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## COLLEGE OF AGRICULTURAL AND ENVIRONMENTAL SCIENCES

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### PRESS RELEASE

#### **Integrating ICT in Agriculture as an extension service to address farmer's challenges**

Makerere University Agriculture Research Institute (MUARIK), has successfully piloted an ICT-based information sharing platform that has enabled farmers in South Western Uganda access information through Mobile Phones, Radio, website, Open and Distance Learning materials for Development (ODL4D)

This is part of the effort by Makerere University to address the problem of extension services in rural and hard to reach areas. One of the biggest challenges Ugandan farmers are facing is lack of access to extension service providers who can offer the right and timely information on best agricultural practices. On average the ratio of extension service providers to farmers stands at 1: 25000.

To address this problem, Makerere University signed a contract with the Commonwealth of Learning (COL) to test the efficacy of ICT use in Agriculture. The project was implemented by Makerere University Agricultural Research Institute Kabanyolo (MUARIK) in the districts of Kabale, Ntungamo and Kisoro in September 2009.

The project is an initiative by the Commonwealth of Learning (COL) called the Lifelong learning for farmers in Uganda (L3F) aimed at using ICT to disseminate agricultural extension information to rural farming communities. Other services include easing access to credit and markets, training farmers to engage in collective marketing, business planning, record keeping, credit and saving management so that agriculture can be looked as a business rather than a subsistence way of living.

The project leader Assoc. Professor Moses Tenywa with technical assistance from Daniel Ninsiima carried out a needs assessment survey to understand the information needs of farmers. Results indicated that mobile phone access in Kabale was about 65% with most farmers using their phones for direct calling and not SMS due to lower literacy levels. In Bubare Sub-county, it was found out that one extension worker had to cater for 46,000 farmers.

To enhance communication and information flow along the production-market value chain and allow agriculturalists to share information and widen the scope of local farmers, the team opted for a Voice Communication Technology alongside SMS, websites, local radio programs and Open distance learning materials. The team acquired an open source mobile based voice based application to provide timely and relevant information on markets, fertilizer application, timely planting, right spacing, prevention and control of diseases.

The technology is a basic set up of a desktop computer and a GSM device which takes in any sim card. The GSM device (Mobigator) is connected to the Desktop computer using the USB connection. Audio content from researchers, scientists and successful farmers is recorded using the mobile phone, edited and stored so that when

a farmer calls on the line in the mobigater they receive an interactive voice response. The voice directs the farmer to the number that gives access to the particular type of information they need. Farmers can make inquiries and follow voice instructions on their handsets and have an option of leaving an audio message file in form of a question so that the moment the technician hangs up on the site he can see and listen to what the farmer has said and respond.

The voice application was tested with information voiced in Rukiga to cater for farmers who cannot read or retrieve messages from their handsets. After successful testing, the team with enough resources, is ready to scale up the service for the benefit of all farmers in South Western Uganda

Farmers were also trained how to develop their own content in their local language and manage their own website to communicate about their daily lives, farming and marketing thus opening up avenues globally. They were also taught how to develop Open distance learning materials such as fresh and timely script and content drawing on their own experience for sharing with the rest of the farmers in sub counties on how to grow sorghum, spacing techniques, fertilizer application, disease and pest control etc.

However, the acquired GSM can only accommodate one sim card resulting to call jam which is worsened by power black outs. There is need to invest in GSM which can accommodate six lines and a back-up power source for better access by farmers. The college looks forward to our partners and government agencies like NARO and NAADS to revisit the program for adoption and scaling out for mass population.

### **About Life long Learning in Uganda (L3F)**

Lifelong learning for farmers in Uganda (L3F) is an initiative by Commonwealth of Learning (COL) in partnership with communities' organizations to make effective use of ICTs to facilitate learning for development to transform rural livelihoods in South Western Uganda through innovative ICT solutions along various product value chains. L3F was introduced as a pilot project in four villages in southern India in 2004. The success of this initiative led to the launch of Lifelong Learning for Farmers in Uganda in September 2009. The major aim of this initiative was to link producers, transporters, financial institutions and traders using innovative ICT tools to effectively work together to alleviate poverty. The program works with various innovation platforms that include the Bufundi Potato IP, Bubare Sorghum IP, Batwa Honey Value Chain and small scale potato traders in Kampala.

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