Proceedings of the East Africa Regional SAFE Networking Workshop

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PROCEEDINGS OF THE

EAST AFRICA REGIONAL SAFE NETWORKING WORKSHOP

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Compiled

by

Deribe Kaske
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OPENING SESSION  
Chairperson: Dr Charles Masangano

Self-introductions of the workshop participants and program overview  
Facilitator: Dr. Jeff Mutimba

Participants were asked to say one thing they want people to talk to them about and to introduce their name, Institution the participant was coming from and their position.

Welcome remarks by Dr Charles Masangano
SAFE’s current thrusts: by Dr. Deola Naibakelao

It is my great pleasure to join you this morning and participate in this important workshop. The timing of this workshop devoted to “Agricultural Value Chain-Oriented Curricula and Broadening Access to Training” is very much appropriate. As we all know, our current curricula are largely production biased. They focus mainly on technical aspects of agricultural production at the expenses of agricultural value chain as well as new emerging issues. Farmers and farmer organizations need to increasingly engaged in activities that add value along the agricultural value chain. They need to move in the direction of commercial (rather than subsistence) agriculture. This indeed requires greater entrepreneurial skills, both on the part of farmers and their organizations, and on the part of extension professionals.

Moreover, extension agents should move beyond simply providing farmers with information about standardized technological packages. They should provide advice and guidance that facilitate communication and coordination among many different stakeholders in natural resource management and market supply chains. They must be able to assist farmers in developing a range of options to address uncertainties brought about climate change, as well as government policy changes that can negatively affect the entire agricultural value chain. Dealing with these kinds of issues requires skills beyond the capabilities of most extension agents working with farmers today.

There is an urgent need for SAFE participating universities and colleges to review and revise their existing curricula; and develop new ones in light of new training demands from the field.

Ladies and Gentlemen, our current programs are based on full time residential instruction. There are several limitations in this model: 1) intakes are limited by available space in terms of dormitories, classrooms; library and computer facilities; 2) these programs also require that those that are in full time employment get study leave to attend the program and if they cannot get study leave, they have to resign their jobs to attend the programs. This creates financial risks to themselves and to their families. In addition, employers find it difficult to release their staff for full time programs due to work requirements and budget. Long periods of absence mean loss of valuable service to their employers. So far, this model has worked well for those under government employment, but has largely excluded potential candidates from the private sector who cannot afford long periods of absence from their work.

Mr. Chairman, in light of all these obstacles and difficulties, SAFE has several thrusts that we intend to mainstream during the coming years.

We need to broaden access to our training programs.

SAFE is now examining options for improving access to our training programs. We are working towards alternative models that seem to hold promise. These include part-time (evening and/or weekend courses), summer vacation, sandwich courses and distance modes of delivery. In these models, mid-career candidates would not have to leave their places of work for long periods of time; this also means that there is minimum distraction in terms of the organizations they work

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1 Managing Director, SAFE
for; minimum distractions for women candidates and their families and candidates will maintain their jobs and income. This also means that self-supporting students have a chance to work and pay their fees.

**We need to broaden the curriculum focus of our training.**

There is an urgent need to broaden our curriculum focus in order to remain relevant and demand-driven. In this regard, I am delighted to notice that most of SAFE participating institutions have recently embarked on needs assessment process followed by the revision of existing curricula and the development of new ones. This is indeed a laudable effort and shows that we are capable and flexible enough to take care of extension staff and farmers’ genuine demands in our curricula.

**We need to increase female students’ intake and female faculty members.**

With the exception of a few universities, the current intake of female students is very low and the proportion of female faculty members is also very small. The fact that most African farmers are women, and that extension services have few female extension agents, points to an urgent need to increase the number of female SAFE graduates. SAFE is concerned about this and is exploring ways of addressing the issue.

**We need to enhance the educational delivery through the use of ICT**

Educational delivery methods have evolved rapidly over the past decade and especially more recently with the advent of ICT. As earlier pointed out, SAFE has the opportunity to implement new alternative delivery modes in its operational framework, including the development of modular course offerings and distance education. SAFE has been providing some basic ICT equipment for kick-starting the use of this technology, and is now exploring ways of scaling up in conformity with the new modes of delivery being considered.

SAFE will facilitate the development of short courses for in-service training of extension professionals, as well as field level training materials for farmers. This effort will enhance the field work of our sister organization, Sasakawa Africa Association (SAA) in its focus countries (Nigeria, Mali, Ethiopia and Uganda).

Lastly, the partnership which exists now between the Ministries of Agriculture, NGOs and Development Agencies in the training of mid-career extension professionals is fundamental, critical and needs to be strengthened. SAFE intends to play a proactive role in this regard. I wish to point out here that one of the reasons for the success of SAFE was that right from its inception it was a strong partnership endeavor between the Ministry of Agriculture (MoA) in Ghana, the University of Cape Coast (UCC), Ghana and an NGO (Sasakawa Africa Association: SAA). The three institutions were fully committed to the program and actively played their respective roles.

Dear colleagues, these are the main directions that will guide our collaborative efforts towards better advisory services to farmers of this continent.

Mr. Chairman, I am convinced that this group of talented experts will come up with sound and useful recommendations for improving our curricula. I wish all of us a successful workshop.

Thank you.
Opening remarks by Stella Kankwamba

Distinguished invited guests, workshop participants from the participating countries and Universities, Ladies and Gentlemen.

It is a pleasure and honor for me to welcome you all workshop participants to Malawi and Lilongwe in particular.

I am happy to see participants that have come from Ethiopia, Mali, Nigeria, Tanzania, Uganda, and within the country.

I would like to say feel safe among SAFE family.

Workshop participants, Ladies and Gentlemen,

In line with Agricultural Extension policy of pluralistic and demand driven extension service provision and the Agriculture sector wide approach (ASWAP) that is emphasizing on value chain approach and building partnerships, emphasis on participatory approaches help to cement farmer responsive program planning and implementation.

Mid carrier staff members have been motivated to work harder and be retained within the Ministry as a result of the capacity building program which is supported by Sasakawa Africa Fund for Extension Education (SAFE). More mid carrier staff putting value to further studies after noting achievements made by work mates who have gone through the program. Demand for the program on the increase among staff. SAFE beneficiaries were motivated to go for further studies.

Workshop participants, Ladies and Gentlemen,

As it has been already addressed by the workshop organizers, the purpose of the workshop is to explore ways of agricultural value-chain oriented curriculum enhancement and broadening access to agricultural training. I believe that a lot of experience can be gained from the workshop participants.

Workshop participants, Ladies and Gentlemen,

This Regional SAFE networking workshop is good forum for sharing experience among Universities implementing the Mid-career training. We need to keep in touch beyond the workshop.

Finally I wish all participants fruitful discussions and enjoyable stay in Malawi –take time to visit Lake Malawi and taste the Chambo fish.

I thank you all for your attention.

2 Director, Department of Agricultural Extension services, Malawi
PRESENTATIONS

SESSION I

Chairperson: Dr. Yibrah Beyene
Agricultural value-chain oriented training needs and expectations from Universities, MoA, Malawi: by Stella Kankwamba³

1.0 INTRODUCTION

1.1 Agriculture in Malawi

Agriculture is a key sector of the Malawi economy. It employs about 80 per cent of the total workforce, contributes over 80 per cent to foreign exchange earnings, accounts for 39 per cent of gross domestic product (GDP) and contributes significantly to national and household food security. The agricultural sector has two main sub-sectors - the smallholder sub-sector, which contributes more than 70 per cent to agricultural GDP, and the estate sub-sector, which contributes less than 30 per cent to agricultural GDP. Smallholders cultivate food crops such as maize, cassava and sweet potatoes to meet subsistence requirements and export crops such as sugar, tea, coffee and tobacco. Estates focus on high value cash crops for export such as tobacco, tea, sugar, coffee and macadamia. Smallholder farmers cultivate small and fragmented land holdings under customary land tenure with yields lower than in the estate sector (Government of Malawi, 2010). With smallholder farmers dominating the agriculture sector, extension plays a crucial role in ensuring farmers access to information.

1.2 Role of Extension

The role of agricultural extension is to ensure access to information and knowledge. The dynamic nature of agriculture has a bearing on the delivery of agricultural extension services of approaches used and focus. The value chain approach is one of the approaches. Decentralisation and democratization demands recognition of other players in provision of agricultural extension services. Mindful of the diverse roles/functions of players, the value chain approach provides a strategy of recognition and integration in order for extension actors to operate as holistic systems.

The “Value Chain” is an approach that Malawi has recently and seriously integrated to its extension services. It is focusing on a wide range of developed and proven technologies and innovations in the areas of crops, livestock and fisheries industries from production, processing for nutrition and marketing and increased incomes. The approach is also paying attention to land resources management and conservation, and mainstreaming of Gender, HIV and AIDS. Stakeholders or actors along the value chain include: individual farmers, lead farmers, farmer groups, civil society, government departments, academic institutions, banks, the media, research institutions, agro processors, input and produce traders and transporters (Government of Malawi 2011).

³ Director, Department of Agricultural Extension Services, Malawi
This paper outlines the value chain oriented extension methods in Malawi, current and emerging staff development needs in agricultural value chain extension, how the Department of Extension is responding to those needs and challenges of coping with extension staff development needs. It also includes expectations from universities regarding the extension staff development needs.

2.0 VALUE CHAIN EXTENSION METHODS IN MALAWI

According to Del Vecchio (2011), a value chain is "a string of companies working together to satisfy market demands." The value chain typically consists of one or a few primary value (product or service) suppliers and many other suppliers that add on to the value that is ultimately presented to the buying public. According to Malindi et al (2011), there are various value chain oriented extension methods that are used by the extension service in Malawi. This paper provides brief details of some of the extension methods and approaches used for resource mobilization, production, processing and marketing.

a. Resource Mobilization

Farmer Clubs, Associations and Cooperatives – these share experiences and show exhibits that depict value chain approach such as National Smallholder Farmer Association of Malawi (NASFAM), Bwanje Rice Scheme Association, Farmers Clubs in honey, groundnut oil producer and the Cotton Development Trust.

b. Production

Farmers Field School. The Farmers Field School is a non-formal training programme for selected farmers within a locality, usually a village. Farmers Field Schools are conducted for the purpose of creating a learning environment in which farmers can master and apply specific management skills. The emphasis is on empowering farmers to implement their own decisions in their own fields.

Clusters and Mndandanda. A Cluster is a collection of farmers undertaking similar agriculture enterprises in the same catchment area or locality. Mndandanda is a stretch of well managed crop enterprises in a catchment area covering a minimum length of one kilometer.

Harmonized Field Days. All players along the value chain jointly organize field days at national, regional, district and sub-district levels to showcase their products and services.

Harmonized Demonstrations, where value chain actors showcase their products related to the enterprises being demonstrated. Field days are conducted in successful demonstration sites.

Guide to Agricultural Production document. The document is compiled by Ministry of Agriculture and Food Security periodically to advise all players on recommended technologies and practices for producing specific commodities. Stakeholders contribute to the document.

c. Processing

Cooperatives / associations. Farmers process their products through cooperatives and associations which are promoted by the extension service.
d. Marketing

National Agricultural Fairs, District Agricultural Shows and Village Fairs. National Agriculture Fairs expose Malawian products to the domestic and export market through participation of other countries in the fairs. The fairs and agricultural shows provide an opportune platform to demonstrate value chain approach in extension services.

Farmer Business School. An adaptation of Farmers Field School where farmers are trained over a season. The farmers are equipped to organize and manage agro-enterprises along value chain through farming business skills indicated in Figure 1.

![Figure 1: Skills Developed through Farmer Business School](image)

Cooperatives / associations. Farmers market their products through cooperatives and associations which are promoted by the extension service.

Malindi et al (2011) state that several lessons have been drawn from implementing value chain oriented extension services. These are:

- Demand for high profit generating agro-enterprises is increasing due to increase in monetary needs among farmers. The needs include phones, better clothing, modern housing, entertainment facilities and transportation. As a result, there is more demand for value chain oriented extension services.
- Value chain oriented extension reduces cost of extension. Traders, transporters, bankers and other value chain actors promote their own services during marketing hence reducing workload for extension workers.
- Feedback on services and technologies is provided instantly hence allowing informed market choices.

However, several issues were noted. These are:

- Increasing specialization – farmers are opting for export crops, but vulnerable to market instability hence introducing shocks.
Inadequate capacity for strong and genuine collaboration and coordination among value chain actors.

In order to respond to the issues, several strategies have been put in place. These include:

- Balancing specialization with diversification – including production of commodities that do not have export markets such as indigenous vegetables.
- Refining processes under the value chain orientation through action research and continued concerted efforts through innovation platforms.

3.0 STAFF DEVELOPMENT NEEDS IN AGRICULTURAL VALUE CHAIN EXTENSION

In the early 1990s and prior to that, marketing of agricultural inputs and produce was being conducted by a parastatal, the Agricultural Development and Marketing Corporation (ADMARC). Farmers were therefore producing commodities with a ready market in mind. This entailed that value chain oriented extension was not necessary. As such, most extension staff were not well equipped in value chain oriented extension services. Considering that there are now various players in the agriculture sector, value chain extension is increasingly becoming necessary. Under demand driven services, extension staff need to respond to farmers demands in terms of resource mobilization, production, processing and marketing. Extension staff therefore need increasing capacity in value chain extension.

4.0 STRATEGIES TO RESPOND TO THE STAFF DEVELOPMENT NEEDS

In order to respond to the staff development needs in value chain extension, the Department is modifying extension methods in order to incorporate contents that respond to the value chain rather than production oriented services only. This is done through improving the concepts for the extension methods such as field days and extension staff are briefed on the same. The Department also enhanced the Agribusiness Branch by employing staff with Bachelor of Science in Agribusiness so that they should build capacity of frontline extension staff in value chain issues. The Department has also been improving training of frontline extension staff on value chain oriented services through partnering with relevant institutions such as Rural Market Development Trust (RUMARK) in training the frontline staff.

5.0 CHALLENGES OF COPING WITH THE STAFF DEVELOPMENT NEEDS

Despite the efforts in improving extension staff capacity in value chain extension, some challenges still exist. The Department does not have adequate funds and expertise to transform the extension staff, especially those at frontline level. There is no staff trained at PhD level in value chain agricultural extension, while there are only two members of staff who have value chain oriented Masters Degrees. As such, technical backstopping of those with value chain oriented Bachelors Degrees is inadequate. This gap is reflected in the insufficiency of technical information relayed to frontline staff by those who have Bachelors Degree and serve as Subject Matter Specialists at District level.
6.0 EXPECTATIONS FROM UNIVERSITIES ON STAFF DEVELOPMENT NEEDS

The Department expects universities to technically backstop government extension staff in value chain oriented extension as a short term to medium term strategy to overcome the existing gaps in technical expertise. This can be done through organizing workshops where extension staff will be trained in value chain extension. The universities should also modify the curricula of various disciplines in order to contain adequate aspects of value chain extension. This will assist to ensure that graduates that will be employed by the Department will already have adequate knowledge on value chain extension. The Department also expects to develop joint upgrading programs with the universities where government extension staff will be trained to PhD and Masters Degree level to ensure adequate backstopping capacity within the Department.
Plans for value-chain oriented training and for broadening access to training, Bunda College of Agriculture, Malawi, by Hastings R Chiwasa

Abstract

Bunda College of Agriculture has been implementing the BSc. Agricultural Extension for Mid-career professionals since 2004. To date, the programme has produced close to 50 graduates with diverse backgrounds. It has however been noted that issues of value chain and value addition have become so important that they need to be part and parcel of the academic programmes. A review of Bunda College curriculum, especially the BSc. Agricultural Extension for Mid career professionals has revealed a gap in the integration of issues of value chain and value addition. Whilst efforts have been made in the new curriculum as Bunda moves to become a fully fledged university (Lilongwe University of Agriculture and natural Resources-LUANR) the curriculum for the BSc. programme is still deficient in issues of value chain and value addition. It would therefore be very important to review the curriculum to ensure that the curriculum is in tandem with the global issues including value chain and value addition.

Introduction

On demand by the Ministry of Agriculture for a tailor made programme for mid-career professionals, Bunda College of Agriculture, a constituent college of the University of Malawi introduced the BSc. Agricultural Extension for Mid career professionals in 2004 with support from the Sasakawa African Fund for Extension Education (SAFE). The programme is running parallel to the BSc. Agriculture (Agricultural Extension option) programme. To date, about 50 students have graduated from the programme with most of them attaining higher positions with their employers upon graduating.

Value Addition in the BSc. Agricultural Extension Curriculum

The main feature that distinguishes the mod career programme is the Supervised Extension Projects (SEPs), action research projects that the students carry out throughout their periods of stay on college. Other programmes/disciplines, including the BSc. Agriculture (Agricultural extension major) conduct regulator research that end with data production of a report on research findings following a short period of data collection. However, the students also take courses from other disciplines such as marketing, economics, engineering, crop and animal production, and nutrition among others.
Following the directive by the Government that Bunda should change to a new university (LUANR), the Department has proposed to stop offering the BSc. Agriculture (Agricultural Extension option) and continue with the midcareer programme. In this case, mid career professionals will be starting their studies in the second year whilst freshmen from secondary schools will be starting from the first year. A review of the current midcareer programme curriculum and the proposed curriculum however shows that value chain and value addition are not given a lot of emphasis. There are only two marketing/business related courses in the current curriculum (AEC 322-Agricultural marketing in third year, and AEC 411-Entrepreneurship in fourth year). Furthermore, it is implied that value chain issues are covered in these courses especially Agricultural marketing. However, there is no curse specifically for value chain. Refer to Appendix 1 for details on the courses on the current curriculum.

The proposed curriculum on the other hand has only one agribusiness course (AEC 411-Entrepreneurship). Refer to Appendix 2 for details on the proposed curriculum.

**Challenges in integrating value chain in the curriculum**

The biggest challenge that the Department faces in integrating issues of value chain is the question how best can value chain be interwoven with extension. For example, the Department trains graduates on extension methodologies whilst issues of value chain are offered by a different department. The dilemma is therefore to identify an appropriate strategy of integrating the two fields.

The second challenge is that for a long time, extension gas concentrated on promotion of production f crops and animals with little attention to postharvest activities. As evidenced by the curricula above, the majority of the courses apart from extension are production oriented with no course directly focusing on value addition. This course could be attributed to the low knowledge on value addition by faculty members as the concept of value additions is also a novel issue which is just gaining momentum.

**Conclusion**

There is need for an intensive curriculum review for integration of value chain in order to make mid career professional adequately trained. Furthermore, faculty members also need to be trained in order to be acquainted with issues of value chain which are becoming so important of late.
Agricultural value-chain oriented training needs and expectations from Universities, MoA, Ethiopia: by Fisseha Teshome

Introduction

Agriculture is the backbone of Ethiopia. Eighty-three percent of the population depends directly on agriculture for their livelihoods, while many others depend on agriculture-related cottage industries such as textiles, leather, and food oil processing. Agriculture contributes up to 50 percent of gross domestic product (GDP), and up to 90 percent of foreign currency through exports. Agricultural training, research and extension have been institutionalized in the country for more than 50 years, but they have not yet brought any marked differences on agricultural productivity and livelihoods of Ethiopian farmers. Indeed, research is reported to have developed many improved technologies both in crops and livestock, and has demonstrated very remarkable increase of productivity at station and on-farm levels. Limited dissemination and adoption of improved agricultural technologies by smallholder farmers has still been remained as a big challenge to the country in general and as an unresolved puzzle to researchers and extension workers in particular. Within extension, the dramatic changes in government policy over the three completely different government periods (with very different ideology) have affected its efficiency.
At present the country has nine National Regional States and two administrative councils.

The agricultural sector suffers from frequent drought and poor cultivation practices. Many other economic activities depend on agriculture, including marketing, processing, and export of agricultural products. Principal crops include coffee, pulses, oilseeds, cereals, vegetables, fruits and flowers. Exports are almost entirely agricultural commodities, and coffee is the largest foreign exchange earner. The production system is smallholder dominated agriculture practiced under rain fed condition. Agriculture is traditional and characterized by subsistence mixed farming with crop and livestock husbandry typically put under the same management unit. Despite the hard working nature of the farming population, the production system is backward and productivity is far too low. Farm power is exclusively under fed draught animals; mainly oxen although horses in some highlands are used. Irrigation and use of modern inputs such as fertilizers and improved seeds with accompanying technologies are extremely limited. As a result the country has been faced with chronic food shortages and malnutrition problem and has not been able to achieve self sufficiency to feed its ever increasing population which grows annually at the rate of 3%. (Demekeach Gera, et al. 2010)

On the other hand, Ethiopia has an immense potential for the increase of its agricultural productivity both in crops and livestock. Ethiopia has 111.5 million hectares of land, 74 million
of which are arable, but only 13 million are being used. Water resources are also plentiful in much of the country. There are about 12 million farmer households providing human resources. Ethiopia’s livestock resources are among the top in the world, at least in terms of quantity. It stands 1st from Africa and 10th in the world in terms of livestock population, which is about 41, 14, 13, 13, 0.3, 0.4 and 42 million of cattle, sheep, goat, horses, asses, mules, camels and poultry, respectively. It is the centre of origin and diversity for many world important crops and livestock such Arabica Coffee, Tef, Sorghum, Barley, Caster bean, Field pea, Faba bean, Rapeseed, Niger seed, Vernonnia, Safflower, etc. Most of its soils are highly fertile and productive. Because of its wide altitude ranges (-110 m to +4600 m above sea level), the country possesses all types of climate from hot tropical to cold temperate and hence all kinds of flora and fauna are found in the country. A large portion of the country receives reliable and sufficient rainfall. The country has huge water sources including surface and ground water and sometimes it is known as the African tower of water. Many streams and rivers of the country like Blue Nile, Baro, Wabeshebele, Genale, Omo and Tekeze flow all-year-round down to the neighboring countries. On the whole, Ethiopia has ample resources for agriculture.

In spite of these resources, many challenges confront policymakers and other agents of change. These include the growing demand for food and products to feed nearly 80 million people; the growing income gap between urban and rural areas; dwindling natural resources; and poverty and food insecurity. The agriculture sector—and institutions that support it such as extension—is thus key to poverty reduction in Ethiopia.

Beginning in 1992 with the Maputo Declaration, the Government of Ethiopia (GOE) began an unprecedented public investment in the agricultural sector. At a time when many governments in Africa curtailed support to the agricultural sector, the GOE began a large scale program of Agricultural Development-led Industrialization (ADLI). In 2008, 16 percent of government expenditure was committed to the agricultural sector. In recent years, high rates of economic growth have been linked to increases in area cultivated and agricultural productivity (Byerlee et al. 2007; Diao et al. 2007). As part of the current five-year (2006 – 2011) Plan for Accelerated and Sustained Development to End Poverty (PASDEP), the government is continuing to invest heavily in agriculture.

The Ministry of Agriculture (MoA) has aligned donor support with plans to scale activities in the sector and to meet the resource gaps identified. A core part of the government’s investment in agriculture is the public extension system. Achievements in rural development and extension as a result of this commitment and strategy include increased “modernization” of agriculture through improved and new crop, livestock, and natural resource management technologies. They also include the increase in input use by farmers, such as inorganic and organic fertilizers. Use of improved seed varieties is also on the rise, although the supply is currently a big bottleneck in the system. The professional capacity of extension has also dramatically increased; almost 74,000 DAs have graduated from the agricultural technical and vocational education and training (ATVET) colleges in the past nine years with three-year diplomas (previously the existing 15,000 DAs had about nine months’ training).
2. PAST EXTENSION MODELS

Ethiopia has had government agricultural extension services since the 1950s, when a model similar to the United States Land Grant approach was used, where universities reach out to communities with research-based knowledge and through adult education. During the imperial period, there were several development plans devised, the last of which supported small-scale farmers through comprehensive package programs, the most prominent of which were the Chilalo and Wolayita Agricultural Development Units (CADU and WADU). A minimum package approach then followed these programs, which extended into the socialist period until 1985 when the training and visit (T&V) system was initiated in Ethiopia. To summarize extension approaches prior to 1993 shared some common shortcomings. These include inappropriate choice of extension approaches and strategies, lack of extension professionalism and relevant agricultural technologies, low research and extension linkages, and poor participation of farmers in generation and utilization of technologies.

Following the downfall of the socialist regime in 1991, the focus changed to a free market economy. These situations led the new government to think reforming the extension service to assist its economic development policy. In the last 15 years, key policy initiatives from the Government of Ethiopia that have affected extension have included market-led reforms of the agricultural sector under the Agricultural Development-led Industrialization (ADLI) strategy set forth in 1991; regional devolution of political, economic, and administrative power following the introduction of the federalist system in 1991; and large-scale education initiatives designed to reverse years of educational neglect and inequity (MOFED 2005, 2002; Beyene et al. 2005).

In 1993, Sasakawa Global 2000 (SG-2000) promoted the use of productivity-enhancing technologies and access to inputs and credit, coupled with training using 0.25–0.5 ha demonstration plots that were closely supervised by research and extension. SG-2000’s goal was to increase food production and stimulate links between research and extension. Via their on-farm demonstration plots, SG-2000 showed that—with sufficient inputs and supervision and management—farmers could double or triple their yields with maize and wheat.

PADETES

The SG-2000 pilots led to the current extension approach called the Participatory Demonstration and Training Extension System (PADETES) in 1995. This falls under the National Extension Intervention Program (NEIP) strategy. The goal of PADETES is to improve incomes via increasing productivity; ensure self-sufficiency in food production; establish farmer organizations; increase production of export crops; conserve natural resources; and increase women’s participation in development. PADETES uses a similar approach to SG-2000 together with a modified T&V approach, but extended the technology package to livestock, high value crops, post harvest technologies, and agro forestry. PADETES also uses a menu-based approach rather than the former package approach. It will be described in more detail below along with findings as to its outreach and effectiveness. The PADETES program had a massive increase in
the number of adopting farmers, from 35,000 in the beginning to over 3.6 million. This program was closely followed up by high levels of government. However, the high levels of maize growers, coupled with a bumper crop in 1997/1998, led to a massive oversupply and a huge drop in maize prices. The realization set in that other issues such as marketing and capacity had to be dealt with in addition to inputs and production. In addition, it became apparent that the yields on the up scaled plots were not as high as the original demonstration plots, due in part to a lack of sufficient supervision by the extension staff.

In spite of this, many stakeholders claim that extension is biased against livestock and NRM. In extension programs, there is little attention to gender, youth, agro-ecosystem variance, or local demands. Indigenous knowledge and systems are disappearing because extension and research appear to prefer and promote modern methods. Cross-cutting issues like HIV/AIDS are usually not part of extension curriculum or outreach. Other shortcomings include low capacity of extension staff, low morale, lack of transport, high turnover, and limited budgets. Capacity is lacking, both among DAs and extension office and bureau heads to effectively participate in priority setting, planning, and evaluation of extension programs. DAs and other extension staff are mostly trained in “technology transfer” skills rather than abilities with regard communication, innovation, negotiation, policy, farmer group development, leadership, and so forth. In some cases DAs are caught up in non-extension type of activities such as credit and tax collection.

Similarly, among extension clientele, men and women farmers are in need of business, management, and analytical skills in addition to technical skills, but this is not currently part of extension outreach. Most of all, the men and women farmers in Ethiopia need to be able to make decisions, voice demand, and play a part in developing extension’s priorities and evaluating its outcomes: in short, they need empowerment. Other major constraints that affect extension indirectly are the high cost of inputs, lack of inputs, late delivery of inputs, weak seed systems, transportation problems with the input system, monopolies on input markets, and lack of coordination within the agricultural system. Linkages are poor between research and extension and within the extension line ministries from the federal to the kebele levels.

The Ongoing Participatory Extension System

Participatory Extension System has originated based on the weakness and challenges observed in implementing PADETES during its late time. Not all, but to mention some of them; lack of community participation, lack of effective integration at various levels, poor planning, poor input delivery, poor credit management and repayment, lack of viable technology, lack of due focus for market oriented-production, lack of effective monitoring and evaluation, and quota-based development approach have contributed to cause great challenge on the success of PADETES. Therefore, Participatory Extension System (PES) came into picture to give remedial actions for the above challenges and weakness that have highly encountered the implementation of PADETES, during its late time.
Extension has shown to have positive effects in Ethiopia, and worldwide it has proven itself to be a cost-effective means of bringing about economic returns—and to have significant and positive effects on knowledge, adoption, and productivity. But while there are high interventions in the agricultural sector by the government of Ethiopia, and a high economic growth rate, the government needs intervention strategies that help to address the gaps in extension outreach to be able to reach more farmers and scale up extension activities. The government needs advice on what practical support is needed for poverty reduction via extension.

One of the most important strengths of the agricultural extension system is the Government of Ethiopia’s strong commitment to developing a strong and effective agricultural extension system that will not only achieve national food security, but that will also increase farm household income and, in the process, improve rural livelihoods. This level of government commitment and the current allocation of government resources significantly exceed the commitment of most other developing countries in the world. As noted above, the Government of Ethiopia (GOE) has created one of the largest, most intensive extension systems found anywhere in the world today. Since about 83% of Ethiopia’s population is engaged directly or indirectly in agriculture, according to returns on research and extension investments in other countries worldwide, these investments can be expected to have a significant long-term impact on agricultural development in Ethiopia.

Due to this strong commitment to agricultural development through extension, there is a strong base on which to build. However, there are a number of key constraints which need to be addressed if the extension system is to be improved. Some of these constraints include: a) most DAs lack practical skills and do not see a career development path; b) most FTCs lack suitable housing and transportation for the DA staff; c) lack of the necessary farm equipment and other inputs needed to develop effective FTC demonstration farms; d) both the woreda extension offices (SMSs) and the FTCs lack adequate operational resources to deliver and support effective extension programs; and e) there appear to be weak links between administrative levels and, especially, with the farmers being served.

3. Organizational Structure of MoA

Currently Ministry of Agriculture has three sub-sectors. They are Agricultural Development, Natural resource Development and Disaster prevention and Food security sub sectors. Each of them is led by a state minister. Under each sub sectors there are different Directorates, agencies and institutes. For example the Agricultural Extension Directorate is organized under Agricultural Development sub sector. The directorate has one Director and two deputy Directors and different subject matter specialists.
4. Experience of MoA with extension staff Development

a. Development Agents Training Program at ATVET college

The transformation of Ethiopian agriculture from its current subsistence orientation into market oriented/commercial production system forms the basis of the agricultural development strategy of the Government. In a situation where many of the farmers are illiterate, acquiring and sustaining competence in production, adding value and marketing will be difficult. Cognizant of this fact, the Government's response to the challenges of agricultural transformation and rural development for poverty reduction among others rests on providing extensive Technical, Vocational Education and Training in agriculture. For which 25 ATVET colleges have been established throughout the country.

Given that there are approximately 21.8 million adults (aged 15-65) who are active in agriculture, it is estimated that the current extension agent: farmer ratio is about 1 DA for every 476 male and female farmers; it should be noted that this is one of the strongest extension agent: farmer ratios found in the world today. However, it was reported that there is a problem of staff instability within many FTCs. For example, the IPMS project (IPMS 2006: 22) reported an average ratio of actually 1 DA for every 896 farmers in eight selected woredas in high potential agricultural areas.

The objective of the program is to create and develop human resources and institutional capacity that would have a desirable precedence over medium and long term capacity building strategies of the country. The program is aimed to produce middle level skilled competent and motivated agricultural practioners who would in turn be potential teachers and/or development agents at each farmers training center (MoA, 2000, MoA, 2006).

In addition to the Diploma three year program carried out at ATVET colleges, a three months specialization in-service training is given at selected colleges based on the needs of regional states. Also continual short term trainings are given to bridge the skill gaps of Development
agent in different fields. To upgrade their extension staff from diploma to degree level some regions have also arranged a special program during the slack period by discussing with the universities found in their regions. Currently many extension staffs are also on upgrading their knowledge in summer and distance education program with the sponsorship of their regions and with their own cost.

b. Mid-career BSC Training Program

The BSc agricultural extension program for Mid-career extension professionals was started at Haramaya University by the year 1997 following requests from the Federal Ministry of Agriculture in order to improve the extension and communication performance of their frontline staffs.

This program was started in one university with a joint support of three partners/ Saasakawa Africa Fund for Extension Education, Winrock International and Haromaya University with 25 male and 3 female students. Now the program expanded to 3-4 universities and the number of enrolment is also enhanced from time to time reached to 333 by the year 2010/ table 1/ with the bases of evaluation findings and improvements on the course provided by universities, specially on post harvest processing technologies and value addition courses inline with production and productivity enhancing extension services in our country.

Table 1: number of graduate students at mid-career program

<table>
<thead>
<tr>
<th>Year of graduation</th>
<th>Number of graduates</th>
<th>Total</th>
</tr>
</thead>
<tbody>
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<td></td>
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</tr>
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<td>3</td>
</tr>
<tr>
<td>2000</td>
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<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>283</td>
<td>50</td>
</tr>
</tbody>
</table>
Even if women’s contribution in development is too high, their effort is not accounted, due to the assumption by extension experts to reach to more women farmers that:-

- Women farmers do not see themselves as farmers
- Women farmers are not volunteer to participate on any extension trainings and field days.
- Once their husbands are involved, they can get messages through their husbands.
- Women are not capable to do more on implementing technologies.
- Women have no power on deciding family incomes.
- Women have a lot of burden in their house then. Most women farmers are not able to leave their families for long period of time

In order to tackle these problems the program focused on the marginalization of women farmers by raising the marginalization is due to inappropriate training of agricultural development professionals and agricultural extensionists. For this partners introduced a full course on gender issues in agricultural extension degree programs.

Again the students were encouraged to do their research with innovative approaches of reaching women farmers when they carried out their projects /SEP/.

Success of Mid Career program students on their Job

- Most of the Mid Carrier students are improved their educational level up to PhD degree, and competent with knowledge and skill, a success in their performance and have a higher position at all level. In general women become confidential on taking decisions and accept positions..
- The program has brought the policy makers to give attention on extension communication and services.
- The program look at the remotest regions of the country that have problems on trained human resource and have difficulties to benefit professionals from the other regions having access to be seen.
- Access to the establishment of an Alumni Association of the Mid-career program participants.
- Extension department and staffs are become more relevant to the country and attention is given.
- Even if it needs attentions by all stockholders, creates linkages with all relevant actors.

c) Human resource Development/ Through RCBP sponsorship

Long term Training

Rural capacity building project which is run by Federal ministry of Agriculture with the fund of the World Bank has contributed a lot in building the capacity of human resource in the
Agricultural sector. Starting July 2007 up to now in long term training was planned to train a total of 323 individuals (200, 100 & 23 for BSc, MSc and PhD, respectively). However, up to now a total of 1233 trainees (772 BSc, 394 MSc and 59 PhD) are enrolled in local and foreign universities, giving an overall gender ratio of 27.3% female to 72.7% male. To improve women participation, effort is being made by the project by arranging special arrangement with Bahir Dar and Jijiga Universities and a total of 51 female extension workers were selected for enrollment.

In the future it is highly expected that the proposed graduates will contribute for building the capacity and enhancing agricultural and rural development of their respective regions. This is particular true for emerging regions that have critical shortage of skilled work force.

**In short term training**

Training on selected modular training is ongoing in all regions as a schedule. The plan is to reach 10,000 Das and SMSs by July 2010 with the nine modules. From the nine modules four are prioritized for Das (Extension methods and Approaches; Communication and facilitation; Knowledge management; and integrated farm management) while five modules are selected for SMSs (Post harvest management and handling; Small scale agricultural business development; Report writing, Agricultural knowledge management; Participatory technology/innovation development).

So far, about 5024 trainees (16% women) participated in TOT training courses and the vast majority at Federal, regional and woreda experts were benefited from the training. DA training has just begun recently and ongoing in most regions. Up to last March, 2010 a total of 900 Das participated in modular training and a total of 3000 Das are expected to be trained before the end of 2010 physical year.

The feedback from trainees and regional Agricultural bureaus on TOT is very encouraging and interesting. All participants suggested that, the TOT is very effective significantly in increasing the knowledge and practical skill of the trainees and addressing the critical gaps exhibited in each region.

**D) Extension staff development with the support of different project**

A project called IPMS/ILRI (Improving productivity and Market success of Ethiopian farmers) has also contributed a lot in building the capacity of many extension staff at BSc degree and MSc level. The project has also bridged the skill gaps of development agents and subject matter specialist in its 8 pilot learning woredas in four regions. There is also another project called Strengthening Ethiopian Agricultural Extension system which is implemented in partner with Oxfam America, SG 2000 and MoA with the fund of Bill and Milinda Gates Foundation. The project build the capacity of 215 FTCs/PTCs, 645 Das and SMSs in 18 woredas throughout the country.
Staff development needs in Agricultural value chain extension

Innovation and investments at local level are hindered by farmers’ limited knowledge. Many are illiterate and lack experience with high-yielding agricultural approaches. Addressing these challenges would yield significant returns in the form of agricultural development and poverty reduction. Building the capacity of the implementers at various levels will be the first step towards the implementation of GTP. The GTP requires capacity building and technical support, which includes both the human and material aspects. The implementation of GTP has incorporated some new areas of expertise and or revision of the previous, which require capacity building to improve the competence of front line workers. This capacity building will be delivered to technical staff at various levels and community themselves.

In order to improve the agricultural production and thereby improve the livelihood of the population concerned, it is important that the potential and constraints of the diverse agro-ecological zones of the country be properly identified and understood. Diversities can also be a threat as it requires different technological packages that are suitable for each zone.

Although the country has abundant resources and good potential for agricultural development increasing production and productivity that can support the ever increasing population was not possible mainly because of biotic/invasive weeds, termites and animal diseases, drought, poor soil fertility, soil acidity, and natural resource degradation, traditional methods of farming, limited capital, high dependency on rain fed agriculture /95%/ poor marketing system and limited knowledge are the major agricultural constraints. In addition limited high yielding varieties of some potential crops like fruits and vegetables, lack of improved management practices, limited quality seed supply and post harvest technologies affected horticultural crop production. Fruits and vegetable products are sorted and loaded unsatisfactorily due to limited knowledge of post harvest handling and processing for vegetables and fruits.

How you have responding to those needs

- Remarkable achievements have been realized in the PASDEP with regards to significantly increasing access to infrastructure and social services.
  - **Road development** (the total road length increased from 36,400km in 2004/05 to 48,800km.
  - The time taken on average country wide, to reach all weather roads has decreased from 5.7 hours in 2004/05 to 3.7 hours in 2009/10.
  - **Telecommunication** (The mobile telecommunications network capacity was increased from 0.5 million users in 2004/05 to 25 million in 2009/10.
  - **Air transport** (a cargo terminal for storage of perishable Agricultural products was constructed at Bole international air port. In addition, new airports were constructed and expanded.
  - **Energy** (The construction of new hydropower plants, enhanced Ethiopia’s hydro power generation capacity- 2000MW, 12,147 km power transmission line was constructed and 126,038 km power substation lines were constructed)
➢ To strengthen research extension farmers linkage, agricultural and rural development partner linkage advisory council (ARDPLAC) was established from Federal up to woreda level with an operational guideline.

➢ Participatory Agricultural extension system was laid down from Federal up to kebele/FTC in order to strengthen the extension service delivery at farmer level.

➢ Designing and implementing Agriculture supporting projects and programs.

➢ Organizing farmers in producer groups, primary cooperatives and union.

➢ By giving more attention for market oriented commodities.

➢ Attraction of investors in the agricultural sector (for this purpose Investment support Directorate was established in MOA).

➢ Establishment of Ethiopian commodity exchange Authority.

➢ Establishment of different agricultural agencies (Ethiopian milk and meat technology Institute, Horticultural Development agency).

➢ About 66 agricultural research centers were established at different agro-ecological zones.

➢ Twenty five ATVET and many agricultural related universities were established across the country.

➢ Establishment of seed enterprises at Federal and regional level.

➢ Organizing youth and women in micro enterprise to work on value addition.

➢ Establishment of credit and saving enterprises in some region.

➢ To build the capacity of extension staff short term and long term training were given in the country and abroad.

➢ Currently, about 9265 FTCs were established at the kebele level. In addition, there are about 45,812 DAs currently on duty at the kebele level, including about 17 percent women DAs. In most cases, there are three DAs assigned to each FTC, including one DA in each of three subject matter areas: crops, livestock, and natural resource management (NRM).

**Challenges of coping with extension staff development needs**

➢ **Staff turnover:**

The issues of staff turnover can be related to several factors. To mention some of them; lack of good governance, lack of good working environment, transparency, attractive payment. Incentive encourages development agents and staff at various levels to make their maximum effort to improve their performance. Incentive should not only limit it’s to the monetary aspects. Consideration must also give for its non-monetary aspects to motivate staff at various levels for better achievement. In line with this, the guideline designed to implement DAs career should be appreciated and implemented by Regions and Woredas particularly to minimize future DAs turnover.

➢ Lack of teaching materials for practical Training

➢ Lack of well experienced and skillful trainers/teachers

➢ The support given by the regions for apprenticeship trainees is very weak

➢ Lack of financial capacity to bridge the skill and knowledge gap of trainers at ATVET colleges.

➢ Lack of transportation facilities to take the trainees for practical training.

➢ Lack of commitment to serve the rural community after graduation

➢ Problems in recruiting the trainees for ATVET program.
The movement of highly skilled people especially scientists and technical workers.
- Instability of appointed extension personnel on their position.
- Shortage of extension personnel at all level.
- Weak Monitoring, Evaluation & Learning system (MEL).

Your Expectations from universities regarding your extension staff development needs

The concerned key stakeholders engaged in supporting agricultural extension service include: Ethiopian Agricultural Research Institution (EARI), Federal Cooperative Agency and Cooperative Union, Universities and Agricultural Colleges, Ethiopian Commodity Exchanges and Ethiopian Market Authorities, Farmers, civil societies and NGOs will continue to play vital role to support the success of extension services and the achievement of the goal of GTP. Strong linkage, effective integration and strong partnership should be created among them to facilitate the provision of the effective and efficient extension service. Knowledge and skill plays crucial role to improve the competence of the extension staff and the communities to improve their production and productivity. Agricultural related Universities have vital role to assess the knowledge gap of the extension staff to provide with necessary knowledge and skill in order to strengthen extension services. Therefore, in the next five year in order to implement the Agricultural growth and transformation plan a lot is expected from universities in creating competent skill man power in different technologies. They have to focus on quality and practice. They have to lay the basement for agro-processing and industrialization. They have to assess the current need of the country and they must update their curriculum from time to time. They have to evaluate the performance of their students after graduation across the country.
Human resource constraints in agricultural development had been a serious concern when modern agricultural production and organized extension started in Ethiopia. Consequently, Agricultural Institutions of Higher Learning (AIHL) were established to train and produce skilled manpower to staff agricultural research and extension organizations as well as commercial farms. It is evident that graduates of AIHL are expected to serve the needs of the country’s agrarian sector and make perceptible changes in production and productivity. For this, the curricula for the training programs must be tuned to the needs of key stakeholders and they must be relevant in terms of producing graduates with knowledge and skills required by the stakeholders. One such training program that was launched with a participatory exercise that involved all key stakeholders, including public authorities, policy makers, employers (government, non-governmental organizations and private sector) as well as university officials and instructors is the Mid-career B.Sc. Program in Agricultural Extension offered at Haramaya University.

Haramaya University, in collaboration with the Ministry of Agriculture and Sasakawa Africa Association, launched an innovative B.Sc. degree program in Agricultural Extension in February 1997. The objective of this innovative training program is to upgrade the technical and human relations skills of experienced Mid-career extension staff working with the Federal Ministry of Agriculture and Rural Development, Regional Bureaus of Agriculture and Rural Development and Non-governmental organizations engaged in agricultural and rural development. In this program, Mid-career extension workers with diploma level training in agriculture and related fields are admitted and trained for two and half years during which they take professional courses and receive hands-on practical training designed to upgrade their skills, knowledge and qualification.

The Mid-career program at Haramaya University was launched in February 1997 to offer B.Sc degree in Agricultural Extension (now, in Rural Development and Agricultural Extension). The principal objectives of the program include:

- To strengthen the theoretical and practical capability of the extension staff in the country;
- To enable them deal successfully with the multidimensional problems facing the farming community;
- To arm the potential participants of the program with the required up to date technological

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5 Head, Department of Agricultural extension, Haramaya University, Ethiopia

6 Dean, College of Agriculture, Haramaya University, Ethiopia

7 President, Haramaya University, Ethiopia. Though he did not attend the workshop, he contributed for this paper
and communication skills that help them transfer meaningful knowledge to the farmers; and
• To assist in the implementation and success of rural-based economic policies.

In this program, Mid-career extension workers with diploma level training in agriculture and related fields are admitted and trained for two and half years, during which they take professional courses and receive hands-on practical training designed to upgrade their skills, knowledge and qualification. The program is believed to prepare adequately the participants to deal with complex agricultural problems. The distinguishing features of this program include: demand-driven curriculum development process (consensus among key stakeholders about the structure and the content’s balance between theory and practice); dynamic interplay between theoretical and practical components; partnerships among institutions and agencies involved in the Mid-career program (these partnerships are important for resource mobilization, monitoring and supervision of students’ projects and ensuring the sustainability of the program); One unique and very important element of this program is the field-based Supervised Enterprise Projects (SEPs).

The Mid-career training program is believed to have contributed to the enhancement of location specific and problem oriented research (applied and adaptive) capability. As already noted, the program focuses on equipping the candidate with knowledge and experience in participatory diagnostic tools and methodologies. These include: needs assessment, formulation of project ideas; design of sound and well-thought projects; selection of appropriate techniques and methods in the execution of projects; and presentation of results in the form of scholarly reports. Through their off-campus SEPs, graduates from the program have addressed different problems related to Ethiopian agriculture. The off-campus SEP reports are believed to be valuable sources of information for national and international organizations involved in agricultural development work in the country.

**Supervised Enterprise Projects (SEPs)**

One of the innovative aspects of the Mid-career program at Haramaya University is the independent field-based projects called the Supervised Enterprise Projects (SEPs), which are small action researches with an intervention objective and a learning objective. Students plan and execute as a requirement for the completion of their study. The principal objective of the SEPs is to narrow the gap between theory and practice and to develop the students’ ability to identify problems and explore practical ways to solve them. More precisely, students are required to design an action research, based on prioritization of location specific problems (Belay and Ferdu, 2008).

At Haramaya University, in the new curriculum, SEPs are organized in two phases. Preparations for SEPs begin with the offering of the course “Introduction to SEPs (SEP-I) with 2 Cr. Hrs” at the second semester of the first year. During the first phase, the second course offering is “Needs Assessment & Project proposal preparation & presentation (SEP-II) with 2 Cr. Hrs.” which takes place at the end of the first year, each student goes back to their work areas to conduct an assessment of farmers’ technology extension needs in a participatory manner using PRA tools and prioritize the problems with the help of the community. Based on the location specific needs
Each student prepares a project proposal, which will have two components/objectives; an intervention objective and a learning objective. The intervention objective will be to introduce or promote a new technology or any such other intervention to solve a prioritized problem of the locality. The learning objective is generally to assess the impacts of the intervention in improving the knowledge, skills and attitudes of the farmers, strengthening rural organizations, or enhancing other community level capacity building activities. SEP proposals are being scrutinized on the campus, when the students present them in the annual Mid-career workshop, attended by the University community (people from different areas of specialization) and other stakeholders. The second phase of SEPs takes place after the completion of three semesters of study on campus. During the second phase, students return to their respective work areas to implement their projects independently over a period of eight months under the course “Off-campus SEP (Project Implementation) (SEP-III) with 5 Cr. Hrs”, during which they are being supervised by university staff and local supervisors. Finally, Students are expected to present their agricultural value chain-oriented extension and research projects reports during specially arranged seminars where they are expected to demonstrate effective preparation and presentation skills under the course “Off-Campus SEP Evaluation (SEP-IV) with 1 Cr. Hr.

The SEPs focus on equipping the candidates with knowledge and experience in participatory diagnostic tools and methodologies. This experiential learning component has been appreciated by the graduates, instructors and employers and being reflected in the graduates’ performance, confidence and professionalism (Mwangi et al., 2005).

However, SEPs are constrained by problems related to supervision and funding. More precisely, though the initial plan was to have two supervisions covers during the eight months period, only one is being conducted for almost eight years now. The main reason for this is shortage of staff, vehicles and financial resources. It should also be noted that starting 2007, the financial support from SAFE for supervision of SEPs was discontinued and the University has to bear the entire costs of the monitoring and supervision of SEPs. The University management and key stakeholders strongly believe that these projects have been the most important component of the Mid-career program and their absence will undoubtedly compromise the quality of the training.

The level of support that students receive from their respective employers to conduct SEPs has been a point of discontent at least for some of the graduates. Mwangi et al. (2005) indicated that most of the students, except those sponsored by donors other than the government, faced problems of financial support. It was also observed that the degree of support varied between Regions and Districts. The students somehow complete their projects because they are working in an area where they have been working before and in most cases they manage to mobilize resources in some way or another.

**Successes of the mid career program at Haramaya University**

*Graduation statistics of Mid-career program at Haramaya University*
The Mid-career B.Sc. degree program at Haramaya University has made contribution to the agricultural sector principally through upgrading the technical and human relations skills of experienced Mid-career extension staff working with the Ministry of Agriculture, Regional Bureaus of Agriculture and Non-Governmental Organizations engaged in agricultural and rural development. So far, 356 students (51 females and 305 males) graduated from the programme (see Table 1 below).

<table>
<thead>
<tr>
<th>Year of graduation</th>
<th>Number of graduates</th>
<th>Total Number of graduates</th>
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<tbody>
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<td></td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>1999</td>
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<td>2000</td>
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</tr>
<tr>
<td><strong>Total</strong></td>
<td>305</td>
<td>51</td>
</tr>
</tbody>
</table>

A closer look at Table 1 reveals that the 5th batch had the maximum number of graduates, with almost half of them being females. The 4th and 6th batches also had considerable female representation, but in other batches it was very low. The 11th batch, which graduated in 2009, had no female candidate, though there are many female Development Agents in the country holding diploma in agricultural sciences after the establishment of the ATVET colleges. In recent years, Haramaya University has been requesting the regions in its notification of Mid-career admission to give preferential treatment to female candidates for short-listing to appear for
entrance examination, but their representation remains lower than expected. Moreover, the program:

- Is believed to have contributed to the enhancement of indigenous research (applied and adaptive) capability;
- focuses on equipping the candidate with knowledge and experience in participatory diagnostic tools and methodologies;
- Through their off-campus SEPs, graduates from the programme have addressed different problems related to Ethiopian agriculture;
- Enables, due to the special nature, students to engage in extended projects, hands-on experiences, and inquiry-based learning;
- Enables students having regular opportunities to work with their colleagues to deepen their knowledge and improve their team work skills;
- Enables students using various forms of media to present their project proposals and reports. This is believed to help improve students’ presentation skills and communication styles, two crucial skills important in the workplace;
- Has given the University experience and confidence in running tailor-made, flexible, and practically oriented programmes;
- Has given the University staff the opportunity to interact with adult students and to handle courses in a participatory and experiential manner;
- created opportunities for faculty members to get out of their ‘ivory tower’ and to appreciate and learn a great deal about indigenous knowledge systems and different rural livelihood systems;
- has brought the university closer than ever to the policymakers at federal and regional levels; and this enhanced interaction between the university and the stakeholders coupled with the effectiveness of the program have greatly improved the image of the university and increased willingness of the policymakers to render more support to the program;
- was able to reach those developing regions of the country that are disadvantaged in terms of trained human resource and have difficulties to attract professionals from the other regions due to remoteness;
- encouraged the University to establish a Technology Village which will be fully operational in the current academic year.

On top of these, An Alumni Association of the Mid-career Agricultural Extension Programme Graduates was established in 2002. The activities of the association had not been as expected over the first six years (problem of office space to establish a permanent secretariat). The Alumni Association workshop which was held at HU in October 9-10, 2009, helped revitalize efforts
required to get the Association legally registered and moving (to be an important forum for agricultural extension professionals). The mid career alumni association also was able to lay foundation for the establishment of the Ethiopian Society of Rural development an Agricultural Extension.

Three studies have been conducted namely: An external evaluation of the programme in 2005; a Tracer Study in 2008 and an Impact Assessment Study in 2010. The report of an external evaluation of the program revealed that employers rated the professional knowledge and skills of the graduates highly and expressed full satisfaction with their job performance. The report noted further that the feedback from employers pointed to the fact that the training had greatly improved the graduates’ professional competence, self-confidence and communication skills. The findings of all these studies underscore: the importance of the programme in terms of bringing perceptible changes in the agricultural extension system of the country; the continuous interaction between the stakeholders has helped to ensure that the curriculum of the program is dynamic and relevant to the reality on the ground; and the curriculum emphasizes deep understanding of important concepts, development of essential skills, and the ability to apply what one has learned to real-world problems;

**Current status of the program**

The curriculum is revised towards value chain oriented agricultural extension through rigorous steps, which include:

- A national stakeholder need assessment workshop held in Addis Ababa from March 11-13, 2009
- An exhaustive national need survey conducted in 2010 by four universities (HU, HaU, BU, & MU); and
- A national stakeholder validation workshop held from November 22-24, 2010,
- Finally, the curriculum development core team incorporated all comments raised during the national stakeholders workshop and finalized the curriculum: “Value Chain Oriented Agricultural Extension program”
- The mode of delivery in the revised curriculum are:
  - Regular (face-to-face); and
  - Semi-distance mode
Table 2: The course structure and course distribution by semester for fulltime mode of delivery (regular face to face) presented as follows:

**Year I semester I**

<table>
<thead>
<tr>
<th>Course code</th>
<th>Course title</th>
<th>CrHr</th>
</tr>
</thead>
<tbody>
<tr>
<td>FLEN 201</td>
<td>Communicative English</td>
<td>3</td>
</tr>
<tr>
<td>AgEx 211</td>
<td>Statistics for Social Sciences</td>
<td>3</td>
</tr>
<tr>
<td>RDAE 221</td>
<td>Extension Methods and Approaches</td>
<td>3</td>
</tr>
<tr>
<td>An Sc 231</td>
<td>Livestock Production and Product Value Addition</td>
<td>4</td>
</tr>
<tr>
<td>An Sc 241</td>
<td>Poultry Production and Product Value Addition</td>
<td>2</td>
</tr>
<tr>
<td>ABM 241</td>
<td>Value Chain Approach in Agriculture</td>
<td>2</td>
</tr>
<tr>
<td>An Sc 251</td>
<td>Apiculture</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>18</td>
</tr>
</tbody>
</table>

**Year I semester II**

<table>
<thead>
<tr>
<th>Course code</th>
<th>Course title</th>
<th>CrHr</th>
</tr>
</thead>
<tbody>
<tr>
<td>FLEN 202</td>
<td>Basic Writing Skills</td>
<td>3</td>
</tr>
<tr>
<td>An Sc 232</td>
<td>Feed Production &amp; Processing</td>
<td>2</td>
</tr>
<tr>
<td>PlSc 242</td>
<td>Horticultural Crops Production and Postharvest Value Addition</td>
<td>4</td>
</tr>
<tr>
<td>PlSc 252</td>
<td>Field Crops Production and Postharvest Value Addition</td>
<td>4</td>
</tr>
<tr>
<td>FSPT 432</td>
<td>Quality Assurance and Standardization of Agricultural Products</td>
<td>2</td>
</tr>
<tr>
<td>AgEx 212</td>
<td>Research Methods in Agricultural Extension</td>
<td>2</td>
</tr>
<tr>
<td>AgEx 222</td>
<td>Introduction to Supervised Extension projects (SEP-I)</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>19</td>
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</table>

**Year II semester I**

<table>
<thead>
<tr>
<th>Course code</th>
<th>Course title</th>
<th>CrHr</th>
</tr>
</thead>
<tbody>
<tr>
<td>AgEx 311</td>
<td>Needs Assessment &amp; Project Proposal Preparation &amp; Presentation (SEP-II) (Home take)</td>
<td>2</td>
</tr>
<tr>
<td>CIST 201</td>
<td>Introduction to Computer Application</td>
<td>3</td>
</tr>
<tr>
<td>AgEx 321</td>
<td>Communication &amp; Audio Visual Techniques</td>
<td>3</td>
</tr>
<tr>
<td>AgEx 331</td>
<td>Gender and Youth in Development</td>
<td>2</td>
</tr>
<tr>
<td>AgEc 361</td>
<td>Agricultural Economics &amp; Marketing</td>
<td>4</td>
</tr>
<tr>
<td>RDAE 222</td>
<td>Rural Sociology</td>
<td>3</td>
</tr>
<tr>
<td>AgEc 411</td>
<td>Agricultural Project Planning &amp; Analysis</td>
<td>2</td>
</tr>
<tr>
<td>NaRe 351</td>
<td>Soil and Water Management</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>23</td>
</tr>
</tbody>
</table>

**Year II semester II**

<table>
<thead>
<tr>
<th>Course code</th>
<th>Course title</th>
<th>CrHr</th>
</tr>
</thead>
<tbody>
<tr>
<td>AgEx 312</td>
<td>Off-Campus SEP (Project Implementation) (SEP-III)</td>
<td>5</td>
</tr>
<tr>
<td>AgEx 322</td>
<td>Cooperatives for Rural Development</td>
<td>3</td>
</tr>
<tr>
<td>AgEx 332</td>
<td>Social Psychology and Group Dynamics</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10</td>
</tr>
</tbody>
</table>

**Year III semester I**
<table>
<thead>
<tr>
<th>Course code</th>
<th>Course title</th>
<th>CrHr</th>
</tr>
</thead>
<tbody>
<tr>
<td>FSPT 281</td>
<td>Principles and Practices of Human Nutrition and Food Sciences</td>
<td>3</td>
</tr>
<tr>
<td>ABM 461</td>
<td>Entrepreneurship and Agribusiness Management</td>
<td>3</td>
</tr>
<tr>
<td>AgEx 411</td>
<td>Farming Systems &amp; Livelihood Analysis</td>
<td>3</td>
</tr>
<tr>
<td>AgEx 421</td>
<td>Theories and Practices of Rural Development</td>
<td>2</td>
</tr>
<tr>
<td>AgEx 431</td>
<td>Off-campus SEP Evaluation (SEP-IV)</td>
<td>1</td>
</tr>
<tr>
<td>AgEx 441</td>
<td>Agricultural Information Communication Management</td>
<td>2</td>
</tr>
<tr>
<td>AgEx 451</td>
<td>Extension Program planning, Monitoring &amp; evaluation</td>
<td>3</td>
</tr>
<tr>
<td>AgEx 361</td>
<td>Training for Rural Development</td>
<td>3</td>
</tr>
</tbody>
</table>

The new curriculum is approved by the Haramaya University Senate in July, 2011, after the approval of Departmental Council & Academic Commission at Departmental and College level, respectively. The regular program will be started with the new curriculum in 2011/12 academic year. Whereas, Implementation strategy for the semi-distance program is developed by the core team in July 15-16, 2011 and module development is being undertaken by the four university’s staff members. As part of the process, first round five-day intensive training on module writing is organized by SAFE and conducted for staff from four universities in April, 2011 and the training is followed by five days evaluation workshop in June, 2011 to finalize the modules. Trained staff are nearly completed the modules and Second round module writing training is scheduled for December, 2011 by SAFE for teaching staff from the four universities. Moreover, training on value chain is organized for teaching staff in October, 2011 to enable academic staff teaching the newly designed courses effectively.

**Challenges facing the mid-career programme**

- **Shortage of highly qualified and experienced national staff**
  - The Department of Rural Development and Agricultural Extension suffers from a chronic shortage of highly qualified and experienced national staff;
  - The problem is compounded by the expansion of the programmes run by the Department and rapid increase in enrolments;

- **Financial problems**
  - The mid-career programme is an intensive programme in terms of staff time and financial requirements;
  - The programme has been receiving generous financial support from the Sasakawa Africa Fund for Extension Education (SAFE) for over a decade;
  - As the programme at HU graduated and is expected to be self supporting, lack of vehicles to conduct off-campus SEP supervisions is a serious problem that the Department of RDAE has to live with;
Resistance by some Regional Bureaus of Agriculture

- Some regions have been reluctant to embrace the programme. The different forms of resistance that some regions have displayed include:
  - Refusal to send their mid-career extension professionals for training with their full salaries;
  - Failure to pay salaries for students throughout the study period and to finance inputs for SEPs, after having authorized them to join the programme;
  - Failure to participate in the annual stakeholder workshops and off-campus SEP supervision;
  - Regional Bureaus of Agriculture follow long and bureaucratic decision making process to discharge their responsibilities, which are stipulated in the MoU; and
  - Some Regional Bureaus of Agriculture are not proactive in terms of following-up the progress of their mid-career extension professionals that they sponsored and sent to the University as well as maintaining strong linkages with the University.

Misunderstanding of the programme by the non-departmental staff

- The majority of the non-departmental academic staff believe that the interdisciplinary nature of the programme, the limited number of courses that students have to take, the two and half years duration of study and the importance given to SEPs make it less demanding than the regular programmes.
  - The College of Agriculture has been consistently refusing to award the Faculty's Gold Medal for best graduate to outstanding mid-career graduates.

Lack of skills on value chain among staff

Less number of female students enrollment

Lack of strong network with regional government to sustain the program

Recommendations

Measures that need to be taken to ensure the sustainability of the programme and its contribution to the economic development of the country include:

- Keeping the curriculum up to date and improving the quality and relevance of the programme through, among others, maintaining strong linkages with key stakeholders and undertaking periodic tracer studies.
- Securing reliable financial resources needed to cover the high expenses of the candidate-recruiting process and supervision of off-campus SEPs (possibly through cost-sharing by
sponsoring organizations);

- Luring young and outstanding professionals into the higher education system and retaining experienced teaching staff by providing, among others, better pay, working facilities, adequate incentives and competitive terms of employment;
- Maintaining strong and firm linkages with key stakeholders should be pursued as a strategy to deal with core problems (shortage of staff, budget, vehicles, and facilities);
- Capacity building for staff on value chain;
- Especial emphasize should be done to increase females participation (affirmative action and tutorial class);
- Strong collaboration among RDAE staff with other non-departmental staff;
- Strong linkage with regional bureaus;
- Close collaboration, linkage and experience sharing program with other universities (in Ethiopia and Africa); and
- Strengthening of alumni associations and professional society (Ethiopian Society of Rural Development and Agricultural Extension) is very important

References


Brannon, Luther H., 1966 "Our Ethiopian Adventure", Remarks Addressed to a Banquet Audience During the Annual Ethiopia Day on the Oklahoma State University


SESSION II

Chairperson: Dr. Paul Kibwika
Progress toward value-chain oriented training and for broadening access to training, Hawassa University, Ethiopia: by Dr. Yibreah Beyene⁸ and Deribe Kaske⁹

INTRODUCTION

In line with the four UN Millennium Development goals (MDGs) (out of the eight), such as reducing poverty and hunger, promoting gender equality and empowering women, addressing environmental sustainability, and creating global partnership for development; the University’s vision, mission, and core values; and the Government’s policy of Agricultural Development Led Industrialization (ADLI), a department of Agricultural Extension was established and started to function in the academic year (2006/2007) under the College of Agriculture. Among others, the University’s mission includes the importance of student-centred practical-oriented teaching and public service; and its core value includes also innovativeness. The mission and core values of the University have been given a due emphasise in establishing the Department of Agricultural Extension.

The Department was established in collaboration with Sasakawa Africa Fund for Extension Education (SAFE) in consistent with the aforementioned issues of concern at various levels.

To establish the Department, a comprehensive need assessment including various stakeholders was undertaken and a curriculum enrichment workshop was also organized. Accordingly, a well-refined curriculum was developed for mid-career agricultural professionals to be upgraded to a first-degree level in Agricultural Extension. This mid-career programme is unique and innovative in its nature owing to its great concern on experiential learning and greater emphasise to independent supervised extension projects that are conducted by students in their working place on relevant problems.

OBJECTIVES OF THE PROGRAMME

General objectives

The general objective of the mid-career programme is to assist the agricultural development effort of the country through training and producing qualified manpower in the field of Agricultural Extension.

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⁸ Dean, College of Agriculture, Hawassa University, Ethiopia

⁹ Co-coordinator, Agricultural Extension Mid-career program, Hawassa University, Ethiopia
Specific objectives

- To train mid-career extension workers who hold Diplomas in the fields of agriculture and related areas and upgrade to B.Sc. level in Agricultural Extension and Communication in two and half years.
- To improve the effectiveness of agricultural extension professionals involved in the agricultural development programmes of the country; and
- To upgrade the academic and professional qualifications of extension professionals by equipping them with up-to-date theoretical and practical knowledge.

ACHIEVEMENTS

The following are some of the successes achieved in the mid-career program:

- Since 2006/07 totally 149 students were enrolled in to the program, out of them three batches (77 students) successfully completed and graduated. Currently 32 second year students are in the field doing their SEPS projects and 39 first year students were completed the course work and have gone to conduct the needs assessment which helps them to plan their projects.
- Establishing an audio visual center & computer laboratory, promoting the program on National TV and Regional FM radio.
- Revising the curriculum and designing new curricula which addresses value chain and postproduction advisory services, in this regard the current mode of delivery, which is mainly full-time based, has inherent limitations which include:
  - Low intake due to space (dormitories) limitations,
  - Most women cannot afford to leave their families for long periods of time,
  - Those in the private sector and NGOs have problems enrolling on full-time programs that require long periods of absence from their place of work,
  - Self-employed potential candidates cannot afford long periods of absence as it means loss of income which they need to raise fees.

There is therefore need to explore the use of other modes of delivery that do not take students away from their families and places of work for long periods of time, like part-time and semi-distance learning, in order to broaden access to University education. As the result the new curriculum approved at the School of Environment Gender and Development Studies Commission and by the curriculum and academic standards committee of Hawassa university to be implemented in the 2011/12 academic year.
STUDENT ENROLLMENT

Totally 149 enrolled in the program, out of them 135 were male (90.6%) and only 14 (9.4%) were female.

<table>
<thead>
<tr>
<th>Academic year</th>
<th>Students enrolment in the program</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
</tr>
<tr>
<td>2006/07</td>
<td>19</td>
</tr>
<tr>
<td>2007/08</td>
<td>22</td>
</tr>
<tr>
<td>2008/09</td>
<td>25</td>
</tr>
<tr>
<td>2009/10</td>
<td>32</td>
</tr>
<tr>
<td>2010/11</td>
<td>37</td>
</tr>
<tr>
<td>Total</td>
<td>135 (90.6%)</td>
</tr>
</tbody>
</table>

Most of the regions of the country are represented in the programme whereas representation is not even, as some regions have more students in the programme than others. The number of candidates taken from each region determined based on the population size of the regional states, and proximity for less costly supervision and follow-ups.

ACADEMIC STATUS OF STUDENTS UP ON GRADUATION

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Distinction</td>
<td>7</td>
<td>10</td>
<td>7</td>
</tr>
<tr>
<td>Promoted</td>
<td>13</td>
<td>17</td>
<td>23</td>
</tr>
<tr>
<td>Incomplete</td>
<td>1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Dismissal</td>
<td>-</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>21</td>
<td>28</td>
<td>30</td>
</tr>
</tbody>
</table>

As we can see from the presentation on the above table, those extension workers some of them may depart more than twenty years from the area of education, but they proved us that they can compete even with regular students and complete their studies successfully.
STAFF PROFILE

There are totally 8 staff members in the program and out of them 1 is PhD and 7 are those who have M.Sc. in different field of specialization.

<table>
<thead>
<tr>
<th>Field of specialization</th>
<th>Academic Degree</th>
<th>Total</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M.Sc.</td>
<td>Ph.D.</td>
<td></td>
</tr>
<tr>
<td>Rural Development &amp; Agricultural Extension</td>
<td>3</td>
<td>-</td>
<td>3</td>
</tr>
<tr>
<td>Agricultural Extension</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Development studies (Rural Livelihood &amp; development)</td>
<td>1</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Agricultural Communication</td>
<td>1</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Management of Agro-Ecological Knowledge &amp; Social change</td>
<td>1</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>7</strong></td>
<td><strong>1</strong></td>
<td><strong>8</strong></td>
</tr>
</tbody>
</table>

SAFE SUPPORT

SAFE project supported us by providing basic instructional materials and equipment to facilitate the teaching & learning process; and provided financial support to facilitate supervision of students’ field projects, promote the program on National TV and Regional FM radio, organizing SEPs Workshops; and staff training (1PhD). Providing three Double Cabin Pick-up (4x4) to facilitate off-campus instructional activities.

CHALLENGES

- **Demand of the program is too high**
  
  Due to the very nature of the program there is a need of closer follow up and supervision by the university staff while students are working on their Supervised Extension Projects (SEPs). This will make considerable costs of time on staff members and logistical arrangements. The possible way out to minimize the problem is by selection of regions that are adjacent to each other. Thus, candidates for particular year/batch will come from clusters selected for the academic year under consideration.

- **Low percent of female candidates into the programme**
  
  The program encourages qualified female applicants and 25% of the admission is reserved for female candidates, unfortunately regions sent few or no female candidates.
• **Mismatch of the program with others**
  Unlike other programs, the mid-career program has 2.5 years of duration and the total credit hours are lesser than others. The program has unique courses such as SEPs

• **Luck of sponsorship**
  Regional governments were unable to cover the living cost of students

• **Some regions not interested to send candidates**

FUTURE PLAN

- Increasing female student intake
- Give special emphasis to the SEP and value chain courses or modules and extend them to other programs of agriculture
- Strengthening the audiovisual and computer centres
- Establishment of Alumni Association
- Conducting trace back studies of graduates
- Commencing semi-distance program soon
- Continuous improvement of the program
- Teaching materials preparation for the identified modules
- Sharing experience to others and from others to expand and continuously improve the program based on needs of the concerned and the Ethiopian Agricultural sector in general

Thank you
Progress toward value-chain oriented training and for broadening access to training, Bahir Dar University, Ethiopia: by Dr. Eneyew Adgo and Girmachew Siraw

1. INTRODUCTION

1.1 Bahir Dar University

The history of establishment of higher education in Bahir Dar began with the establishment of Poly technique institute in 1963 under the technical cooperation of USSR and the Imperial Government of Ethiopia. Then, it was followed by launching of Academy of Pedagogy (Teachers College) in 1972. The two institutions merged together and formed Bahir Dar University (BDU) in 1999.

Bahir Dar University encompasses 14 academic/research units (4 Colleges, 3 Faculties, 4 Schools, 3 Institutes) with a total student population of 41,000 in regular, extension and summer (2nd in Ethiopia). Currently, the university has 1,156 academic staff and 1,350 administrative support staff. It is found in three campuses and four more campuses are under construction. The university is running 55 undergraduate and 35 postgraduate programs.

1.2 College of Agriculture and Environmental Science

The College of Agriculture and Environmental Sciences in which the Mid-career Program is hosted, is one of the Colleges of Bahir Dar University established in 2005 with 8 undergraduate programs; Graduate programs (9 MSc programs and 3 PhD levels – underway); 97 academic staff and 27 supporting staffs (19 PhD holders, 45 MSc degree and 24 BSc and 7 Diploma holders); 3219 students (about 21% Female) and different mode of delivery (regular, extension, summer and distance). The under graduate program include Bsc programs in Plant Science, Animal Science and Technology, Natural Resource Management, Water Resource and Irrigation Management, Fishery, Wetland and Wildlife Management, Disaster, Risk and Sustainable Development and Rural Development. All these, on their part, will contribute offering courses to the new Mid Career Agricultural Extension Program.

1.3 Rural Development Program

10 Dean, College of Agriculture and Environmental Sciences, Bahirdar University, Ethiopia
11 Lecturer, College of Agriculture and Environmental Sciences, Bahirdar University, Ethiopia
The Programme of Rural Development is relatively new as the college itself. The Program has 16 academic staff (12% female) six of whom are on study leave pursuing their Msc and PhD studies (Agricultural Economics 4, Agricultural Extension 1, Agricultural Extension/ Rural Development 5 MSc and 3 BSc, Social Anthropology 1 and Development Studies 3). To an effective running the intended Program, additional professionals in the area of agricultural extension has been recruited.

Rural development under the college of Agriculture and Environmental Science is a pioneer programme which has currently more than 163 students and hosted Mid-Career- Extension Programme

2. RATIONALE OF OPENNING THE MID-CAREER AGRICULTURAL EXTENSION PROGRAM

Bahir Dar University launched the Mid Career Agricultural Extension Programme for the following reasons: more than 85% of the population in Amhara region of Ethiopia, in which the university is located, enaged in agriculture; huge number of extension staff at low level of qualification (Diploma) in the same region; need for enhancing agricultural professional career & improve effectiveness of technological dissemination; noticed gaps in the already existing Mid-Career Agricultural Extension Program not responsive to the emerging issues of value chain; high interest and comittement of the Amhara Bureau of Agriculture in upgrading the educational level of its extension staffs; availablity of staff and other infrastructure to run the program; Participation by Bahir Dar University in the development of the new value chain oriented curriculum and existence of good experinces from other Ethiopian universities

3. OPPORTUNITIES AND STRENGTHS OF BAHIR DAR UNIVERSITY TO RUN THE PROGRAM

Bahir Dar University has the following opportunities and strengths to run the Mid Career Agricultural Extension Program: already existing strong linkage among Bahir Dar University, Amhara Bureau of Agriculture and Amhara research institute; experience of upgrading the development agents in the summer as well as in regular programs (900 trainees in summer program and 800 trainees in regular program of special program funded by Amhara Bureau of Agriculture); existence of staffs of diversified disciplines; commitment of the University’s
management to launch the program and accumulated experience of the university in running distance programs

4. BAHIR DAR UNIVERSITY EXPERINCE IN DISTANCE MODE OF DELIVERY

Bahir Dar University is adopting both full time and semi distance mode of modality. Currently there are more than 12,000 students in distance mode of modality with seven outreach centers of coordinators where registrations, tutorial classes, payments and examinations are handled. There is a plan to establish libraries and computer centers for this mode of modality.

5. READINESS OF BAHIR DAR UNIVERSITY TO LAUNCH THE PROGRAM

The College of Agriculture and Environmental Science Academic Commission of Bahir Dar University has endorsed the curriculum of Mid Career Agricultural Extension Programme. The Curriculum and Standard Committee of the University has also endorsed it. Endorsing the curriculum by the university senate is on process.

In addition to this, memorandum of understanding has been signed between Bahirdar University with Sasakawa Africa Fund for Extension Education (SAFE) and Amhara Bureau of Agriculture. SAFE is supporting the university with basic office supplies and books.

6. PREPARATIONS TO LAUNCH THE PROGRAM

Bahir Dar University has conducted sensitization workshop about the new program. As a result, Amhara Bureau of Agriculture has nominated 46 trainees and they have taken the entrance exam prepared by the university among which 30 only will be selected for this academic year. For this purpose, the university has recruited two additional staffs in the area of agricultural extension and rural development.

The College of Agriculture and Environmental Science was using engineering campus for the teaching and learning however its own campus will be ready as of this academic year. The regular full time program will be effective as of this academic year and the semi distance will be commenced in the near future.

7. EXPECTATION CHALLENGES IN RUNNING OF THE PROGRAM

Bahir Dar University expects challenges in running this Mid Career Agricultural Extension Program. Thus, staff capacity especially in the area of value chain oriented extension will be challenging as professionals were focusing the production aspect ignoring value addition and post production. The other challenge can be logistical and budget constraints especially to supervise students when they are doing for their supervised enterprise project which may take them more than eight months.
Getting the required number of female trainees is also challenging as the ground education did not work to the expected level in upgrading them. Lastly, the tendency to give more respect to University legislation may challenge a roam for flexibility.
Progress toward value-chain oriented training and for broadening access to training, Mekelle University, Ethiopia: by Dr. Girmay Tesfay\textsuperscript{12} and Mikinay Hailemariam\textsuperscript{13}

Upgrading/tailor-made programs with relevance to Agricultural Extension at Mekelle University

The Diploma in General Agriculture

The diploma programme run from 1996/97 till 2003/4 (six batches). The main objectives of the programme were:

- On the job training to promote the academic qualification of extension agents in the Tigray region
- Upgrading of certificate holders to Diploma in GA
- Multidisciplinary program to address the diversity of agricultural problems

- The program designed as
  - One semester intensive course per year
  - Semester running from December 10 till March 10 annually
  - Total load was 72 credits in four semesters

- Admission to the GA
- Candidates are selected by the BoANR out of those who are academically qualified development agents
- A total of 198 were admitted and graduated during the program period
- It was run for six cycles, annually 30-40 students and only 4 were female

Advantages

- The courses were conducted during off-agricultural season
- Some overlap with the natural resources rehabilitation work in the region
- Although intensive during delivery, there was enough time for preparation and revision during the rest of the year
- Producing generalists (what was demanded by then)

Disadvantage

- Longer duration than the normal full-time diploma (takes four years to finish under normal circumstances)
- High semester load given the 12 weeks duration (the last 10-15 days are for exams)
- Difficulty on supervision of students off-campus
- Dependency on project support for student funding

Termination of the program

- It was terminated due to phasing out of diploma programs from the public universities
- Shift in demand of the region to a B.Sc. level upgrading

\textsuperscript{12} Dean, College of Dry land Agriculture and Natural Resources, Mekelle University, Ethiopia

\textsuperscript{13} Lecturer, College of Dry land Agriculture and Natural Resources, Mekelle University, Ethiopia
• Launching of summer B.Sc. degree programs (from 1997-2006)
  In the summer programs a total of 20 female and 298 male extension agents were
  upgraded

The Diploma in Soil and Water Conservation (evening)
• This was launched in 1995
• Fee paying high school leavers were trained in SWC
• Most of the graduates joined the Bureau of Agriculture as natural resources management
  extension agents
• The focus of the training was on the principles of SWC and technologies
• A three credit course general in agricultural extension
• Graduated 20 female and 207 male students from 1996 till 2004
• Other Upgrading programs currently ongoing
• B.Sc. in Food Science and Post Harvest Technology
  o For home agents in the regional extension system
  o A total 30 admitted in 2010 summer (all female)
  o Supported by the Government of Norway (NUFU project) and Women’s
    Association of Tigray/ Development Fund Support/
  o It started as a summer program but to shorten the duration of the study, as of
    2011/12 academic year, it will be combined with the regular program

Other Upgrading

M.Sc. in Rural Development
• Five cycles conducted with the Support of Irish Aid (3) and RCBP(2)
• For professional involved in food security programs (as planners and implementers)
• The program combines face-to-face intensive courses for 10 to 15 days every three
  months
• One day per course tutorial on arranged weekends
• Maximum 25 students per batch
• So far 66 has graduated and 34 are finalizing their thesis work
• 16 will be admitted in October 2011 with the support of Irish Aid

Short courses on topics of relevance
• Soil and water conservation; watershed management; sustainable land management;
• Sustainable agriculture
• Livestock management
• Seed system development
• Farm data recording and analysis; farm management
• Participatory community development approach

B.Sc. in Rural Development and Extension
• It is a three years duration
• In the regular programme
• Started during the academic year 2010/11
• 35 students are attending
• Some elements of the value chain orientation are introduced to this curriculum
Otherwise, it is the more conventional curriculum

**Progress in the implementation of Mid-career program (Value Chain oriented extension education)**
- Gaining management support for the program
- Involvement in the process of the joint curriculum development and review
- Organizing university level teams for development of the course plans and contents
- Preliminary consultation with major stakeholders
- Stakeholder’s sensitization workshop conducted on August 18, 2011 with the financial support of SAFE and NORAD
- Revision of curriculum after sensitization workshop on going
- Approval of curriculum and the modality of delivery by the University Appropriate Committees
  - Additional staff recruitment on-going and one already recruited

**Discussion with major stakeholder**
- Tigray BoARD is planning to train 1000 DA’s with five years
  - 60% of them will be in agricultural extension
  - 40% other agricultural training areas
- Funding contribution is promised to support the program
- Intake capacity is discussed
- Possibility of other modalities
- Taking other Universities that can implement the program is also discussed
- Selection process is about to start
- Implementation contract agreement under preparation (of course there is MoU)

**Opportune time for value chain oriented extension services**
- The launching of the Agricultural Growth Plan at the national/regional levels in which Value chain approach is advocated, Market development is given emphasis and Some donor support may be available for the market development (e.g. USAID)

**Demand for Capacity Building of Tigray Region**
- Total targets within 4 to 5 years time is to train up to 1000 DA’s
  - In fulltime programme: 50 DA's per year
  - In summer 50 DAs per year
  - Semi-distance program: 100 DA’s per year
- Planned distribution of training demand
  - 60% of the target will be B.Sc. degree in agricultural extension and communication,
  - 40% B.Sc. degree in cooperative and marketing, apiculture, horticulture, animal breeding and veterinarians

**Challenges**
- The financing of the program
- Finding sufficient female applicants
- Finding appropriate modality of delivery to reach more participants
- University policy on
  - Credit loads
o Possibility of three semesters per year
o Modality of implementation
  • Meeting the demand
Thank You
SESSION III
Chairperson: Dr. Kindie Tesfaye
1. INTRODUCTION

1.1 Background Information

The United Republic of Tanzania is a Republic formed by the union of Tanganyika and Zanzibar in 1964. Tanganyika attained independence in 1961 and Zanzibar in 1964. Tanzania is located in East Africa between latitude 1° -12° South of Equator and longitude 29° - 41° East of Greenwich. It shares the borders with eight countries: Uganda and Kenya to the North, Democratic Republic of Congo, Burundi and Rwanda, to the West, Malawi Zambia, and Mozambique to the South. A coastal line of 800kms borders the Indian Ocean on the East. The total land area of Tanzania is 945, 000 sq. kilometers which includes a land area of 881,000 Sq.kms of Mainland, 2,000 Sq.kms for Zanzibar, 62,000 Sq.kms inland water and 3,350 Sq.kms forest and woodlands.

The population of Tanzania is estimated to be 45 million people (2002 census and population projection). The population growth rate is 2.8% per annum. About 80% of the population lives in rural areas where subsistence farming is the main source of livelihood. The strength of the Tanzania economy lies on the rich endowed natural resources including minerals, arable land and large population that constitute the large internal markets, favorable climate and political peace and stability.

1.2 Importance of Agriculture in Tanzania

Agriculture is the main stay of the Tanzanian economy. It contributes more than 25 percent of GDP and 30 percent of export earnings. The country is food self sufficient. The agriculture sector provides employment to about 70 percent of the total labour force out of which the majorities are women. Food crop production accounts for about 65 percent of agricultural GDP while cash crops accounts for only 10 percent. Maize is the most important food crop accounting for over 20 percent of total agricultural GDP. Food and cash crops account for about 70 percent of rural income.

1.3 Agriculture policy framework

Since nineteen eighties, transformation the Tanzanian economy has redefined the role of government and the private sector. Under the new environment most of the production, processing and marketing function have been assigned to the private sector while the government retained the regulatory and public support functions. These changes have profound impact on the agricultural sector. Currently agricultural inputs and output price have been decontrolled; subsidies given to priority crops and monopolies of cooperative and marketing boards have been eliminated.

In this new environment the government does the support functions, such as protection of environment and provision of enabling environment for private sector participation in the
agricultural production, policy formulation, information service, regulatory functions, research, extension and training.

1.4 Agricultural Sector Vision

Stakeholders in Agriculture envisage an agricultural sector that is modernized, commercial, highly productive and profitable, utilizes natural resources in an overall sustainable manner and acts as an effective basis for inter-sectoral linkages by the year 2025.
2. THE ORGANISATIONAL STRUCTURE OF MAFC

(Approved by the President on 4th July, 2008)
STRUCTURE OF EXTENSION SERVICES

CROP DEVELOPMENT
DIVISION

ASSISTANT DIRECTOR OF
EXTENSION

RAS

FARMERS

DALDO

DAEO

WAEO/VAEO

ZONAL DIRECTOR
OF RESEARCH

ZIELU

PORALG

DRD
3. EXTENSION SERVICES

Extension aims at empowering farmers to identify and analyze their agricultural problems, and give the right decision on matters pertaining to profitable and sustainable agriculture.

The major objective of extension services is therefore to facilitate farmers to increase agricultural production and productivity, and finally improving their social economic status. The value addition and agricultural marketing is the most focus of extension service through FFS and Producer groups. Also extension is responding to farmer’s need-, by provision of demand driven services. Agriculture extension has been entirely financed by the public sector until recent years when the government encouraged the private sector to provide and finance extension services. As a result non- governmental organizations- religious organizations and private agribusiness are now supplementing public extension services by using government extension officers and very few employing their own extension officers.

With the government idea of having extension service administered at the lowest level of the government, the delivery of public extension is now vested with the local governments (Local Government Act of 1997). The role of central government as far as agricultural extension is concerned is to facilitate and to support local authorities to carry out extension services. This is done by training of extension staff, providing transport facilities, guidelines, regulations and coordination in general.

To facilitate the flow of knowledge and agriculture information the district and farmer networks (farmer fora) have established the Ward Agricultural Resource Centers (WARCs) which act as a meeting centre for farmer groups and networks to meet and share experiences. Also these centers are used for sharing expertise between extensionists, farmers and researchers. Currently there are about 152 WARCs constructed in 55 Districts. The new informations of value chain will be tought and demonstrated at this centre.

4. EXPERIENCES WITH EXTENSION STAFF DEVELOPMENT

Agricultural extension services have been decentralized so that they are nested at the lowest level of government machinery, where they will be cost –effective and easily respond to farmer needs. However the major problem impeding the effectiveness of agricultural extension services in Tanzania is the low number of extension staff with the knowledge of value chain technologies compared to the size of the country. Even if the government is involving private sectors in extension service provision the role of extension staff development is still a responsibility of central government of which has no enough money to incorporate the upcoming needs of extension services.

Up to 2010, there was a shortage of 9,901 agriculture extension staff at village level (see in table 1). The ministry continued to increase the rate of enrollment of pre-service extension staff in agriculture institutes who will be employed by district to reduce the existing shortage of extension staff. The aim is to have one agriculture extension staff at lower level that is one agriculture extension staff at every district, ward and village by the year 2011/2012. However the government has managed to have one extension officer in each district and Ward for the whole country but many villages still have no extension staff. In view of this, the Ministry of Agriculture, Food Security and Cooperatives has in the past two years (2008/09 and 2010/11) trained 4,441 extensions officers waiting to be employed in the year 2011/12. This will reduce
the deficit to 5460 of which if enrollment maintains the same level the aim may be fulfilled in four years to come. The ministry will prepare short courses that will train these extension staff on technologies in value chain as they did not get it from the university.

Table 1: Requirements of Extension staff at LGAs and Situation By 2010/2011

<table>
<thead>
<tr>
<th>Extension service level</th>
<th>Required</th>
<th>Available</th>
<th>Percent</th>
<th>Deficit No. of Extension staff</th>
</tr>
</thead>
<tbody>
<tr>
<td>District HQ</td>
<td>792</td>
<td>792</td>
<td>100</td>
<td>0</td>
</tr>
<tr>
<td>Ward</td>
<td>2,855</td>
<td>2,855</td>
<td>100</td>
<td>0</td>
</tr>
<tr>
<td>Village</td>
<td>12,227</td>
<td>2,326</td>
<td>19</td>
<td>9,901</td>
</tr>
<tr>
<td>Total Requirement</td>
<td>15,874</td>
<td>5,973</td>
<td>37.63</td>
<td>9,901</td>
</tr>
</tbody>
</table>

4.1 Current and emerging staff Development Needs

While we were used to conventional agricultural production and the government providing all agricultural services to farmers including subsidy in all stages of production and marketing, the change in the Agricultural production caused by free market and the use of new ICT in technology transfer requires that the extension staff goes beyond the dissemination of technical knowledge and skills and take on critical challenges that affect the agricultural industry such as environmental protection, value chain and market competition in an increasingly global economy. To attain these extension staff need to be developed/trained on the following:-

- Providing extension services in Participatory Approach;
- Involvement of different stakeholders in extension programme;
- Increase the use of Information and Communication Technologies (ICT) in agriculture technology transfer;
- To respond to the changes in the socio-economic and value chain demand, political environments that exists;
- Integrated systems and sustainable production;
- Hiv/aids subject included in the university syllabus.

4.2 How the Ministry has been responding to staff development needs

The government strategies to respond to the staff development needs includes:-

1. The ministry has trained 4,441 extension staff who are waiting to be employed to fill the gap, these are expected to be employed in the year 2011/2012 and working on improving the working
conditions by giving the transport facilities, building housing and looking the modalities of improving their salary;

2. Extension staff are provided with short course training on value additions, agribusiness, marketing and on Computer skills;

3. Stakeholders meetings on value chain in agriculture are conducted to share knowledge and skills;

4. There are farmers day exhibitions (Nane Nane) at National, Zone, District and at ward level;

5. Orientation of graduates to extension services during their field practicals

6. Training of extension staff on prevalence of HIV/AIDS) and political environments which are existing in the country at present.

7. Rehabilitation of agriculture training institute to increase enrolment rate of extension students has been done.

8. Provision of long and short courses in and outside the country (Development partners);

9. The use of Information and Communication Technologies (ICT) in agriculture technology transfer has been encouraged and introduced in Ward Agriculture Resource Centers;

10. Currently the ministry has introduced the project called Southern Highland Agriculture Growth Corridor where extension staff and farmer groups are trained on value chain management skills;

11. The ministry is working to revive the Tanzania Society of Agriculture Education and Extension where the extension staff will share their working experiences;

12. Farmer’s organizations have been strengthened by forming SACCOSS to increase their financial power and marketing opportunities.

### 4.3 Challenges

Challenges of coping with extension staff development needs includes:-

1. High Demand of extension staff training to respond on emerging needs including value chain knowledge and skills;

2. Facilitating conducive environment so that extension staff are willing to live and work at the rural areas.

3. Low number of extension staff at village level.

4. Providing competitive salary with none Agricultural private sectors so that we can recruit and retain many graduates from SUA.

5. Revising the curriculum of agriculture training institutes is a process that takes long time.
4.4 Expectations from Universities

The ministry expects the university to produce extension officers with theoretical and practical skills on:-

1. The ministry expects the university to produce graduates with theoretical and practical skills on:-
2. Responding to the changes in the socio-economic including Value chain skills and knowledge;
3. Involvement of different stakeholders in extension programme management;
4. Use of Information and Communication Technologies (ICT) in agriculture technology transfer;
5. Responding to the challenges of the prevalence of HIV/ADS

Also the university should produce graduates with positive mindset on the extension workers to live and work in the rural communities where they are mostly needed.

Thank you
1. Introduction

The Mid-career Extension Degree programme at Sokoine University of Agriculture (SUA) was launched as BSc. Agricultural Education and Extension (B.Sc. AEE) degree programme in October 1998. Since its inception a lot of experiences have been gained. This paper therefore aims to share experience on the programme and highlighting plans for incorporating the value chain aspects in the curriculum.

The mid career BSc. Agricultural Education and Extension degree programme was meant to cater for mid-career extension staff with agricultural technical knowledge but it attracted candidates with diverse education backgrounds. One of the attracted groups for example, was that of secondary school teachers who lacked extension background. Another major group was that of form-six leavers whose despite of having no extension experience they also lack agricultural technical knowledge, which the mid-career group already has. Practically, for efficient and relevant delivery of learning experiences, students are expected to have homogenous professional background. With the diverse professional background as it is the case for B.Sc. AEE programme, it poses several challenges such as to have tailor-made practicums, problem-focused courses, and field-based enterprises. Generally, these challenges posed logistical problems, especially in organizing Supervised Extension Projects (SEPs), which is the core element of the programme but also in trying to fill the gaps of the inexperienced entrants.

Moreover, for effective running of the programme, an appropriate class size is critical. Class size must reflect the students / teacher’s ratio to allow efficient learning and supervision. With the limited number of staff available in the Department the class size must be small enough to create efficient classroom learning environment and supervision of students for the field practical training.

In order to overcome these problems the Department initiated the curriculum review process. This review process was drawn heavily on inputs based on the experiences in running the BSc. AEE programme and various tracer studies and stakeholder workshops that have been conducted so far. It also accommodated the opinions of stakeholders including graduates of the program, the Ministry of Agriculture, and the Ministry of Education and Vocational Training. The BSc. Agricultural Education and Extension was therefore changed to BSc. Applied Agricultural Extension (BSc. AAE) that was launched in 2010/2011 academic years. This implies that the
first year students are under taking BSc. AAE while the second and third year students are pursuing BSc. AEE that is expected to phase out in 2011/2012 academic years.

2. Current students enrolled in mid career programme

Currently a total of 304 students have been enrolled in the programme. These are in their first, second and third years as shown in Table 1.

### Table 1 Number of current students enrolled in the mid - career programme

<table>
<thead>
<tr>
<th>Year of study/Intake</th>
<th>BSc. Holders</th>
<th>Diploma Holders</th>
<th>Direct students (Form Six)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>3rd (2008/2009)</td>
<td>AEE</td>
<td>78</td>
<td>2</td>
<td>80</td>
</tr>
<tr>
<td>2nd (2009/2010)</td>
<td>AEE</td>
<td>106</td>
<td>1</td>
<td>107</td>
</tr>
<tr>
<td>1st (2010/2011)</td>
<td>AAE</td>
<td>117</td>
<td>-</td>
<td>117</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>301</strong></td>
<td><strong>3</strong></td>
<td></td>
<td><strong>304</strong></td>
</tr>
</tbody>
</table>

The students in third year are due for graduation in November 2011 subject to passing their Supervised Extension Projects and probation examinations (for those who failed). In this respect the number of graduating students might change accordingly. It is worthy noting that the new degree programme (BSc. AAE) caters for mid career candidates (field-based agricultural extensionists). As indicated in Table 2, in 2010/2011 academic years when the programme was launched, a total of 117 students were enrolled in the programme.

2. BSc. AAE Curriculum

As in the case of BSc. AEE, the BSc. AAE is a three years degree programme and its curriculum runs through six semesters, two in each year. Supervised Enterprises/Experience Projects (SEPs) continues to be the salient feature in the curriculum of the mid – career BSc. Applied Agricultural Extension degree programme due to its practical oriented nature. The curriculum covers a range of courses related to agricultural extension, SEP, crop production, animal production, post harvest handling, food storage and handling, food science, human nutrition, animal nutrition, agricultural economics, Agribusiness, gender issues, Agriculture and
development, administration and management, just to mention few (Table 2). It is a full time programme and lecture remains the main mode of delivery.

4. Academic Staff

Currently, the Department has a total of twenty-five academic members of staff. Four of them are pursuing their PhD studies; seven are pursuing MSc. studies, one is on leave without pay and five on two years contract after retirement. Their current status is as indicated in (Table 3).

Table 3: The number of academic staff and their status

<table>
<thead>
<tr>
<th>Category</th>
<th>M</th>
<th>F</th>
<th>Total</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professors</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>One present, one on two years contract</td>
</tr>
<tr>
<td>Associate professors</td>
<td>3</td>
<td>0</td>
<td>3</td>
<td>All on two years contract</td>
</tr>
<tr>
<td>Senior lecturers</td>
<td>3</td>
<td>1</td>
<td>4</td>
<td>Three present, one on two years contract</td>
</tr>
<tr>
<td>Lectures</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>One on leave without pay, one on study leave (PhD).</td>
</tr>
<tr>
<td>Assistant lectures</td>
<td>11</td>
<td>1</td>
<td>12</td>
<td>One present, Three on study leave (PhD), Six on study leave (MSc.)</td>
</tr>
<tr>
<td>Tutorial assistants</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>One present, one on study leave (MSc.)</td>
</tr>
<tr>
<td>Total</td>
<td>22</td>
<td>3</td>
<td>25</td>
<td></td>
</tr>
</tbody>
</table>

5. Challenge of the programme

Challenges of the BSc. AAE revolves around the areas of less coverage on value chain aspects in content and sequence in the curriculum, the number of students enrolled and teaching staffs.

5.1 Less coverage of value chain aspects in the curriculum

The experience shows that the graduates of mid career are technically competent to offer advisory services largely on production agriculture. They are comparatively less competent on value chain aspects related to production, post harvest handling, processing, value addition and
marketing in order to attain food security and increasing export volumes. This is largely due to the fact that the present curricula for the training program are production based and partly cover the tenets of value chain in content and sequence (SAFE Workshop communiqué, 2010). This is the case with curriculum for BSc. Applied Agricultural Extension. The aspects covered of value chain such as post harvest handling, food storage and handleings, marketing, are not organized sequentially along the value chain aspects as indicated in Table 2. Based on the SAFE workshop it was felt that there was a need to come up with specific course on value chain and also include the principles of value chain into specific technical courses in the current curriculum that will go hand in hand with proposing suitable modes of delivery.

5.2 Large number of students

Ideally, the selection of students, from amongst the mid-career extension staff, was to be initiated by the stakeholders of the programme such as district councils. The Department was then to select the best students from this pool. This, however, has not been the practice. For the past thirteen years since the inception of the mid career programme (between 1998/1999 and 2010/2011 academic years) the Department has been receiving large number of students that is un-proportional to the number of academic staffs available in the department.

For the programme to run smoothly, it is necessary that the acceptable students / staffs ration be maintained. Under the present arrangement, this is difficult to achieve because practically the Department has no mandate to deny enrolment of any potential applicant to join the degree programme.

5.3 Academic Staffs

As indicated in Table 3, out of 25 academic staff only eight members assume full teaching responsibilities. Of eight academic members of staff, two of them have a relatively heavy administrative load within and outside the Department and all members of the Department are heavily involved in multidisciplinary research activities, a situation that has implication on the teaching and supervision of field practicals/SEPs. Academic members of staff in the Department also teach a number of courses that run across departments within the Faculty of Agriculture and across faculties and institutes in the University. For example while the currently approved teaching load for a Professor is 80 contact hours there are some professors whose load is over 600 hours irrespective of class size. The heavy involvement of academic members of staff in teaching, research, administration, and extension, among other activities has adverse impacts on the running of the programme.
6. The Way Forward

There are issues that need attention for the programme to run smoothly. These include the initiation of the process of curriculum review to incorporate the aspects of value chain as per the recommendations offered by SAFE workshop held in Ghana. The idea was to start the review process since 2010 but there is a fundamental factor that delayed the process. As highlighted earlier, BSc. Applied Agricultural Extension was recently launched, in year 2010. This implies that the SAFE’s recommendations (aspects of value chain) came about when the curriculum for the newly introduced programme (B.Sc. AAE) was just approved by the university organs and the Tanzania Commission for Universities (TCU). Although Sokoine University of Agriculture quality assurance policy (SUA, 2011), encourages periodic review of curricula the Department felt that it was necessary to allow some time to run and assess the performance of the new degree programme before incorporating SAFE recommendations. However, the Department has currently requested funds that will enable to conduct need assessment for curriculum review aimed at among other things to incorporate SAFE’s recommendations.
Wednesday, September 21, 2011

SESSION IV

Chairperson: Justa Katunzi
Background of the Mid-Career Training Program in Makerere University

Uganda’s economy, which is predominantly agricultural relies heavily on its national agricultural extension system to transfer agricultural knowledge and skills to farmers (FAO, 1991, 1997; Jurgen, Murwira, & Connolly, 2000; Mettrick, 1993; World Bank, 1990). This implies that the role of the field extension workers (FEWs) is critical to the economy given that they work on daily basis with the farming communities. However, the front-line extension workers held very low academic qualifications, with the majority holding just the equivalent of high school certificates or diplomas from two-year post-secondary institutions. They therefore possess insufficient theoretical and practical preparedness to work with diverse agricultural systems and stakeholder groups and can hardly take up leadership positions within the workplace hierarchies. The structural adjustment programmes of the 1990 aimed at reducing Government expenditre and increasing effectiveness of service delivery posed a threat to the FEWs who directly serve the farmers. Those with Diplomas and lower qualifications were targeted for retrenchment as one of the ways of down-sizing the public service sector.

The Ministry of Agriculture, Animal Industry and Fisheries was keen to upgrade the FEWs with diplomas in in extension methodology and technical aspects which limited their potential to work efficiently with the ever changing agricultural world (Mango, 1996). A study by Najjingo (1990) identified the most deficient areas among Uganda’s FEWs. These included: program planning techniques; communication; and, teaching skills, in addition to technical know-how of modern agricultural systems. Mango (1996) confirmed these deficiencies and emphasized the need to re-educate all extension workers in extension methodology and technical knowledge if the FEWs were to retain their jobs in MAAIF. In response to the above need, the then Faculty of Agriculture at Makerere University, in partnership with Sasakawa African Fund for Education (SAFE) and initiated a three year degree program, the Bachelor of Agricultural Extension Education (BAEE) in 1997. Different from the conventional BSc Agriculture, the BAEE was based on the principle of experiential learning with a strong component of learning from practice as a course known as Supervised Enterprise and Learning Projects (SELPs).

The BAEE curriculum was prepared to incorporate skills and knowledge that prepare the FEWs to work more effectively with farmers using a more practical approach to agricultural development. The curriculum covered several agricultural-related disciplines including: Extension Education; Economics; Engineering; Food Science and Technology; Crop Science;
Animal Science; Soil Science; Social Science; and, Forestry. The diverse mix of agricultural-related courses was aimed to prepare FEWs with the ability to organize effective agricultural educational programs among farming communities. The program admitted candidates with diploma, and at least a three-year field experience in an agricultural related field, hence a unique group of adult learners. The BAEE programme was implemented for ten years (1997-2007) until it was transformed into another programme, called the Bachelor of Agricultural and Rural Innovations (BARI).

Challenges of Implementing the Mid Career Degree Program (BAEE) at Makerere University

Several challenges were experienced with the BAEE programme. These are outlined below:

- As a private programme, it needed to attract at least 40 students each year to meet the cost of its implementation. Enrolment of the BAEE largely remained too small to sustain a private programme. Even with the support from SAFE towards mainly the SELPs the programme could not generate enough funds to meet the costs of the programme including teaching materials and paying teaching staff. The programme could not break even with the enrolment and the Department was under pressure to justify its existence. In reality the BAEE programme was heavily subsidized by other programmes in the then Faculty of Agriculture, something that could not be sustained. Figure 1 below shows the enrolment of the BAEE and the newly introduced BARI programmes.

Figure 1: Enrolment of the BAEE and BARI programmes
With a unique group of adult learners, the BAEE program was designed to use a variety of teaching methods that leaned towards problem solving and experience sharing. However, due to several constraints including inadequate facilities, staff time constraints, staff competence to effectively use alternative learning methods and others, the planned methods were not commonly applied to this degree program. A study by Kyazze (2006) confirmed that lecturers used more of the traditional lecture style than the more interactive teaching approaches that had been planned for this programme. This limited the opportunity for learners (FEWs) to tap into their wide work experience as a learning resource. Inadequate orientation and fund to motivate them to implement a program differently.

The BAEE design required a classroom environment that fostered safety and confidence among its unique audience. In this regard, the learners were to attend independent lectures from the regular BSc students even for courses whose content was similar. For staff time constraints and lack of adequate resources to incentivize the lecturers to teach these learners differently, in many cases the BAEE students were combined with regular BSc Agricultural students for common courses. This culminated into large class sizes, which created difficulties for the adult learners. Needless to say, adult learners and regular BSc agricultural students were at different cognitive and work experience levels. Combining them created an intimidating learning situation where the adult learners lost their confidence to interact, and the focus on individual learning needs of the mid-career students was lost.

The adult learners were concerned about accountability and more so value for their money. In this regard they demanded time and learning materials from their instructors. Some instructors who for example missed some lectures, coming in late were challenged to explain. The lecturers were not used to this kind of behaviour by students and indeed they dismissed students’ complaints calling them problematic students among others. None the less the university in general lacked a monitoring system that made instructors accountable for their own behavior during teaching. This phenomenon in a way frustrated the adult learners, especially after heavily investing in the educational program in terms of time and money.

The full time BAEE program was a challenge for the adult learners in terms of balancing social and family responsibilities, work, and school obligations. The full-time programme withdraws them from their work and yet they have to meet their own cost of education plus that of their children and family welfare. This was even a bigger challenge for the female adult learners who had more social and family responsibility especially in cases where their husbands were not very supportive.

Moving from Mid-career (BAEE) to Bachelor of Agricultural and Rural Innovations (BARI)

At the same time the programme faced low enrolment to sustain a private programme, the landscape of the national extension system fundamentally changed. Creation of the National
Agricultural Advisory Services (NAADS) led to a major shift from Government delivered extension to private sector delivered extension. The underlying principles to this shift among others include:

- Enhancing farmer empowerment to influence the quality and relevance of extension through farmer fora at various levels
- Demand-driven service delivery – farmers through the farmer fora demand and contract service providers
- Enhancing effectiveness of service delivery through privatisation of advisory service delivery

The Department Extension/Education then with support from the British Council and in collaboration with the University of Greenwich in UK, undertook a comprehensive study and stakeholder consultations to identify the critical professional needs for extension in the new context of extension in Uganda. These led to the development of a new programme, BARI. The BARI programme was a replacement of the mid-career (BAEE) also carried over some the good aspects of the BAEE, particularly the SELPs. Different from the BAEE, BARI is open to direct entrants from High School. The Diploma holders can still join the BARI programme through Mature Age Entry or the Diploma Scheme. The BARI programme was designed to embrace the broader agricultural development paradigms, particularly the innovation systems approach. Based on needs assessment studies and stakeholder consultations, unique (non-conventional courses) were developed as part of the BARI programme. Examples of the new courses included:

- Community Mobilisation and Group Dynamics
- Entrepreneurship and Small Business Management
- Innovation Systems Management
- Documenting and disseminating Development Information
- Developing Sustainable Rural Institutions
- Social Skills for Professional Development

Currently the BARI programme is one of the most attractive in the School of Agricultural Sciences with respect to private students enrolment. Figure 2 illustrates the enrolment of BARI in four years in comparison to enrolment of BAEE in ten years.
Opportunities for Mid-Career in BARI

With the intention of increasing access to the BARI programme and particularly targeting the diploma holders (mid-career candidates), a distance-learning version of the BARI has been developed and approved by the University senate. The distance-learning version will particularly be convenient for the mid-career candidates who are also employed to enroll. In addition, it is relatively cheaper and therefore more affordable by the mid-career candidates.

One of the major requirements before launching this programme is the development of learning resources for the distance learner. With the support of SAFE, development of the learning materials for the BARI (Distance) started about a year ago. It is a process which starts with reorientation of the respective lecturers on how to develop distance materials for distance learners, drafting the materials (modules), reviewing the modules and making final corrections. It is also a costly exercise as the module writers have to be paid – this being a private programme. So far, most of the modules for Year I&II are near complete. There are plans to expedite the development of the materials for Year III & IV to be able to launch the programme in the academic year 2012/13. Table 1 below presents the current status of module development for the distance-learning programme.
Table 1: Progress on module development to-date.

<table>
<thead>
<tr>
<th>Academic Year</th>
<th>Number of modules</th>
<th>Status</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Drafted</td>
<td>Under development</td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>10</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>II</td>
<td>12</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td>III</td>
<td>15</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>IV</td>
<td>10</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Pool of Mid-career Candidates

In targeting the mid-career students, it is important to know the pool from which to recruit. There are currently two agricultural colleges that produce graduates with diplomas in agricultural related disciplines. Record of the annual pass-out of diploma holders (Table 3) indicates sufficient pool of diploma graduates, even with the understanding that some of them find their way to other universities. Table 3 presents the diploma graduands in one of the colleges in the past decade. It can be assumed that the total number of graduands in the same period is double what is presented in this table. It is also important to note that the trend of diploma graduands is increasing.

Table 3: Diploma Graduands from Bukalasa Agricultural College 2001 – 2010

<table>
<thead>
<tr>
<th>YEAR</th>
<th>Number of Diploma Graduands</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>174</td>
</tr>
<tr>
<td>2009</td>
<td>207</td>
</tr>
<tr>
<td>2008</td>
<td>186</td>
</tr>
<tr>
<td>2007</td>
<td>166</td>
</tr>
<tr>
<td>2006</td>
<td>170</td>
</tr>
<tr>
<td>2005</td>
<td>78</td>
</tr>
<tr>
<td>2004</td>
<td>72</td>
</tr>
<tr>
<td>2003</td>
<td>86</td>
</tr>
<tr>
<td>2002</td>
<td>77</td>
</tr>
<tr>
<td>2001</td>
<td>73</td>
</tr>
<tr>
<td>Total</td>
<td>1,289</td>
</tr>
</tbody>
</table>
Integration of Value chain Concept in Training of Extension Professionals

For relevance, the curricula have to be responsive to emerging issues and demands. The Value-Chain concept is one of those recent concepts that need to be integrated in the curriculum. Whereas the BARI courses tend to address the key aspects of agricultural innovation systems for which value chain is part, it was felt that there was need to put more emphasis on value chain approach to agricultural development. To this cause, SAFE supported a workshop involving wide-range of stakeholders in agriculture analyse knowledge/skill related constraints to agricultural development with a view to identify key elements of the value chain that may be integrated in the curriculum. The outcomes of this workshop were followed with a survey for more detailed input and validation. The stakeholder consultation and survey confirmed that relevant curricula in agricultural extension needed to on themes listed in the Table 4. These themes were further prioritized for integration in the curriculum.

Table 4: Priority themes for curriculum integration

<table>
<thead>
<tr>
<th>Thematic Area</th>
<th>Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Farmer institutional Development</td>
<td>YES</td>
</tr>
<tr>
<td>2 Management of agricultural innovation platforms</td>
<td>YES</td>
</tr>
<tr>
<td>3 Partnership and networks for co-ordinated service delivery</td>
<td>YES</td>
</tr>
<tr>
<td>4 Entrepreneurship and Market Development</td>
<td>YES</td>
</tr>
<tr>
<td>5 Trust, Ethics and Integrity</td>
<td>YES</td>
</tr>
<tr>
<td>6 Policies regulations and standards</td>
<td>NO</td>
</tr>
<tr>
<td>7 Support infrastructure</td>
<td>NO</td>
</tr>
<tr>
<td>8 Technical Content (Disciplinary content)</td>
<td>NO</td>
</tr>
</tbody>
</table>

Policies, regulations and standards and support infrastructure were considered more of development interventions, which may not be strongly influenced by training. The existing curricula were considered to be very strong in technical (disciplinary) content and less on process related aspects. So this was not considered priority because it already exists. On cross-checking the priority themes and courses for the BARI, all the priority content areas above were already taken care of in the BARI curriculum. What needed to be done, was to target reorienting the academic staff to modify their teaching approaches to focus on value chain approach.
It is also noted that curricula are increasingly becoming overloaded as new content is added without dropping the old content. Generally, there are many challenges of integrating new emerging issues and needs in the curricula. Some of the basic concerns include:

- Curricula may not be able to cope with the rate and number of emerging issues/needs
- Do all emerging issues/needs require review curricula content or could it be also be addressed by changing delivery approach?
- Should we develop specific programmes on value chain? If so, what will be fundamentally different in content from existing programmes? What is the take-off level for new programmes versus revising existing curricula?
- Should universities also consider short-courses on some of the emerging issues e.g. value chain which can then be applied in different contexts by professionals and practitioners?

Fortunately, Makerere University is part of a RUFORUM initiated project to “Build the capacity of African university graduates to foster change through agricultural innovation” (Go4IT). This project used the outputs of the workshop and survey as the building blocks to develop a short course on innovations including value chain. The 9 months short course, Mid-career Professional Training Course on Enhancing Innovations and its Facilitation will focus on building capacity to enhance agricultural innovations, in which value chain is part. This will be offered to mid-career and other professionals to enhance their understanding of innovation and its application in agricultural systems. The short-course which will be implemented in four blocks, each with specific content as outlined below:

**BLOCK 1: Developing a common agenda based on the perspectives, knowledge and actions of different stakeholders**

- Agricultural Innovation Systems
- Innovation development (Managing the process, Institutional communication, Communication for innovation)
- Innovation Platforms
- Communication (personal development, interpersonal)
- Law and policy environment (agricultural law)

**BLOCK 2: Facilitation of learning by stakeholders based on working together**

- Facilitation of innovation processes and networks
- Facilitation of learning (teaching and facilitation for dissemination, extension communication
- Partnership and network development (for MS processes, etc.)
- Organizational development of FO in the AIS
- Conflict management
• Change management

**BLOCK 3:** *Analysis, assessments and action and change across the different (environmental, social, economic) “dimensions” of development*

• Entrepreneurial skills
• Value Chains (analysis, development, finance, business development)
• Agri-enterprise development (Value addition, Market assessments)
• Livelihood Assessments
• Vulnerability assessment (Climate change)

**BLOCK 4:** *M&E and up-scaling or analysis, action and change at different levels of spatial, economic and social organization.*

• Agricultural Innovations systems design and management of innovation for impact (ex-ante)
• M&E for accountability and in agricultural innovation systems
• M&E and learning for innovation (developmental evaluation, learning-oriented monitoring)
• Dissemination and scaling up (uptake strategies, exit strategies)
• Policy change (policy development and influencing, development of policy statements, lobbying and advocacy)

*Other Cross-cutting issues*

• Trust, Ethics and integrity

**Implementation mode of the mid-career short-course**

The short-course will be implemented in an action-learning framework involving short sessions of theoretical input and joint analysis intermitted by periods of real field engagement to practice what has been introduced in previous sessions. As outlined above, the content will be delivered in four major blocks. Figure 3 illustrates implementation design of the short-course.
Conclusions and way forward

In view of the discussions above, the following conclusions can be made:

1. The Uganda government has not increased number of Government Sponsored students in the last decade. Yet many new public universities are being established leading to redistribution of the government sponsored students among all public universities. As a result, the number of Government sponsored students at Makerere University is progressively declining. Therefore, most of the new academic programmes (developed in recent past) are largely private in a sense that most of the students pay for themselves.

2. In principle, all private programmes should be self-sustaining – meaning that the programmes must generate funds to support their implementation including staff costs.

3. Academic staff are not obliged to teach on private programmes. They do it at will. Therefore those who choose to participate in private programmes are paid by the respective units that implement those programmes. This then requires that for a programme to be sustainable, it must be able to attract a minimum number of students to break-even.
4. The distance mode of the BARI programme offers the best opportunity for the mid-career candidates owing to its suitability to employed candidates and relatively cheaper cost. However, implementation of the BARI (distance) is dependent on availability of funds for module development as well as the commitment of the module writers. Developing the modules is a mutual agreement between the individual module writers and the Department/ coordinator. Aware that the module writers have also many other things to do, this has been a slow process. Nevertheless, reasonable progress has been made.

5. The curriculum is increasingly getting overloaded and there are many other emergent paradigms and approaches that need to be mainstreamed in the training of professionals. Unless some of the current curricula content is found irrelevant and dropped, it will be difficult to continuously add content to existing curricula. The other option is to develop new programmes with new orientation, otherwise offering well-focused short-courses is another mechanism for building capacity for emergent paradigms in agricultural development. Short-courses can be a powerful way of enhancing the capacity of mid-career professionals.

6. The challenges of mid-career enrolment in conventional training programmes are many. In the case of Uganda, the major ones are the cost and being able to study while maintaining their jobs. Alternative ways for upgrading mid-career professionals such as distance mode of training and short-courses should be given serious considerations.

7. The capacity of universities is not unlimited. Most universities are severely constrained by human and financial resources as well as infrastructure. Expansion of programmes and enrolment have to take into account these constraints, otherwise the quality of training will not be worthwhile.
Progress toward value chain-oriented training and broadening access to training, University of Ilorin, Ilorin, Nigeria: by O.A. ADEKUNLE and O.A. OMOTESHO

Introduction

Established in 1975, the University of Ilorin (UNILORIN) has tremendously grown over the past thirty-five years of its existence to be the number one University in Nigeria based on observable indicators and webometrics ranking. It is the top choice of admission applicants, with 73,392 candidates applying to the University in 2009/2010 alone. It is also an emergent destination of foreign students seeking university education in Nigeria with citizens of ten countries constituting part of its studentry.

With a student population of 28,554 (undergraduates and postgraduates) and a staff strength of 2,849, the University of Ilorin has become a dream place to study and work. It is noted for academic excellence and renowned for striking a balance between character and learning. Both the scholars and students of the University have distinguished themselves among their peers both nationally and internationally. The University has signed many MOUs with the hope of impacting positively on the manpower needs of the nation. One of such MOUs is that with Sasakawa Africa Fund for Extension Education (SAFE).

The SAFE Initiative and MOU with University of Ilorin.

The mission of SAFE is “To strengthen the capacity of agricultural higher education institutions in sub-saharan Africa to develop responsive formal continuing education programs for mid-career agricultural and rural development workers.”

The Development of the B.Sc. Agricultural Extension and Community Development Curriculum.

Immediately after the signing of the MOU between SAFE and UNILORIN, three events led to the emergence of the curriculum for the B.Sc. Agricultural Extension and Community Development. First, a stakeholder’s workshop was organized by the Department of Agricultural Extension and Rural Development, University of Ilorin on February 16 and 17, 2011. The sole objective of the workshop was to develop the curriculum by inviting contributions from the potential beneficiaries of the programme.

Three lead papers were presented as forerunners to deliberations at the workshop. These were:
   a. The Challenges of Agriculture in Nigeria in the 21st Century: Agricultural Extension Education Response and Curriculum Relevance- Prof. O.A. Adekunle
   b. The Experiences of Sasakawa Fund for Extension Education (SAFE) in Extension Curriculum Revitalization in Sub-Saharan Africa. – Dr Deola Naibakelao and Dr. Mercy Akeredolu
c. Summary SAFE experience in University of Cape Coast, Ghana and BUK, Nigeria- Dr. Festus Annor-Frempong and Dr. Daneji

The participants at the workshop were invited from the middle belt and southern States of Nigeria. The organizations represented were the Agricultural Development Programmes (ADPs), Private Farms, Farmers’ groups, Departments of Agriculture in the Local Government Areas, Faculty staff and Staff from the Kwara State University (KWASU). Overall, more than fourteen State ADPs were represented, and several individuals and agro-related organizations participated in the workshop.

After the lead paper presentations, the participants were divided into three syndicate groups for discussions of the following issues:

a. Curriculum structure and course/subject revision (Group 1)
b. Facilities, human resources and teaching/learning challenges (Group 2)
c. Policy, advocacy and sustainability issues (Group 3)

The outcomes of the deliberations were a demand-driven and value chain-oriented curriculum. This was to be supported with adequate facilities, transportation and local leader encouragement for awareness creation. The participants argued strongly for value chain approach because they believed it was an area that could increase farm gate prices for farmers thereby increasing their standard of living. They believed it was time to empower the farmers and their households with information, skills and technologies that will add value to their productivity. This will invariably enrich our local farmers’ ability to be able to enter the global market and contribute more to national and regional development.

Second, SAFE organized a trip to the Bayero University Kano (BUK) for a Team comprising the Dean of Agriculture, the Head of Department of Agricultural Extension and Rural Development, a member of Teaching staff in the Department and the Director of Extension Services in the Kwara State ADP to visit the BUK and understudy their mode of operation of the SAFE programme. The trip was in Mar 9-11, 2011. Though the curriculum from BUK was found to be the general Extension programme, which is quite different from that of UNILORIN, but a lot of administrative issues and its duration were shared with the UNILORIN Team by the BUK SAFE authorities. The BUK SAFE programme is older to that of UNILORIN. The visit afforded us the opportunity to ask questions and we were happy that we made the trip because it gave us impetus that we could surpass the success level of the BUK SAFE.

Third, is the Faculty in-house curriculum validation workshop. After agreeing that the B.Sc. Agricultural Extension and Community Development degree was to be a Value chain focus programme, there was another Faculty in-house workshop to fine-tune the issues raised at the February 16 and 17, 2011 workshop and the trip to BUK in March 9-11, 2011.

The Faculty in-house curriculum validation workshop was a one-day event which held on July 6, 2011 at the Faculty of Agriculture.

The participants at the In-house curriculum validation were served copies of the draft curriculum with all the courses suggested by the participants at the February workshop. The second (in-
house) workshop allowed the Faculty staff and some invited ADP staff to look at the content of the courses about to be mounted for the B.Sc. Agricultural Extension and Community Development degree. All the staff from the six Departments in the faculty discussed extensively the relevant course synopses, codes and credit loads for the programme.

The faculty workshop enabled the other aspects of the programme to be focussed.

The West Africa SAFE coordinator, Dr Mercy Akeredolu flanked by the Dean, Prof. Omotesho (wiping his face) and Head, Department of Agricultural Extension and Rural Development, Prof. Adekunle, O.A. at the In-house curriculum validation.

The issues concluded at the second workshop were the objectives, admission requirement, period of the programme and sharing of the courses among the various relevant Departments in the Faculty and relevant faculties. These are detailed below.

**Objectives of the B.Sc. Agricultural Extension and Community Development degree.**

The main objectives of the programme are to:

1. train mid-career extension and rural development professionals in specialized technical areas along the entire agricultural value chain;
2. improve the effectiveness of grassroots extension and community development professionals involved in the development programmes in Nigeria; and
3. upgrade the academic and professional qualifications of extension and community development professionals by equipping them with up-to-date theoretical and practical knowledge applicable in the field.

**Title of Degree;** B.Sc. Agricultural Extension and Community Development.

**Nature of the Degree Programme.**

The mid-career Extension and Community Development professionals are to be exposed to the issues involved in value addition to agricultural products. These candidates are expected to possess Higher National Diploma (HND), in addition to the O’level requirements. The entry point is at the 300 level. The Programme is a six Semester type. The students will be expected to specialize in any of the value addition options in their 500 level. This final year activity is the Supervised Enterprises Projects (SEPs), which covers both the Harmattan and Rain Semesters.

**Admission Requirement for the B.Sc. Agricultural Extension and Community Development.**

**Entry into the 300 level**
At least 5 O-level WAEC, SSCE, GCE Credits at not more than two sittings in the following subjects: English Language, Mathematics, and any other three from Biology or Agriculture, Chemistry, Physics, Geography, Economics, Food and Nutrition and Home Management.

1. A Higher National Diploma (HND or equivalent) in Agriculture or related field of study with a minimum of lower credit from a recognized institution. The related fields include HND Animal Husbandry, Agricultural Extension and Rural Sociology, Agricultural Economics and Farm Management, Food Science, Home Economics, Fishery, Forestry and Wildlife, etc;

**Distribution of Credits required for Graduation**

a. **300 level**
   Minimum of 36 Credits to be passed in prescribed courses in the Faculties of Agriculture and Engineering &Technology; including GNS 111, 112, 211 and 212.

b. **400 level**
   Minimum of 34 Credits to passed in the relevant courses in the Faculties of Agriculture, and Engineering &Technology; including GNS 311 and GSE 301.

c. **500 level**
   Minimum of 23 Credits in the prescribed courses in the Faculties of Agriculture, and Engineering &Technology; including their Supervised Enterprise Project (SEP).

**Graduation Requirements for the Degree programme.**

In order to be eligible for the award of the degree of **B.Sc. Agricultural Extension and Community Development**, a candidate must satisfy the following:

a. Earn a minimum of 93 Credits to include all compulsory and required courses throughout the three year duration. In addition, the candidate must earn, at least, 23 Credits in the final year (500 level) of the programme to include ACD 501 (6 Credits) and ACD 599 (5 Credits) and any other twelve Credits from any of the Final year options.

b. Candidate must consistently obtain a minimum Cumulative Grade Point Average (CGPA) of 1.50 at the end of each year of the Programme.

**Coordinating Department:** Agricultural Extension and Rural Development and the options are:

a. **Agribusiness Option:** to include Entrepreneurship, Agricultural Business Appraisal, Marketing of Agricultural Produce among others.

b. **Agricultural and Bio-Systems Engineering Option:** to include Postharvest Management, Farm Structures, Buildings and Housing Systems, Agricultural Products Processing, Agricultural Products Storage Systems and others.

c. **Food Science and Nutrition Option:** Food Biochemistry and Microbiology, Human and Community Nutrition, Food Product Development, Plant food Processing and value-addition, Animal Food Processing and Value-Addition and others.
d. **Animal Production Option**: Poultry Production, Livestock feeds production, Ruminant Production, Diary science and Livestock Improvement.

e. **Crop Production Option**: Seed Production Technology, Soil Fertility and Plant Nutrition, Irrigation Agronomy and Water Conservation and Processing of Forest Produce among others. The synopses of the courses related to these options are many, detailed and need not described here.

**Uniqueness of the B.Sc. Agricultural Extension and Community Development programme.**

a. Unlike other SAFE programmes that currently train generalists in agricultural extension, this one at UNILORIN intends to train specialists in Agricultural Extension with emphasis on post-harvest and food technology, marketing, transportation, storage, packaging, agribusiness and agricultural production.

b. The needs of both male and female farmers along the entire value chain will be addressed.

c. The programme is practical oriented. It will provide practicums, hands-on-laboratory work, problem-focussed courses and field-based enterprises.

d. The students, in consultation with their Lecturers, employers, farmers and researchers will develop Supervised Enterprise Project (SEP) proposals relevant to their job as Extensionists and on which they go back to implement in their work place.

e. Both Faculty Lecturers and employers supervise the student SEP.

**PLANS FOR BROADENING ACCESS TO AGRICULTURAL TRAINING THROUGH OTHER MODES OF DELIVERY.**

a. Feedback from the employers and Farmers adoption of Value chain practices will inform the modifications required for the improvement of the degree programme.

b. At least a significant percentage will be reserved for admission of female Extension and Rural development workers.

c. Field Trips to successful Value chain establishments to serve as model for candidates.

d. Invitation of experienced and successful agribusiness entrepreneurs to share their experiences with Faculty and student.

e. Use of mobile phone to facilitate on-farm discussion of farm constraints, and relate these to the researchers and subject matter specialists to investigate for further development.

f. Open and Distance Learning (ODL) would be used to send Coursewares and relevant subjects to potential candidates who want the degree but could be limited in certain ways or the other.

g. Sandwich programmes would be put in place for those with limited time.

h. Audio-Visual Aids will be used to reflect the step-wise procedure in every value-addition activity in Agriculture.

Thank you
Progress toward value chain-oriented training and broadening access to training, Adamawa University, Nigeria: Neils J. Shelleng\textsuperscript{14} and Muhammad R. Ja’afar-Furo\textsuperscript{15}

Introduction

The Adamawa State University’s (ADSU) experience in relation to Sasakawa Africa Fund for Extension Education (SAFE) programme implementation has been that of a historical perspective. Adamawa State being endowed with immense natural resources, particularly in terms of agriculture potentials, has had a Faculty of Agriculture established in its University in the year 2002. The ultimate purpose for this creation is to train men and women of the State and beyond, in the acquisition of appropriate skills and abilities to harness these resources for maximum agricultural production in the geopolitical region in particular, and the country at large. The Faculty initially commenced with two Departments: Animal Production and Crop Science. The Department of Agricultural Economics and Extension (DAEE), the seat of SAFE Programme in the University, was created from the Department of Crop Science in 2005. Having graduated four sets of students with Bachelor’s Degree in Agriculture, the DAEE is now poised to start-up new Programmes that can further enhance the capabilities of extension staff in the domain.

In a bid to realize the above objective, a letter of request indicating interest to establish SAFE Programme in the University was sent to the Regional Director of Sasakawa Global 2000 (SG 2000) for consenting in February, 2010. A visit of the SG 2000 team to the State in April, 2010, culminated in an agreement to sign a Memorandum of Understanding (MoU).

The idea of commencing the SAFE Programme proper in ADSU started with the signing of the MOU between the Adamawa State Government (ADSG) and SAFE team in

\textsuperscript{14} Dean, Faculty of Agriculture

\textsuperscript{15} Head, Department of Agricultural Economics and Extension
September, 2010. The signing of MoU was followed with a SAFE team’s visit to ADSU in May, 2011, as a fact-finding tour to assess the facilities on ground, in preparation for the take-off of the programme in October, 2011. The team leader, Dr. Chris Downsell, was impressed with the level of preparation, thereby giving a nod for the commencement.

**Needs Assessment of Stakeholders**

As the catchment areas for this Programme include Adamawa, Bauchi, Borno, Gombe, Taraba and Yobe States, agriculture related organizations both government and non-governmental in these areas were invited for a workshop in order to find out the needs of the stakeholders with the ultimate aim of developing a curriculum that could serve the entire needs of all stakeholders. However, neighbouring countries like Chad, Cameroon and Niger could be beneficiaries.

The outcome of the workshop culminated in producing four (4) options namely, Crop Production, Animal Production, Postharvest Technology and Irrigation Agronomy for the programme.

Having drafted the curriculum for the Programme, another workshop meant for validation of the document was organized for the stakeholders. The participants resolved as follows:

- the programme should be for three (3) years in accordance with the National Universities Commission (NUC) regulations;
- the degree to be awarded would be Bachelor of Agriculture (Extension and Innovations); and
- there shall be at least six (6) months of Supervised Enterprise Projects (SEPs) with three (3) supervisors for each student

The developed and validated curriculum was submitted to the Academic Planning Unit (APU) for perusal, a document which was later approved by the Senate of the University. The Joint Admission and Matriculation Board (JAMB) and the NUC have been informed of the introduction of the programme. The programme has been scheduled to commence
by October, 2011, with 25 students. Of this figure, 40% is expected to be female candidates, in an attempt to encourage gender balance.

**Broadening Access to Agricultural Training**
Aside effective training of the mid-career candidates, on-the-job staff holders of Diploma certificates in agriculture, secondary and primary school leavers would benefit from short courses. Course modules are being developed for the programme. In order to have a wide range of participants, private companies, Local Government Councils (LGCs) and Farmer Associations, especially women were contacted to apply.

**Value Chain Mainstreaming in the Curriculum**
As the global trend in agricultural training is to provide information on the whole production circle, courses had been developed on agriculture value chain. These courses would be delivered in sequence. They will be from production, storage, processing/value addition to marketing of products. The training will take on community approach and team teaching. In order to ensure continuity, regular trainings are being planned for lecturers on agriculture value chain.

**Uniqueness of the Programme**
While majority, if not all, of the Universities running SAFE Programmes in Africa adopt only an option for their respective studies, the ADSU Programme is composed of four (4) options as already stated. This aspect made the programme more broad and comprehensive, and therefore, unique in approach. However, all these options/specialization were demand driven.

**Future Plans to Scale Up**
The essence of SAFE Programme is mainly to broaden access to effective agriculture information by wide range of farmers. In order to scale-up this course, there are plans to develop learning modules for different categories of agricultural extension staff. Similarly, distance learning centres will be established at strategic locations within the zone for the purpose of proximity which could be a major constraint to some staff. The
area of e-learning is another facet of development of the Programme which the University intends to explore extensively. This is aimed at making learning easier for the privileged ones who can access ICT facilities. And to further consolidate the field work and practical aspect of teaching of the programme, a technology village has been earmarked for implementation.

Course Structure

The course structures with the four options for B. Agriculture (Extension and Innovations) programme are shown in the following Tables:

Note: All courses are compulsory while practicals are 50% of every course ie minimum of three hours.
### 300 Level: First Semester

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>AXS 321</td>
<td>Social Change and Rural Development</td>
<td>2</td>
</tr>
<tr>
<td>AXS 323</td>
<td>Participatory Agricultural Extension</td>
<td>2</td>
</tr>
<tr>
<td>AES 321</td>
<td>Agricultural Production Economics</td>
<td>2</td>
</tr>
<tr>
<td>AES 323</td>
<td>Farm Business Management</td>
<td>2</td>
</tr>
<tr>
<td>APS 321</td>
<td>Non-Ruminant Animal Production</td>
<td>2</td>
</tr>
<tr>
<td>APS 323</td>
<td>Feed Resources and Feeding Principles</td>
<td>2</td>
</tr>
<tr>
<td>CPS 321</td>
<td>Principles of Plant Breeding</td>
<td>2</td>
</tr>
<tr>
<td>CPS 323</td>
<td>Physiology of Crop Growth</td>
<td>2</td>
</tr>
<tr>
<td>IgA 321</td>
<td>Introduction to Irrigation Agronomy</td>
<td>2</td>
</tr>
<tr>
<td>FQS 301</td>
<td>Introduction to Fisheries and Wildlife</td>
<td>2</td>
</tr>
<tr>
<td>SSS 325</td>
<td>Introduction to Soil and Water Conservation</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td><strong>Total Credit Units</strong></td>
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</tr>
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</table>

### 300 Level: Second Semester

<table>
<thead>
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<th>Code</th>
<th>Title</th>
<th>Credit Units</th>
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</thead>
<tbody>
<tr>
<td>AXS 322</td>
<td>Communication &amp; Teaching Methods in Extension</td>
<td>2</td>
</tr>
<tr>
<td>AES 324</td>
<td>Agricultural Entrepreneurship</td>
<td>2</td>
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<tr>
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<td>AGS 324</td>
<td>Value Addition on Agricultural Products</td>
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<td>CPS 324</td>
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## 300 Level

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<td>IgA 322</td>
<td>Introduction to Agricultural Engineering</td>
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<td>Communication in English II</td>
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### 400 Level: First Semester

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<td>Principles of Cooperative Practices</td>
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<td>Management of Extension Organizations</td>
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<td>Current Issues in Agricultural Extension &amp; Technology</td>
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<td>AXS 431</td>
<td>Gender and Youth Issues in Agriculture</td>
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<td>AES 421</td>
<td>Agricultural Marketing and Price Analysis</td>
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<td>Horticultural Crop Production</td>
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<td>PTS 423</td>
<td>Introduction to Postharvest Technology</td>
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<tr>
<td>SSS 423</td>
<td>Soil and Crop Nutrition</td>
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<td>FQS 413</td>
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<td>Field Experimentation</td>
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<td>CPS 406</td>
<td>Physiology of Crop Production</td>
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<td>Micro- Propagation</td>
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<td>CPS 410</td>
<td>Pesticides and their Application</td>
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<td>Harvest &amp; Postharvest Technology</td>
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<td>PTS 418</td>
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### 400 Level: Second Semester - Irrigation Agronomy Option

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<tr>
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<td>Farm Design, Survey &amp; Land Use Planning</td>
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<td>IgA 424</td>
<td>Farm Mechanization Practice</td>
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<td>IgA 426</td>
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<td>Principles of Organic Farming</td>
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### 500 Level: First Semester

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### 500 Level: Second Semester - Crop Production Option

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<td>CPS 504</td>
<td>Forage and Fodder Crop Production</td>
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<td>CPS 506</td>
<td>Farming Systems</td>
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<td>4</td>
<td>CPS 508</td>
<td>Seed Production Technology</td>
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<td>SSS 502</td>
<td>Soil and Water Management</td>
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<td>7</td>
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### 500 Level: Second Semester - Animal Production Option

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<td>Animal Products Processing &amp; Handling</td>
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<tr>
<td>3</td>
<td>APS 508</td>
<td>Pasture &amp; Range Management</td>
<td>2</td>
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<tr>
<td>4</td>
<td>APS 510</td>
<td>Animal Health &amp; Diseases</td>
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<tr>
<td>S/No.</td>
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</tr>
<tr>
<td>5</td>
<td>APS 508</td>
<td>Ruminant Nutrition</td>
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500 Level: Second Semester–Postharvest Technology Option

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<td>PTS 504</td>
<td>Game Products &amp; Utilization</td>
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<td>PTS 506</td>
<td>Post-Harvest Physiology &amp; Product Storage</td>
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<tr>
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<td>PTS 508</td>
<td>Pests of Stored Products</td>
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<tr>
<td>5</td>
<td>PTS 510</td>
<td>Fish Technology, Processing &amp; Storage</td>
<td>2</td>
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<td>PTS 597</td>
<td>Seminar</td>
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500 Level: Second Semester -Irrigation Agronomy Option

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Thank you for good listening
SESSION V

Chairperson: Justa Katunzi
An overview of the Supervised Enterprise Projects (SEPs): by Dr. Jeff Mutimba

SEPs are a set of four courses designed to develop students’ knowledge and skills in solving real life problems in communities using action research and experiential learning techniques.

The courses are:

- Introduction to Supervised Extension Projects (SEP-I)
- Needs Assessment and SEP Project Proposal Preparation & Presentation (SEP-II)
- Off-campus SEP (Project implementation) (SEP-III)
- Off-campus SEP Evaluation (SEP-IV)

They are designed in such a way that outputs from one course become inputs for the next course.

Objectives of SEPs courses

After going through the four courses, students should be able to:

- Integrate principles of experiential learning into action research;
- Design responsive agricultural value chain-oriented action research projects;
- Implement real life agricultural value chain-oriented extension and research projects;
- Collect data;
- Analyse data; and,
- Write action research project reports.

Introduction to Supervised Extension Projects (SEP-I) (Year I Semester II)

Introduction to Supervised Extension Projects is a taught course that provides the theoretical orientation for the other three courses all of which are practicals. SEP I is assessed through a written exam.
Needs Assessment and SEP Project proposal preparation & presentation (SEP-II) *(Year I Semester II + vacation + Year II Semester I)*

After going through SEP I, students prepare an agricultural value chain-oriented extension needs assessment plan based on sound theory given in SEP I. The proposals are presented in class seminars organized for the purpose of getting feedback and guidance.

Students then go back to their work areas for close to ten weeks of their end of first year vacation (mid-July to September) to conduct needs assessment.

After the needs assessment, students come back to university for their 3rd Semester course work during which time they prepare extension and research proposals which they present in seminars specially organized for them to share experiences and get comments for improving their proposals. The proposals are assessed and graded.

**Off-campus SEP (Project implementation) (SEP-III) *(Year II Semester II + vacation+ Year III Semester I)*

At the end of their 3rd Semester in February, students go back to their work areas to implement the extension and research projects for a full (4th) semester plus vacation – up to end September.

Assessment for this course includes field work and a final report.

**Off-campus SEP Evaluation (SEP-IV) *(Year III Semester I)*

In October, students come back to university for their 5th and final semester for more course work during which time they also prepare their project reports.

From the reports, students prepare summary reports that they present at seminars organized by the university. The seminar presentation are assessed and graded.
Content outline of SEPs courses

Introduction to Supervised Extension Projects (SEP-I)

Content outline

Unit 1 Concept of supervised enterprise projects
Unit 2 Overview of learning theories
Unit 3 The experiential learning process
Unit 4 An overview of action research
Unit 5 Advantages and disadvantages of action research
Unit 6 How to do action research
Unit 7 Introduction to problem solving
Unit 8 Problem solving techniques
Unit 9 Decision-making approaches in groups
Unit 10 Problems in animating group discussions
Unit 11 Agricultural loans
Unit 12 Guidelines for conducting extension needs assessment

Needs Assessment and SEP Project proposal preparation & presentation (SEP-II)

Content outline

Unit 13 Needs assessment as an example of action research: A practical step-by-step guide
Unit 14 Conceptualizing and writing SEPs proposals
Unit 15 Examples of extension research topics
Unit 16 Tips for preparing seminar presentation on needs assessment report and extension and research proposal
### Off-campus SEP (Project implementation) (SEP-III)

**Content outline**

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<tr>
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### Off-campus SEP Evaluation (SEP-IV)

**Content outline**

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<td>Tips on seminar preparation and presentation skills</td>
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</table>
SEPs marking scheme: by Charles Masangano

Introduction

- SEPs are a major characteristic of the mid-career programme
- At BCA we have x courses related to SEPs as follows:
  - Introduction to SEPs (2.0 credit hours)
  - SEP 1 - Needs Assessment (2.0 credit hours)
  - SEP 2 – Vacation SEP (2.0 credit hours)
  - SEP 3 - SEP implementation (10 credit hours)
  - SEP Presentation and Evaluation (2.5 credit hours)

- Total number of credit hours = 18.5
- Most of these credit hours are taken in the last semester.
- SEPs have a major impact on the quality of degree that is finally awarded.
- There is therefore need to think carefully on the assessment system for SEPs
- SEP Assessment tools used at BCA

Introduction to SEP

- Continuous assessment - 40%
- Examination – 60%
- SEP 1
  - Marking guide
- SEP 2
  - Marking guide (Oral Presentation marking guide)
- SEP 3
  - Final report marking guide

SEP Presentation and evaluation

Presentation marking guide

SEP 1 Needs Assessment report & proposal marking guide

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**LEVEL OF ACCOMPLISHMENT**

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**SEP Oral Presentation marking guide**

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<td>Handling questions</td>
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<td>Observance of time</td>
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**SEP 3 Final report marking guide**

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<thead>
<tr>
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<th>Maximum marks</th>
<th>Supervisors marks</th>
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Extension approaches and methods (20 marks)

- Appropriateness of methods and approaches used
- Innovativeness of the methods and approaches
- Extent of stakeholder participation
- Ability to learn from farmers
- Potential for wide applicability of the methods & approaches
- Sustainability of the methods and approaches used
- Ability to deal with challenges
- Creation or strengthening of farmers’ self-help
- Ability to consult and create linkages
- Evidence of reflection and learning
- Evidence of application of theory
- Gender sensitivity

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<td>EXTENSION METHODS AND APPROACHES</td>
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<td>Presentation And Analysis Of Results</td>
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<td>Discussion Of Results And Process</td>
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<td>Achievements of the learning process</td>
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<td>Ability to critique one self</td>
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<td>Ability to relate to others’ and own experience</td>
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<td>Soundness and applicability of recommendations</td>
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<td>Extent to which recommendations are derived from project</td>
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SESSION VI
Evidence-based reporting: by Justine Wangila

1. Evidence
Evidence can be defined as anything or every that is used to determine or demonstrate the truth of an assertion. Giving or procuring evidence is the process of using those things that are either: presumed to be true, or were themselves proven via evidence, to demonstrate an assertion's truth. Evidence plays an important role in many academic disciplines, including science. There is an important distinction in the field of evidence, i.e., circumstantial evidence that suggests truth; direct evidence that directly proves truth (Wikipedia).

2. Types of Evidence
These range from anecdotal evidence which is mostly seen as hearsay to intuition that is based on ability to acquire knowledge without inference or the use of reason. Other forms are testimonial that is a solemn attestation as to the truth of a matter and personal experience which is the moment-to-moment experience and sensory awareness of internal and external events. Then we have the more scientific evidence, which has no universally accepted definition but generally refers to evidence which serves to either support or counter a scientific theory or hypothesis; and empirical and properly documented as per applicable scientific method (Wikipedia).

3. Rationale for Evidence-based Reporting
Increasingly, investors are interested in value for money, i.e., the economics, efficiency & effectiveness of investments and interventions (Grun, 2006). If you do not measure results, you cannot tell success from failure. If you cannot recognize failure, you cannot correct it and if you cannot see success, you cannot learn from it (Kusek and Rist, 2004). How can you know success when you see it, is a pertinent question. Further, and increasingly, hard evidence on the impacts of programs is becoming mandatory. Do we know if such interventions say in extension) really work? And how much impact do they have (Ravallion, 2006)? Evidenced-based reporting provides information on motion towards targets and goals; outcomes; results and impacts and constant feedbacks. Evidence-Based Reporting is an approach to program planning and management that integrates processes and measurements to improve decision-making, transparency and accountability and it is an expectation of management, investors, partners and stakeholders.

4. What does EBR Require?
The starting point for evidence-based reporting is the definition of the problem, searching or finding the evidence; selecting the relevant and best evidence on the problem; writing-up and presenting findings or results (Writing in Health Science) and sharing. Monitoring, evaluation and Learning (ME&L) provide data and information for evidence-based reporting. The 5-Year logframes for SAFE and SAFE Programs at partner universities – Haramaya, Hawassa, Mekelle, Makerere, Adamamwa, Ilorin, Sokoine, Bunda College, etc. are very important. Logframes are the foundation for both the design and implementation of ME&L especially as they clearly and
realistically define objectives; specific objectives; inputs; activities; assumptions; risks; performance and results indicators; means of verification and baselines situations. The above are better clarified in an MEL&S Framework and in an annual MEL&S Plan. Monitoring, evaluation, learning and sharing derives from logframes.

5. **MEL&S Chain**

An Unpacked MEL&S Framework is implemented through a MEL&S Chain whose key Components are:

- Helicopter (rapid monitoring or field visits);
- Needs assessments whose results feed into logframes and define interventions;
- Baseline surveys which are based outcome and impact indicators in the logframe (baselines and benchmarks) that in the ‘long-run’ are used in impact assessment processes;
- Monitoring that is done at 2 levels based on indicators: output progress and outcome monitoring on achievements and results;
- Evaluations which deal with relevance, effectiveness, efficiency, etc.;
- Impact assessments (& in-depth studies) that address specific issues to measure results. Specific to SAFE, these would include alternative delivery of education modules - regular, part-time, semi-distant and distant and may look at costs, affordability and viability, etc; tracer studies; contribution to extension; SEPs; etc;
- Learning essentially deals with drawing lessons on successes, failures, bad and good practices; hits and misses; peculiarities, etc. such as increasing female admissions and curriculum development; and
- Reporting and sharing of reports and their wide use is the ultimate goal of evidence-based reporting.

6. **MEL&S Plan**

A MELS plan unpacks the ME&L Framework. A detailed M&E Plan should describe the program goal and objectives; targets & milestones; indicators and the necessary data requirements, frequency of collection and staff responsibilities. Therefore, it has to be underpinned by monitoring plan; evaluation plan; data analysis plan and information use plan including audience analysis and target audiences. Central to all the above is the data chain. Whatever part of the MEL&S Chain e.g. needs assessments; implementation of an MEL&S Plan (or part of) depends on the data chain.

7. **Data Chain**

This starts with conceptualization to solve the problem/challenge at hand and identification of methods, methodologies and approaches – quantitative and qualitative, or both. Once this is done, the next step is the design of instruments and tools for data collection and their implementation in the field (commonly referred to as data collection). These are normally followed by data processing and management; that is capture/entry; cleaning, verification and validation; collation and analysis.

Investments are needed on the relevant and necessary hardware, software and skills – computers, GPS, computer packages, analytical skills, etc. In web-speak; the back end consists of MEL&S Systems; and the front we have reports.

8. **Reports and Reporting**
Whichever the case; most common reports are either on implementation or monitoring. These include quarterly, half-yearly, annual which can be classified as business as usual or comfort zone reports. Then we have demand-driven reports such as monitoring and supervisory; back to office (BTORs); SEPs; action research, scientific, trip and progress reports. Another group includes policy briefs and other ad hoc reports. Once data has been analyzed, the findings and results become evidence for any of the above reports. The evidence should be used to write factually, logically and concisely; then we will be in the business of evidence-based reporting.

9. Challenges

There are some challenges that one may face on the road or in the business of evidence-based reporting. These include data storage and management especially if scattered in MS Excel sheets and not in relational database. It is also faultily assumed that software (especially SPSS) will do the analyses; you need to know how to analyze data and information. Beyond analysis, we are challenged with the piecing together of relevant and appropriate evidence. Understanding the agricultural value chain as it is affected by education and extension and attendant needs is also important as much as is the sharing reports to and with the right audiences. Starting-up evidence-based reporting has high initial costs in terms of finance resources; times and skills but it also has valuable returns. Getting evidence may be hard; you may need to climb mountains and even cross rivers.

Picture 1: In Search of Evidence: Madagali, Adamawa, Nigeria
Thursday, September 22, 2011

SESSION VII

Chairperson: Dr Girmay Tesfaye
Tips on running distance education programmes: Sam Ndenda Siminyu

Coverage
- What is Distance Education?
- Why has Distance Education become an issue?
- What is a Distance Education made up of?
- How can one set up a viable Distance Education program?
- So what next?
- Some Important Readings on Distance Education
- What is Distance Education?
- A practice with a growing community

SOME DEFINITIONS OF DISTANCE EDUCATION
1. The learner and the teacher are separated in terms of physical distance and time, teaching and learning acts and psychological and communication distance (Keegan, 1996).
2. Interaction is important for bridging the distance. This can be done between learner and teacher, learner and learner, learner and study material and it involves use of any technology to ensure constant interaction (Rowntree, 1986).
3. ‘[an] education program whereby students may complete all or part of an educational program in a geographical location apart from the institution hosting the program; the final award given is equivalent in standard and content to an award program completed on campus.’ (United States Distance Learning Association, 2003)

There are other concepts/terms related to distance education, such as: Correspondence education, Home schooling, Open schooling, Open learning, Online education, E-learning, Independent study, Flexible learning, Blended learning, and School of the Air

Why has Distance Education become an issue?
- Benefits for students: Access, Flexibility, Adult learning techniques, Quality and range of courses
- Benefits for Employers: Integration with work and Cost effective training
- Benefits for Providers/Government: Cost reduction (per student/graduate) and Reaching more people

Pitfalls
- Too much too early
  - Invest in planning
  - Begin small then grow
- Lead time for courses
  - Take on a few at a time
  - Consider other sources
- Time for staff development
No ready experts to hire
• Up-skill your existing staff

What is a Distance Education made up of?
• DE involves careful planning and organisation of the teaching and learning activities like:
  • production of study materials,
  • provision of student support services,
  • managing of programmes, and
  • monitoring and evaluation
    ▪ (Peters, 1994) and (Keegan, 1996).

There was reflection from participants on Resistance and Remedies of DE
• Why is Distance Education resisted in your setting?
• What can we do to overcome this resistance?

How can one set up a viable Distance Education program?
• Identify your key stakeholders
• Develop strategies to address stakeholder concerns [fears and priorities]
• Do not compel staff to participate
• Engage change agents
• Start small to ensure good first impression

How to set up
Plan the innovation

Issues for market research
1. Before you can begin to plan your ODL system, which of the following do you need more information about and what sort of data do you need?
   • the size of the market
   • who the potential students are
   • what programs and courses those potential students want the form(s) in which the potential students want their courses/programs.
2. Which published data might give you what you need?
3. Which data do you think you will need to get from your own research?
4. From which population do you need to collect this data? (In this question we use the word ‘population’ to mean the precise subset that you wish to research, e.g. young people aged 18–21.)
5. Which sort of data do you think you can gather using questionnaires?
6. For which sort of data might you need to use depth methods?
7. Who can you contact to give you expert guidance on questionnaire design and sampling?

**Identify your potential learners**

**Issues on target population**

1. What is your target population?
2. Why this population?
3. How will you identify the demographics of your target population?
4. How will you identify the motivations of your target population?
5. How will you identify the study skills of your target population?
6. What prior learning are you going to assume for your course(s)?
7. What are the implications of the demographic factors that you have found?
8. What are the implications of the motivational factors that you have found?
9. What are the implications of the study skills factors that you have found?
10. How will you make sure that the students whom you enrol have this prior learning?

**Open up access to all potential learners**

**Issues on access**

1. Will you need to provide pre-courses in certain subjects for students who do not have the prerequisites for the courses?
2. What steps will you need to take to ensure that your courses use a wide enough range of teaching and learning methods to meet the needs of a heterogeneous student body?
3. What cultural factors might make your courses less accessible to certain student groups?
4. Will language be an issue in restricting access to your courses?
5. Will you need to make any special curricular provision for handicapped students?

**So, what next?** Choose between

<table>
<thead>
<tr>
<th>Self-paced system</th>
<th>Program-paced system</th>
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<tr>
<td>Open access</td>
<td>Closed access</td>
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<tr>
<td>Single-mode</td>
<td>Dual/Mixed-mode</td>
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<tr>
<td>Low-end technologies</td>
<td>High-end technologies</td>
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<td>Mandatory attendance</td>
<td>Voluntary attendance</td>
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<tr>
<td>Unique accreditation</td>
<td>Common accreditation</td>
</tr>
<tr>
<td>Low enrolment</td>
<td>High enrolment</td>
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<tr>
<td>Self-financing</td>
<td>External funding</td>
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</table>
Issues on choice of technology

You will need to decide the type of technology you will use for the following aspects of ODL provision.

1. Providing information to students and potential students.
2. Providing information to tutors.
3. Diagnosing learning needs.
4. Enrolment of students.
7. Access to online resources.
8. One-to-one communication.
10. Student preparation of assignments.
13. Administration.

On-going concerns of DE

- Course materials provision
- Tutoring and learner support services
- Financial management
- Student recruitment and enrollment
- Assessment of learners
- General Administration and Management
- Monitoring and Evaluation

Some Important Readings on Distance Education

• Commonwealth of Learning (1995) *Directory Of Courses And Materials For Training In Distance Education*. From [http://www.col.org](http://www.col.org)

Chairperson: Dr Mercy Akeredolu

Tips on using ICT in agricultural training and extension: by Paul Hixson
SESSION VIII: Closing session

Chairperson: Dr Daimon Kambewa
Workshop summary and evaluation: by Jeff Mutimba

Malawi

The Ministry of Agriculture has embraced the value chain approach in extension. Extension is promoting commodity value chain interest groups that involve a range of actors like farmers, traders, transporters bankers & other value-chain actors. Collaboration among these is still weak. This approach might lead to specialization at farmer level which may make farmers vulnerable. Hence, extension is encouraging diversification to reduce vulnerability.

Extension staff is to inadequately trained for the value chain-oriented services. There are only two staff with value chain-oriented degree at MSc level.

Extension expects universities to backstop government in training staff through short courses and modifying curricula to include value chain. MoA also expects universities to develop partnership programs up to MSc and Phd level.

Bunda College teaches a few value chain-oriented courses like entrepreneurship, marketing and agri-business in the mid-career program.

Bunda is considering other modes of delivery – distance learning and part-time mode – to broaden access to the mid-career program.

The SEPs are being adopted in other programs.

Challenge: Value chain approach implies a degree of specialization. How will this go with smallholder farmers who produce for a whole range needs?

Ethiopia

The Government of Ethiopia is increasing investment in agriculture (16%). It has increased frontline extension workers dramatically from 15000 nine-months certificate holders to 74000 three-year diploma holders. Forty five thousand of these are in position.
MoA supporting staff development through different opportunities.

MoA has embraced the value chain approach through producer and processing groups.

MoA expects universities to produce graduates who are practical. The current graduates are bookish.

_Haramaya University_ is ready to launch a revised curriculum with a strong value chain orientation. The university has embraced some innovative ideas on the use of ICT; is making commendable efforts in increasing the number of women; has a strong alumni association which has spearheaded the formation of a professional association.

_Hawassa University_ is ready to launch a revised curriculum with a strong value chain orientation, starting with the current full-time program which will later be followed by a semi-distance version of the same program. The challenge will be in developing self-learning materials.

The SEPs are being adapted to other programs.

There are plans to start an alumni association.

_Bahir Dar University_ participated in the value chain needs assessment. Plans to launch a mid-career program coming October and has already conducted a pre-launch sensitization workshop for the new program. There is huge demand from the region where the university is located (Amhara Region). The university plans on getting a sizeable number of women students. The main challenges will be low staff capacity and logistical problems.

The university has had experience with summer and distance programs.

_Mekelle University_ has had experience with upgrading certificate to diploma level from the region where the region is situated (Tigray). Students would attend classes for only one semester per year Bureau of Agriculture wanted their staff during busy periods. The main weakness of the program was its dependence on donors.

Other upgrading program: BSc Food Science and Post Harvest Technology, MSc in Rural Development (come 15 days every 3 months)

Also running short-term training – one week to three months on relevant topics.

Mekelle University plans to launch the mid-career program coming October using its own resources. The demand from the regional bureau is very clear and structured – they want 600 to enroll for the mid-career program at the rate of 50 per year.

This should be an important lesson for other universities and regional bureaus in the country given the huge demand for training.
**Lessons from Ethiopia:** Universities working together on the mid-career program subsuming their individual identities for the common good of the nation. They are forming steering committee for implementation of the program.

The deans and presidents of universities are closely involved in the mid-career program.

**Tanzania**

*Minsistry of Agriculture* has embraced the value chain orientation but staff trained in production agriculture. Concept is new for everybody. Running in-service orientation programs on value chain

MoA is working reviving the agricultural professional association.

The ministry expects universities to produce graduates with practical skills.

*Sokoine University* plan to conduct value chain-oriented training needs survey.

**Uganda**

*Makerere University*’s mid-career program negatively affected by the environment. Lesson: Sustainability of the program depends on effective demand – which diminished in Uganda because of policy and structural changes.

Embarking on distance program to reach the mid-career professionals – but awaiting production of learning materials.

Plan to infuse value chain orientation in the curriculum more in term of delivery than new content.

**Nigeria**

*Illorin University* has embraced the value chain concept.

*Adamawa University* aims to have 40% women.

State Government highly commitment – paying 55% of running the program.

Embracing the idea of distance learning

**Overview of SEPs**

Agreed SEPs is a generic name – but universities can adapt to embrace thrust of their philosophy.
Generally agreed to credit students for the hard work they do by having 4 courses that are assigned credit hours

**Evidence based reporting**

Got some useful tips on evidence-based reporting.

**Tips on distance education**

Contrary to conventional belief, distance is better quality than conventional in that you are forced to produce learning materials of certain quality standard. In conventional teaching, the quality depends on the time the instructor has had to prepare – and nobody checks on what the instructor teaches.

Better to start small and give yourself time to grow.

**IN SUMMARY**

There was a meeting of minds on key issue.

1. Employers and universities have embraced the value chain concept – and some have already begun to mainstream it into their curricula.
2. Employers and universities have embraced the idea of broadening access to the mid-career program through distance learning modes of delivery. The current concern for full time programs is “How do I keep more out?” whereas for the distance mode the concern will be “How do I take more in?”

We were advised to start small to give ourselves time to develop experience.

3. We have all embraced the idea of ICT. We are already into it – but maybe at different levels.
4. We agreed on the need to continuously review appropriateness of assessment procedures for SEPs to ensure objectivity and fairness to students for the hard work they do.
5. Reports indicated that SEPs presented opportunities for improvement in other programs. It was being adapted in other programs.

Coming back to value chain-oriented curriculum review:

For those that are in the process of reviewing their curricula, the key question to ask yourselves is… "What does a smallholder farmer need to know and do about the different commodities for him or her do derive maximum benefits?" The answer to this question is content for your curriculum.
There are people making a living from articulating the value chain concept – and they come up with sophisticated models and so forth. This is not what the smallholder farmer needs.

The onion producer in Ethiopia wants to know how s/he can increase the shelf life of his/her onions to avoid dumping them on the market.

The banana producer in Malawi wants to know how s/he can reduce in-transit losses through bruising.

You will have to be ruthless in cutting down on the peripherals. Don’t go round the credit unit limit by reducing number of credit units per course so that you can load all the courses you want on the curriculum.

**Other observations**

Presenter need to improve on their power point presentations. It will useful to provide some tips on power point presentation at the time of invitation.

Universities need to relax their rules to accommodate non-conventional programs.
Vote of thanks: by Yibrah Beyene

Managing Director of Sasakawa Africa Fund for Extension Education (SAFE), Dr Deola Naibakelao, Deans and representatives of different colleges, coordinators, invited guests, Ladies and gentlemen

It is a privilege and a great joy for me to extend a vote of thanks to all those who have contributed in one way or the other to make this workshop a success.

Ladies and Gentlemen, the Managing Director of Sasakawa Africa Fund of Extension Education (SAFE) Dr Deola, and Dr Jeff Mutimba have been the driving force behind this whole process. Their vision, interest and hard work have once again culminated in another success story. I wish to thank them for the efforts they have put into developing this education agenda for the Value Chain Oriented Agricultural Extension program.

The staff of the SAFE especially, those with us here at the Ufulu Garden have been worked extremely hard, both at the head office in Addis Ababa, Ethiopia and here. Organizing a three day workshop (between 20 and 22, September, 2011) with experts and professionals of different universities from Malawi, Uganda, Tanzania, Nigeria, and Ethiopia is not at all an easy task. You deserve congratulations for a job well done.

The SAFE provided the financial resources for organizing this workshop which ensured smooth running of this workshop. I wish to thank them for their assistance and acknowledge the support rendered. Bunda College of Agriculture has been hosted the workshop and it deserves great recognition and appreciations’.

The Deans and professors of the universities and colleges and representatives of Ministries of Agriculture have shared their knowledge and experiences. The experience gained in this workshop will guide us in the right direction during the implementation process of our academic programs and we greatly appreciate that. We understand that you have taken time out of your very important schedules to contribute to this workshop, and some of you might have even traveled at a very short notice. Thank you for coming and for your invaluable contributions.
I also acknowledge the contributions of all those who have presented papers at this workshop.

All representatives from all invited universities, colleges and other organizations have been participated actively throughout the workshop. It is what was expected and we would like to see this kind of close co-operation in the implementation of the new curriculum, Value Chain Oriented Agricultural Extension. What has been discussed here in this three days workshop would have implications for future improvements of the program and our future cooperation to work and develop together.

Before concluding, let me express our sincere gratitude and appreciation to the Guest of Honor Honorable Madam Stella Kankwamba, Director Department of Agriculture at the Ministry of Agriculture of Malawi, who has risen this occasion with opening of the workshop and her presence for the last two days actively participating with us.

Let me put on record our tributes to the chairpersons, the rapporteur and facilitators of the workshop for their immense contributions for the successful completion of the workshop.

I would like also to thank the management of the Ufulu Garden for inviting us for a wonderful reception and the whole staff of the hotel for their hospitality and care.

Thank you all
Appendix I: Workshop theme

EAST AFRICA REGIONAL SAFE NETWORKING WORKSHOP

Ufulu Gardens, Lilongwe, Malawi

20-22 September, 2011

Workshop Theme

Agricultural value chain-oriented curricula and broadening access to training

Background to the workshop

The challenges faced by the smallholder farmers are very big if they are to enter the cash economy. They will need strong support from well-trained agricultural extension professionals with appropriate knowledge and skills to drive the agricultural modernization process. Currently, smallholder farmers in the region are not benefitting to the full because they do not add value to their agricultural produce. Part of the reason why farmers do not engage in value addition is that extension services focus on improving production and productivity and abandon the farmers after the harvesting. Extension services are structured for this production focus. University training also has a strong production orientation because they train for extension services with a production focus. This situation is therefore self-reinforcing – the extension service’s production focus influences training at universities; and training at universities determines what extension can do – the result is, extension services are not trained to provide advice beyond production. To break this cycle, employers need to articulate their needs that cover the entire value chain and in ways that universities can easily translate into curricula. The role of universities is to ensure that the wheels of agricultural production and the entire value chain are well oiled with the necessary knowledge and skills. This workshop will provide a platform for employers and universities to engage and identify opportunities for meeting emerging needs for training.

Purpose of the workshop

➢ To explore ways of curriculum enhancement and broadening access to agricultural training.

Specific objectives

➢ To share ideas and experiences on mainstreaming the value chain concept in the B.Sc. programme for mid-career extension professionals.
➢ To share ideas and experiences on the use of modes of delivery that broaden access to agricultural training.

➢ To establish a common understanding of the off-campus practical experiential learning component of the SAFE-supported B.Sc. programme for mid-career extension professionals.

**Expected outputs**

➢ Opportunities for mainstreaming the value chain concept in the B.Sc. programme for mid-career extension professionals identified.

➢ Opportunities for reaching a broader range of trainees identified.

➢ Structure of the experiential learning component of the B.Sc. programme agreed.

**Date:** 20-22 September, 2011

**Place:** Ufulu Gardens, Lilongwe, Malawi
Appendix II: Workshop program

PROGRAMME FOR
EAST AFRICA REGIONAL SAFE NETWORKING WORKSHOP

20-22 September, 2011

Monday, September 19, 2011
Arrival of participants in Lilongwe, check in at Ufulu Gardens

Tuesday, September 20, 2011
0800 – 0900 Registration of workshop participants

OPENING SESSION
Chairperson: Dr Charles Masangano
0830 – 0900 Self-introductions of workshop participants + programme overview
0920 – 0940 Welcome remarks: Dr Charles Masangano, Vice Principal Bunda College
0920 – 0940 SAFE’s current thrusts: Dr. Deola Naibakelao, Managing Director, SAFE
0940 – 1030 Chairperson’s closing remarks
Group photograph
1030 – 1100 Coffee/tea break

SESSION I
Chairperson: Dr Yibrah Beyene
1100 – 1130 Agricultural value chain-oriented training needs and expectations from universities MoA, Malawi
1130 – 1200 Plans for value chain-oriented training and for broadening access to training.
Bunda College of Agriculture

1200 – 1230 Agricultural value chain-oriented training needs and expectations from universities
MoA, Ethiopia

1230 – 1300 Progress toward value chain-oriented training and broadening access to training.
Haramaya University, Ethiopia

1300 – 1400 Lunch break

SESSION II

Chairperson: Dr Paul Kibwika

1400 – 1430 Progress toward value chain-oriented training and broadening access to training.
Hawassa University, Ethiopia

1430 – 1450 Progress toward value chain-oriented training and broadening access to training.
Bahir Dar University, Ethiopia

1450 – 1510 Progress toward value chain-oriented training and broadening access to training.
Mekelle University, Ethiopia

1510 – 1530 Discussion

1530 – 1600 Coffee/tea break

SESSION III

Chairperson: Dr Kinde Tesfaye

1600 – 1630 Agricultural value chain-oriented training needs and expectations from universities
MoA, Tanzania

1630 – 1700 Plans for value chain-oriented training and for broadening access to training
Sokoine University of Agriculture

1700 – Discussion

Wrap-up & announcements
Wednesday, September 21, 2011

SESSION IV
Chairperson: Ms Justa Katunzi

0830 – 0900 Progress toward value chain-oriented training and broadening access to training.

Makerere University

0900 – 0930 Progress toward value chain-oriented training and broadening access to training.

Illorin University

0930 – 1000 Progress toward value chain-oriented training and broadening access to training.

Adamawa University

1000 – 1030 Coffee/tea break

1030 – 1130 An overview of the Supervised Enterprise Projects (SEPs)

Jeff Mutimba

1130 – 1200 SEPs marking scheme

Charles Masangano

1200 – 1300 Evidence-based reporting

Justine Wangila

1300 – 1400 Lunch break

1400 – Free

Thursday, September 22, 2011

SESSION VII
Chairperson: Dr Girmay Tesfaye

0800 – 1200 Tips on running distance education programmes

Sam Siminyu

SESSION VIII
Chairperson: Dr Mercy Akeredolu
1200 – 1300  Tips on using ICT in agricultural training and extension   Paul Hixson
1300 – 1400  Lunch
1400 – 1600  Tips on ICT cont...   Paul Hixson

SESSION VIV

Chairperson: Dr Daimon Kambewa

1600 – 1630  Closing session
    Reflections   Group
    Workshop summary and evaluation   Jeff Mutimba
    Vote of thanks   Yibrah Beyene
    Closing speech, SAFE MD   Deola Naibakelao
18.00  MSc student presentations   Ejegayehu & Bekelu
1900 – 2130  Dinner at Ufulu   Group