. Quantity Surveying
Faculty of Economics and Management: B.COM; BBA
Institute of Statistics and Applied Economics: B. Business Statistics; B.Sc. QE

These efforts indicate the commitment of the University Management to take education nearer to the people and students are encouraged to enroll at the upcountry campuses because they offer them affordable education and employment opportunities especially in secondary schools

1.3 Academic reforms

With regard to the Government White Paper, Makerere University has embarked on educational reforms. Currently, the Academic Restructuring Committee is analyzing all academic programmes; identifying duplications and proposing mergers where necessary. This will reduce the teaching load and therefore reduce the expenditure incurred on salaries. The implementation of the policy which requires the teaching staff to teach for at least ten (10) hours a week will optimize the human resources at the University. This will therefore reduce the additional costs incurred on labour. With these reforms, we shall ensure that by May 2010, the number of academic programmes is reduced by 30% to 40%; a step which will also lead to a **gradual** reduction of part-time teaching staff.

1.4 Infrastructural development

The New Library building will eventually occupy 8,000sq meters of space. The building has been constructed in two phases of two equal parts. The first phase of 4,000sq meters was completed, handed over to the University, and opened to library users in August 2007. The construction of the second phase started in October 2009. We expect to complete its construction in two years.

Currently, there are more ICT facilities in the 4,000sq meter extension. The entire building is fitted with a Local Area Network, OPAC (open public access catalogue) terminals and computers, with an Information Commons set up for the first time. This has greatly increased the library users' access to electronic information in the library and improved the student to book ratio to 1:21.

In addition, the University Library is fully integrating digitalization of data/content in its operations. We now have over 6000 online journals.

1.5 Improving accessibility

In a bid to improve access to Makerere University, and reduce congestion at the Southern (Main) and Eastern gates especially during rush hours, a need arose to open up a gate on the Western side into Sir Apollo Kaggwa road. This gate located next to the Faculty of Technology, is now fully operational. The feedback from users is positive and encouraging.

1.6 Updates

The university is endeavoring to remain in touch with its alumni and a mailing list alumni@lists.mak.ac.ug has been set up to facilitate this. Similar efforts have been put in place for the parents, parents@lists.mak.ac.ug, and former parents, formerparents@lists.mak.ac.ug. With regard to the University Hotline, Uganda Telecom (UTL) is in the final stages of setting up an information center; at no setup cost, where the public will be able to call in and request for information as well as provide some much-needed feedback. Calls to the hotline will be charged at the normal call rates.

1.6 Student research

As the University strives to entrench its research objective, students are being encouraged to start on research as early as the undergraduate level. For example, using field attachment as a proponent, the Institute of Environment and Natural Resources, attaches its students to districts, where students identify problems, write proposals, collect data, and thereafter defend their proposals in a session comprising fellow students and their lecturers. This not only builds a strong culture of research, but encourages the students to seek solutions to problems already existent in the districts, thereby fulfilling the outreach objective as well.

2.0 Dean, Faculty of Agriculture, Makerere University

Introduction

The Faculty of Agriculture which is one of the oldest Faculties in Makerere University is involved in Human capacity building, research and extension in Agriculture and Agriculture related activities. The Faculty has seven academic departments, one Research Institute and a Continuing Agricultural Education Centre based at Kabanyolo.

The Academic Departments include: Animal Science; Agricultural Engineering; Agricultural Extension Education; Agricultural Economics & Agribusiness; Crop Science; Soil Science; and Food Science and Technology.

Makerere Agricultural Research Institute Kabanyolo is the Research Arm of the Faculty while the Continuing Agricultural Education Centre (CAEC) is the extension wing of the Faculty.

The Faculty is contributing to National Development in a number of ways which include:

2.1 TRAINING

i) Undergraduate training: Every year, the Faculty contributes about 270 students graduate in various aspects of agriculture. To improve on the skills of the students, Makerere University Agricultural Research Institute (MUARIK) has adopted a leaving by doing approach also known as service leaving. Students from the Faculty and other tertiary institutions are hosted at Kabanyolo and undergo service leaving. This approach is now very popular among students.

ii) Postgraduate training: The Faculty is leading in postgraduate training in the country. On average, between 35-60 students graduate with Master of Science degree. Because of its academic excellence, the Faculty is hosting three region postgraduate programmes namely:

1. Bachelor of Agricultural and Rural Innovation
2. Master of Science in Plant Breeding and Seed Systems
3. PhD in Plant Breeding and Biotechnology

The Faculty is therefore building capacity for Uganda and the entire East African Region.

2.2 RESEARCH

The Faculty has over **80** on-going research projects in various aspects of Agriculture. This press brief, however, is concentrating on three aspects.

2.2.1 Production of new soybean varieties

Soybean production in Uganda had come to a stand still because of the out break of soybean leaf rust disease which was devastating soy bean crop throughout the country. To reduce the problem, the Faculty of Agriculture, through its soybean breeding program, responded by producing 3 new soybean varieties that are high yielding, more nutritive, early maturing and resistant to soybean leaf rust. These include Maksoy 1N, Namsoy 4M released in 2004 and Maksoy 2N released in 2008. As a result of these release, soybean yield has gone up to 3 tons per hectare . Under soybean rust infestation these varieties yield 3 times higher than the earlier varieties. These varieties will grow well wherever maize is grown, and don't demand any extra attention compared to the old varieties. .

The new varieties can be accessed in the following ways (i) through private seed companies. We are in private/public partnership with Mt Meru Seed company to supply soybean seed to farmers in Northern Uganda.. (ii) Farmers organization eg the seed has been given to Palisa Progressive Farmer Association,and Mayuge Farmers Association for distribution. (iii) NAADS and international NGO. The Seed has been given to CARE international to distribute to farmers in Northern Uganda.

Because of the good quality of these varieties, currently all the soybean varieties grown in this country are Maksoya lines; an indication that they are in high demand. They have been recommended in Nigeria and other countries in Africa by AGRA. It is important to mention that our Soybean breeding program is the best in sub-Saharan Africa.

It is important for the public to understand that these are not genetically modified varieties. They were developed through classical breeding approaches. The varieties will do very well wherever maize is grown. This is a good initial test before planting. However, if the land is very new (that is it has never grown soybean) the farmers may apply a rhizobia innoculum to enable soybean to start fixing its own Nitrogen. The other aspect the public should know is that the Faculty of Agriculture through its Department of Soil Science produces the Rhizobia on demand.

To help farmers understand the growing of these varieties we have provide a production manual and we are available for technical back stopping. Dr Phennihus Tukamuhabwa in the Department of Crop Science is the Scientists behind the new soybean varieties and is available for any technical back-stopping.

The soybean breeding work has been supported by the Vegetable oil development project of the Ministry of Agriculture Animal Industry and Fisheries, and the Alliance the Green Revolution in African (AGRA)


2.2.2 Tomato Variety MT56

The Faculty of Agriculture through its Department of Crop Science has also screened A Tomato Variety MT56 which is very resistant to Bacterial wilt of tomatoes. Bacterial wilt (caused by *Ralstonia solanacearum*) is one of the most serious disease of Tomatoes without easy means of controlling. Most farmers in the areas around the central regional are abandoning tomato production because of this disease.

The new tomato variety is resistant to the bacterial wilt disease and is high yielding. Professor Emeritus Rubaihayo of the Department of Crop Science is working on getting the variety officially registered and released by the Variety release committee. Some of the farmers groups in Busukuma- Wakiso and Mukono Districts have already started growing the variety.

This variety is not genetically modified. It was developed through classical plant breeding procedures.

2.2.3 Biotechnology

The Faculty has established a good Biotechnology laboratory which has produced many protocols (recipes) for banana tissue culture production; most of the protocols used in tissue culture banana in the region were developed by the Department of Crop Science. Tissue culture is the growing of plants from single cells. This technique enables the production of clean planting material (with out diseases) and their quick multiplication. Use of clean planting materials results in over 40% increase in yield of most of the vegetatively propagated plants like cassava, sweet potato, banana etc.

The Faculty has also developed molecular diagnostic tools for a number of diseases including banana bacterial wilt, sweet potato viral disease, cassava brown streak, passion fruit woodiness virus etc. Correct diagnosis is always the first step in successful management of any disease problem.

The Molecular diagnostic tools are based on the use of DNA of the disease causing organism. Therefore the tools are important for a number of reasons:-

- They are highly specific, accurate, and sensitive and timely which helps scientist to develop the right control techniques in a relatively short time.
- The tools help in supplying clean planting materials and stop the spread diseases. For example the diagnostic tools can be used to ensure that the suckers of banana to be planted do not have banana bacterial wilt diseases.

Finally we would like the public to know that the faculty of agriculture is involved in a number of activities aimed to helping the common person live a better life such activities include (i) agriculture innovation platforms which are helping farmers to link directly with the good and sustainable markets, (ii) development of new food processing procedures for value addition, (iii) Establishment of Business Incubation Centre to help people transform research results into commercially available products.

3.0 Director, Institute of Environment and Natural Resources, Makerere University

MUIENR carries out research and training in environment and natural resources. The Institute has several laboratories (Molecular Genetics Laboratory, Water and Wetlands Research Laboratory and Geographical Information Systems Laboratory) for research and teaching. These facilitate generation of data/ information required to improve our understanding of functioning of nature and how nature can be harnessed to improve our livelihoods in addition to building capacity through teaching and learning.

In the molecular Genetics Laboratory, molecular population genetic studies are done on a wide range of species and their pathogens. The purpose is to understand processes that are responsible for the generation and maintenance of the high biological resources in Uganda and Africa in general. It is through understanding these processes that we are able to design appropriate conservation strategies. We have worked with the Uganda Wildlife Authority (UWA) for instance to locate appropriate source populations for re-introduction. During the re-location of elephants from Luwero – Genetic studies established that the problematic Luwero population was a subpopulation of the Murchison Falls National Park population and as a result it was advised that the best place to re-locate the Luwero population was Murchison Falls National Park. There were less than 5 giraffes remaining in Kidepo Valley National Park.

In order to improve the survival chances of this population, there was urgent need to introduce some individuals from source population with relevant genetic affinities. Although there was a free offer of giraffes from Botswana, our studies indicated that there would be a survival problem if individuals were obtained from that source. The giraffes were eventually obtained from Kenya where our studies had indicated as best source population; genetic similarity.

We are also monitoring species that have been re-introduced or translocated to study their adaptation in their new localities. In the last 10 years, more than 20 species have so far been studied. Some of these species include the African elephant, common warthog and lions whose genetic diversity was found to be very low probably because their population sizes had been drastically reduced during the civil strife of the 1970s.

We are still monitoring these species to see if they recover naturally through movement of individuals from Virunga National Park in DR Congo. These are species that attract tourists and play an important role in the ecosystem, for example the elephants controls bushes (trees and shrubs). Their survival is therefore important not only for the ecosystem, but also for the economy. The other species such as Uganda Kob, Buffalo, Hippo, Hearbeast, Bush pig, Giant forest hog, Topi etc were found to harbor appreciable levels of genetic diversity with no apparent threat to their survival resulting from genetic adaptation. Results so far reveal unexpectedly different patterns of genetic divergence with wide ranging implications for conservation and management. In the last 10 years, over 40 publications have been generated and are being used to make management decisions and the trend has continued in recent years.

In the last 4 years, we have expanded our scope and are now trying to understand why some selected viral diseases persist despite the several control measure. Together with the Ministry of Agriculture Animal Industry and Fisheries (MAAIF), we have started with viruses that cause Foot-and-Mouth disease a highly contagious disease that undermines livestock productivity and marketing in the East African region.

Our hypothesis is that change in the genetic material of these viruses may underlie this phenomenon. We anticipate that results from these studies will go a long way in improving our control strategies in Uganda and the region. At the moment the lab has graduate students from the whole of the East African region; Kenya (1 PhD); 1 DR Congo (1 PhD), Tanzania (1PhD), Rwanda (1 Msc.) and Uganda (4). Some of the publications that have emanated from the genetics lab are indicated in annex 1.

In the water and wetlands research laboratory; research has been carried out water and wetlands resources with focus on assessment and monitoring. We have been able to demonstrate the importance of wetlands in water treatment and pollution control. Our results have influence policy by demonstrating the importance of urban wetlands like Nakivubo wetland. This wetland provides wastewater treatment function estimated at just over 1 million US dollars per annum.

The Ministry of Water and Environment is in the process of gazetting this wetland so that it can be used sustainably and continue providing wastewater treatment function. We have been studying the potential of different plants in pollution and flood control.

Our findings indicate that papyrus performs best in wastewater treatment and flood control because of its well developed root structure. Papyrus takes up more nutrients compared to other wetland plants and this in turn results in higher biomass production. The papyrus reeds resulting from this productivity are used in making fences and thatching of houses in addition to acting as fuel. Papyrus, because of its strong root-mat complex, is also able control floods by reducing the speed of running water in addition to having the ability to expand and contract; hence the ability to store flood water.

This partly explains why Bwaise where wetland vegetation has been replaced by infrastructure (buildings) frequently flood whereas the wetland portion between Hoima Road and Sentema Road, where most papyrus wetland vegetation still exists does not flood.

We work closely with government institutions like, the Wetlands Management Department in the Ministry of Water and Environment, the National Environment Management Authority, National Water and Sewerage Corporation and the Directorate of Water Resources Management. Currently we have 4 PhDs (2 from the Islamic University in Mbale, One from Gulu University and one from Makerere University) and 10 MSc students. Some of the publications that have emanated from the water and wetlands research laboratory are indicated in annex 1.

The Institute is also involved identifying, promoting and conserving useful plant species (ethnobotany). Our research in this area aims identifying priority species to which value could be added in order to create opportunities of benefit sharing by identifying markets for priority species (Table 1). Research results show that many plants are known to be useful by local communities. It is also clear that many of these useful plants, especially woody species, are threatened by over-exploitation, habitat conversion and habitat degradation. Some of the publications that have emanated from this research are also indicated in annex 1.

In collaboration with Tropical Aloe lands and some other NGOs we have started study projects to study the biology of priority woody species with a view to understanding their germination and early seedling establishment behaviours. This will ultimately contribute to their domestication.

……We build for the future……

Sincerely: Ms Ritah Namisango, Administrative Assistant – PRO