

*Full Length Research Paper*

# A study on the feasibility status of implementation of DAESS system in Malawi

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Malawi adopted a pluralistic, demand-driven and decentralised agricultural extension system in 2000, following a political change from one party to a multiparty democratic system of government. This was followed by the introduction of a district agricultural extension services system (DAESS) as a way of facilitating the implementation of the pluralistic, demand-driven and decentralised agricultural extension policy. This study was conducted to assess the feasibility and status of implementation of DAESS. The study was conducted as an action research which involved an assessment of the status as well as implementation of the DAESS system. Stakeholder consultations revealed that DAESS is a very good extension system for promoting agricultural and rural development in Malawi considering its socio-political set-up. At the time of the study, the system had not been well established in two of the three districts and the action research activities demonstrated that the system can be established and works effectively in promoting agricultural development. There is need to conduct more sensitization and training of stakeholders for them to understand and effectively implement the system.

**Key words:** Extension system, pluralistic extension, decentralised extension, demand-driven extension, extension policy, action research.

## INTRODUCTION

Agricultural extension is an indispensable component of agricultural development process. It is a catalyst for the development of agricultural systems. Benor and Baxter

(1986) argued that „sustained high levels of agricultural production and incomes are not possible without an effective agricultural extension service supported by agricultural research that is relevant to farmers” needs”. The role of agricultural extension is actually increasing

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and becoming more conspicuous now that the inherent diversity of farmers and farming systems requiring different and diverse services and approaches to address their needs and challenges are being recognized (Heemskerk and Davis, 2012; Wongtschowski et al., 2013). The roles have actually expanded from transfer of technologies to facilitation and from training to supporting learning by farmers as well as helping to create farmer groups that can deal with market issues (Davis, 2008). The type of stakeholders extension and advisory services are expected to serve has also expanded and become more diverse by including farmers as primary producers and all players in the value chains. As such agricultural extension services are under increasing pressure to become more effective, relevant, responsive to client needs and less costly (Swanson and Samy, 2002; World Bank, 2000). A proper institutional arrangement encompassing policies and regulatory frameworks as well as appropriate structures for enhancing effectiveness and efficiency of the extension system is a necessity. Minh et al. (2014) have discussed the crucial role that institutions play in influencing various actors including government, private extension service providers as well as farmers and other users' behaviour in the extension system. Oladele (2011) as well as Zwane and Chauke (2015) also emphasised the crucial role of policies and legal frameworks in enhancing extension effectiveness.

The socio-economic and political environment in some countries like Malawi has changed very significantly in the past two decades with major impacts on the agricultural sector. The major changes relate to the introduction of plural politics where multiparty democracies have now become the order of the day and the introduction of decentralised governance systems

where deconcentration has become major characteristics. Shrinkage of public sector resources has on the other hand been a major factor contributing to the erosion of quality in the provision of extension services. One effect of these changes has been the need to make major changes in agricultural extension systems in such countries. Malawi as a country whose economy mainly depends on agriculture with smallholder farmers as part of the major players needs to have a well defined and robust agricultural extension system. Davis (2008) conducted an analysis of extension models practiced in sub-Saharan African countries and based on her analysis concluded that the future of extension services is going to be in pluralistic, demand-driven and participatory services.

### **Conditions which led to the introduction of the district agricultural extension services system**

Agricultural extension in Malawi was first recorded in 1903 and since then, the country has implemented several extension systems. These include the coercive extension system and the master farmer system which

were implemented during the colonial era (Masangano and Mthinda, 2012; Mkandawire, 1987) followed by the progressive farmer system introduced immediately after independence in 1964 and the block extension system (BES) which was introduced in the early 1980s. The BES was a modification of the training and visit (T&V) system. Despite the evidence shown in the literature that T&V system of extension made impact in terms of increasing adoption of technologies and productivity (Hussain et al., 1994; Ilevbaoje, 2004; Amin and Stewart, 1994; Uzunlu, 1990), high implementation and maintenance costs led to its abandonment (Anderson et al., 2006). The BES was considered to be a very expensive system to maintain and it was abandoned in Malawi. Both the progressive farmer system and the BES were introduced at a time when Malawi was politically being governed under a one party system, that of the Malawi Congress Party. The BES, just like the other extension systems that existed before it, was characterized by top-down approaches, which emphasized national interests to the disadvantages of farmers' individual interests. As a top down system, BES worked very well under the one party system of governance which was predominantly authoritarian in nature and people were used to being told what to do by the government. This situation changed in the early 1990s when Malawi underwent some political changes.

Malawi changed its political system from one party autocratic governance system of the Malawi Congress Party to a multiparty democratic governance system in 1994. This governance system promoted democratic principles such as freedom of speech, freedom of choice and freedom of association. As part of the process to consolidate democracy and enhance public participation, the government decided to introduce decentralized governance system, whereby power was devolved to the districts and lower levels through a local government policy and its associated Act of 1998 (GoM, 1998a, GoM, 1998b). Decentralisation has been a major public sector reform that has been implemented since the early 1990s, when most African countries were transitioning from authoritarian to democratic regimes (Chasukwa et al., 2014). Decentralisation is a tool used by most governments for enhancing participation and sharing of power and responsibilities with actors at the bottom stratum of society (Hood, 1991; Osborne and Gaebler, 1992; Ostrom, 1973; Tambulasi, 2010). Local government structures were established as part of the decentralization process. The structures included the District Assembly (DA), which is supposed to be the policy making body of the district, the District Executive Committee (DEC), which is supposed to act as a technical advisory body of the DA and local committees under it. Below the DA are Area Development Committees (ADC), at the level of the Chiefs and Village Development Committees (VDC) at the level of Group Village Heads (GVH). These local government structures

do not go to the level of the Village Head (VH).

As the process of decentralization was taking its roots, Malawi also experienced a proliferation of private and non-governmental organizations (NGO) which were providing extension services. Most of the NGOs started as relief organizations that were set up to assist refugees from the Mozambique civil war in the 1980s. The refugees were repatriated when the war ended in Mozambique and the NGOs in Malawi transformed themselves from relief to development. One way to serve communities was by providing extension services using farmers or churches as conduits. Under these circumstances, the top-down extension system which was predominantly provided by the public sector was not suitable and the government introduced a new extension policy which promoted demand driven and pluralistic extension system (GoM, 2000). The main objectives of the policy were to encourage multiple players to complement the extension efforts of the government and to shift extension delivery from top-down to bottom-up delivery designed to respond to the needs of farmers on the ground. Pluralism was introduced in order to create a suitable environment for the participation of various extension providers including NGOs, farmer organizations (FOs) and the private sector in the provision of extension services. The principle of demand-driven extension services was introduced in accordance to the new political environment where people had various freedoms including freedom of choice, freedom of expression and freedom of association, while also responding to the diversity of needs that farmers were experiencing from a liberalised marketing system. Farmers had to be given the freedom to choose the type of extension services they wanted, especially considering also that they were operating in a liberalized marketing system where they made choices of the type of production systems according to market demands. Decentralized extension services were introduced to be in tandem with the decentralization process taking place where power was being devolved from the central level to lower levels closer to the farmer. Farmers had to have valued voices.

### **The district agricultural extension services system**

Adoption of the policy was followed by the introduction of the District Agricultural Extension Services System (DAESS) in 2006 as a policy implementation guide (GoM, 2006). One of the major characteristics of DAESS was the establishment of district structures which included: the District Agriculture sub-Committee of the DA, the District Agricultural Extension Coordinating Committee (DAECC), the District Stakeholder Panel (DSP) and the Area Stakeholder Panel (ASP). The main functions of DAESS were fourfold, including: organizing farmer demands, organizing service providers' responses to farmer

demands, coordination of various stakeholders in extension service delivery and assisting the district assembly in sourcing funds for agricultural extension activities in the district. The composition, roles and responsibilities of the DAESS structures are briefly described.

### **District agriculture sub-committee**

The District Agriculture Sub-committee is a sub-committee of the DA, composed of elected members of the assembly with the District Agricultural Development Officer (DADO) providing secretarial services. The committee is expected to receive and consolidate local agricultural development plans and submit them to the DA for approval. The committee is also expected to make policy recommendations to the DA regarding the governance and delivery of agricultural extension services in the district. The committee is further supposed to assist the DA in establishing local agricultural institutions for public participation, as well as assisting the DA in mobilizing resources for governance and agricultural development. The committee is supposed to ensure that there is equity in the provision of agricultural extension services in the district. Supervision, monitoring and evaluation of agricultural development activities in the district is supposed to be another key role of the sub-committee.

### **District agricultural extension coordinating committee**

DAECC is a sub-committee of the DEC of the DA (GoM, 2006). The DAECC is composed of representatives of institutions that provide agricultural extension services including the office of the DADO, NGOs, private sector and farmer organizations. The overall responsibilities of the DAECC include: setting up standards for delivery of the services, developing codes of conduct and memorandum of understandings with stakeholders, registering service providers, planning agricultural extension services at district level, ensuring equity in service provision, coordinating provision of agricultural extension services at district level, harmonizing approaches in extension service provision and delivery and linking agriculture extension service providers and farmers to the DA among many others.

### **District stakeholder panel**

DSP is a platform where farmers and extension service providers plan and coordinate their activities. It serves as a forum for dialogue between farmers and service providers where farmers are expected to present their

demands for extension services and the service providers plan on how to respond to such demands. It is supposed to be composed of representatives of various categories of farmers, farmer organizations and various agricultural and extension service providers at the district level. The DADO is expected to play a facilitating role in the DSP.

### Area stakeholder panel

The Area Stakeholder Panel (ASP) is a platform of farmers and stakeholders in agriculture development at traditional authority (TA) level. It is a sub-committee of the ADC with the sole purpose of linking the interests of farmers and those of the service providers. Members comprise representatives of different categories of farmers, farmer organizations and all actors in agricultural sector at area level. Some of the roles and responsibilities of the ASPs include; providing a forum for farmers to express their demands, consolidating and articulating farmer demands, ensuring that quality response is provided to farmer demands and coordinating agricultural development activities according to the demands coming from the communities.

According to the district agricultural extension services system implementation guide, the ASP is the lowest structure despite the fact that local government structures go as low as to the GVH level. Some extension workers have gone further to establish agricultural structures at lower level than the TA level. These include structures such as village agricultural committees (VACs) at GVH or VH levels as well as model villages at VH level. The study was therefore conducted in order to assess the effectiveness of DAESS in facilitating the provision of extension services in accordance to the demand-driven, pluralistic and decentralized extension policy to the smallholder farming communities in Kasungu, Mzimba and Rumphi districts. The establishment and implementation of DAESS has been problematic in some of the districts.

### Study objectives

The main objectives of the study were to facilitate the establishment of the DAESS and assess its impact on provision of extension services. The specific objectives were as follows:

- (1) To examine the status of implementation and performance of DAESS in promoting provision and delivery of extension services.
- (2) To establish DAESS structures at district and sub-district level in selected districts.
- (3) To operationalize DAESS structures at district and sub-district level in order to facilitate provision and delivery of extension services.

- (4) To assess the effectiveness of DAESS structures in promoting the provision and delivery of extension services.

### METHODOLOGY

The study was conducted using action research approach in Kasungu and Mzimba districts from April 2010 to December 2012 as part of an FAO/FICA project titled "Support to Agricultural Extension and Training Services Programme". Additional data were collected through key informant interviews and focus group discussions in Rumphi district in July 2014. The action research involved community and contextual analysis, action planning, experimentation by implementing the action and evaluation of the activities implemented (Gausi, 2015; Hagmann et al., 1998). The rationale for using action research was to enable researchers to implement the actions whilst studying and learning the best practices for establishing effective District Agricultural Extension Services System.

#### Community and contextual analysis

Community and contextual analysis involved an ADD level meeting which was conducted by the researchers with staff from Kasungu and Mzuzu ADDs, Kasungu and Mzimba districts as well as staff from the four selected EPAs of Chipala and Kaluluma in Kasungu district and Emfeni and Luwerezzi in Mzimba district as well as representatives from FAO/FICA project in April 2010. This meeting was conducted in order to identify the needs and problems associated with the implementation of the DAESS. The meeting discussed whether DAESS structures were established in the two districts and whether they were implementing the district agricultural extension services system. The meeting proposed to pilot-test the extension model in two EPAs in Kasungu district and two EPAs in Mzimba district. This was followed by action planning as described subsequently.

#### Action planning

The needs and problems identified in the meeting were validated and action plans were developed during stakeholder workshops which were conducted in Kasungu and Mzimba districts in June 2010. The people who participated in the workshops included representatives from the Ministry of Local Government, the Department of Agricultural Extension Services, local government and agricultural staff in the two districts, the NGOs as well as staff from other departments, local leaders and farmer representatives in the districts. A total of 46 people comprising 26 men and 20 women participated in the Kasungu District workshop and 37 people comprising 21 men and 16 women participated in the Mzimba District workshop.

#### Experimentation and implementation

The major activities which were conducted to implement the action plans were in the form of meetings at Area, Group and Village levels in the four selected EPAs (Table 1). The meetings were conducted with agricultural stakeholders, local leaders, and influential farmers. The meetings were conducted with the assistance of four Field Assistants, who were recruited and sent in the four EPAs for a period of one and half years to facilitate the implementation of the action plan. The meetings helped to establish the structures at the area level, GVH level and VH level through fact

**Table 1.** Meetings conducted to operationalize implementation of the DAESS system in Chipala, Emfeni, Kaluluma and Luwerezi EPAs.

Type of meeting	Number of meetings	Number of participants		
		Female	Male	Total
Area level	11	718	960	1,778
GVH level	126	1832	2066	3,898
Village level	901	8445	14440	22,885
Total	1038	10995	17466	28561

finding and sensitisation as well as follow ups.

The meetings were conducted in order to assess the existence of DAESS structures, encourage farming communities and their community leaders to establish the structures where they did not exist, elect leaders for the DAESS structures as well as to train and orient them of their roles and responsibilities in the DAESS structures. Follow up visits were also conducted to ensure planned activities for the DAESS structures were being implemented. The experiences drawn from the implementation of the activities were shared with staff and farmers including ASP committee members in 11 focus group discussions (FGD) in the four EPAs.

#### Assessment of effectiveness of the structures

Effectiveness of the methodology used to operationalize the DAESS structures was assessed using focus group discussions and key informant interviews (KII). The FGDs and KIIs were conducted in two phases. A total of 11 FGDs and 19 KIIs were conducted in the first phase in 2012 and 2013. These FGDs and KIIs were conducted in the four EPAs where activities to establish and operationalise the DAESS were carried out (Chipala and Kaluluma EPAs in Kasungu District as well as Emfeni and Luwerezi EPAs in Mzimba District). The participants in the FGDs included extension staff, ASP committee members and some farmers while participants in the KIIs were District Commissioners (DC) in the two districts, Directors of Planning Development (DPD), DADOs, TAs and Agricultural Extension Development Coordinators (AEDCs).

Additional data was collected through phase two of FGDs and KIIs which were conducted from 13th to 21st July 2014 in Kasungu, Mzimba and Rumphi districts. Rumphi District was included in this phase because reports on DAESS showed that Rumphi was one of the districts which was very successful in establishing functional DAESS structures. The consultations were conducted with DADOs, and the district Farmers Union of Malawi (FUM) facilitators in each of the three districts, 12 district agricultural staff, 13 district farmers union leaders and district stakeholder panel members at district level. Similar consultations were conducted in one EPA in each of the three districts. The consultations at the EPA level were conducted with agricultural staff, farmers union leaders as well as ASP members. The selected EPAs were Mhuju in Rumphi District, Manyamula in Mzimba District and Chulu in Kasungu district. Consultations were also conducted with senior staff at the Department of Agricultural Extension Services (DAES).

## STUDY FINDINGS

### Ten year experiences in the implementation of DAESS

The consultations revealed that there was a general

agreement that DAESS is a good system for the implementation of agricultural extension services in Malawi. DAESS is a system which fits very well under the decentralization system as described in the decentralization policy and Local Government Act of 1998. DAESS provides a system of structures through which various extension approaches and methods can be implemented by various service providers in accordance to farmer demands. Using DAESS, implementation of extension activities by various service providers can be complimentary, harmonized, well coordinated and monitored.

However, the consultation meeting at ADD level and the district stakeholder workshops revealed that most of the Local Government structures existed at the district level while DAESS structures did not. Table 2 shows the status of Local Government and DAESS structures that existed in the two districts at the beginning of the study in 2010.

According to Table 2, Local Government structures which included the district development committee (DDC), DEC, ADC and VDC existed before implementation of the study and the status remained the same after the study. Similarly DAESS existed as a DAESS structure at district level in both districts before and after the study. However, DA and district agriculture sub-committees did not exist in the districts due to the fact that these structures were supposed to be composed of ward councillors who were not yet elected by the time of the study. DAESS structures which included DSPs and ASPs did not exist. Despite the fact that the DAESS structure existed, it was not fully operational in either of the two districts. DAESS as a structure was expected to plan and coordinate agricultural extension services; ensure equity in service provision; receive and provide feedback on service delivery; monitor and evaluate delivery of extension services; among many others. These functions were not being implemented in the two districts. Consultations at the level of the Department of Agricultural Extension Services (DAES) revealed that the observations made in the two districts were a common scenario in most of the districts in the country. Most of the districts did not have DSPs and ASPs while DAESS was a structure which was commonly found. The consultations also confirmed the fact that despite its

**Table 2.** Existence Local Government and DAESS Structures at District Level before and after Implementing the Study in Kasungu and Mzimba Districts.

Type of structure	Name of structure	Kasungu district		Mzimba district		Total	
		Before study	After study	Before study	After study	Before study	After study
Local government structures	DA	0	0	0	0	0	0
	District Agriculture sub-committee	0	0	0	0	0	0
	DDC	1	1	1	1	2	2
	DEC	1	1	1	1	2	2
	ADC	7	7	2	2	9	9
	VDC	71	80	38	46	109	126
DAESS structures	DAECC	1	1	1	1	2	2
	DSP	0	0	0	0	0	0
	ASP	0	7	0	4	0	11

Source: Kasungu and Mzimba District Agricultural Offices, January 2012.

existence, DAECC was not fully operational in most districts.

The major challenge was that there was limited knowledge among stakeholders regarding the concept of DAESS. Results of the key informant interviews and focus group discussions revealed that most of the stakeholders including agriculture staff from the government, local government staff, private extension service providers including NGOs as well as farmers did not have adequate understanding of the concept of DAESS. Most stakeholders did not understand the system because they were not adequately sensitized. Most of the people consulted felt that most of the agricultural staff at district and field level did not have the technical know-how to guide the implementation of DAESS system. Instead of helping communities to establish the DAESS structures and encouraging them to establish forums which they can be using for expressing their demands, they continued to operate using the top-down approach. It was even reported that some field staff had stopped working with farmers arguing that they were waiting for farmers to come and demand services from them creating a situation where extension services became less readily available to farming communities.

Staff from the other departments of the Ministry of Agriculture thought that DAESS was a concept to be used by the Department of Agriculture Extension Services only. In other words, their perception was that DAESS was a DAES baby. They did not have adequate understanding of the role of DAESS neither did they attach any ownership to it. With this kind of conception, the other technical departments of the Ministry such as Animal Health and Livestock Development, Land Resources Conservation, or Crops tended to take their technical messages straight to farmers without using the established DAESS structures. This kind of perception was also common among other extension service

providers including private companies, farmer organizations and NGOs. The result was the delivery of messages that were not properly harmonized and coordinated and sometimes messages that conflicted with one another thereby confusing farmers. It was not uncommon to find two contradicting messages brought to the same farmer by two departments of the Ministry. One common example cited by the key informants was a message on conservation agriculture by the Department of Land Resources which encouraged farmers to use maize stalks for mulching while the Department of Animal Health and Livestock Development encouraged farmers to use the same stalks for animal feed and fodder. Such conflicting messages ended up confusing farmers.

On the other hand, Local Government staff and other stakeholders in the local government system perceived DAESS structures as having competing roles and responsibilities with those of local government structures. Farmers on the other hand did not understand the agricultural extension policy especially the principle of demand driven services. Most of the farmers did not demand such services because they did not know that they were supposed to do when in need of extension services. The other challenge was that whenever farmers had expressed their demands, appropriate responses for such demand were not being provided. This was further compounded by the lack of DAESS structures at the group village and village levels through which farmers could express their demands. The ASP covers a very wide area and most farmers were not able to access its services. In response to this and as part of the experimentation and implementation of activities in the research study, it was decided to introduce DAESS structures at the GVH and VH levels in the form of group village stakeholder panel (GVSPs) and village stakeholder panels (VSPs) Table 3. Apparently the focus group discussions and key informant interviews which

**Table 3.** Number of DAESS structures established at EPA level before and after implementation of action research.

Level	Number of sensitization meetings conducted	Type of structure	Number of structures established before meetings	Number of structures established after meetings
TA (Area)	11	ASPs	0	11
GVH	126	GVSPs	0	126
VH	901	VSPs	0	834
VH	901	Model villages	19	67

were conducted in 2014 revealed that some EPA had started establishing village agricultural committees (VACs) and group village agricultural committees (GVACs) which played the same roles as the VSPs and GVSPs at village and group village levels respectively. Another structure promoted in the study was model villages. Model villages are villages with improved livelihoods of the people achieved through implementation of integrated interventions.

The results of the action research showed that sensitization meetings with various stakeholders including farmers supported with follow ups were very effective in promoting establishment of DAESS structures and generation of demands from farmers. Table 3 shows the number of structures established after conducting some sensitization meetings.

The sensitization meetings helped farmers and the rest of the rural communities to appreciate the importance of establishing the DAESS structures as well as to understand their roles and responsibilities. The perception that the roles and responsibilities of DAESS structures conflicted with those of local government structures was corrected by clarifying that DAESS structures were sub-committees of the local government structures aimed at promoting agricultural development which is part and parcel of the of the whole rural development process. The DAESS structures also offered an opportunity for collaboration and networking between different agricultural extension service providers. The need for more sensitization on DAESS was further emphasized by most of the stakeholders consulted through KII who indicated that most stakeholders did not have adequate understanding of the DAESS concept. A critical analysis of the responses obtained from the various stakeholders during the consultations reveals their lack of knowledge of the functions of the stakeholder panels. Apart from Rumphi where specific examples of farmer demands were cited, the other two districts were not able to do the same. When asked to provide suggestions for improving the activities of the stakeholder panels, the respondents emphasized the need for more training and sensitization on DAESS concept. Both the staff and leaders in Kasungu and Mzimba districts did not feel confident to implement DAESS activities and therefore demanded more training.

The establishment of structures at village and group

village level such as VACs or VSPs, model villages and GVACs or GVSPs was very essential because it created forums which were in close proximity and therefore readily accessible to farmers. This allowed farmers to participate in activities at such forums and this resulted in generation of farmer demands as shown in Table 4. The study demonstrated that sensitization meetings as well as creation of DAESS structures at area, group village and village levels helped to encourage farmers to start demanding for services (Table 4). Villages are the naturally and traditionally existing institutions in the Malawian agrarian communities and they are in most cases composed of blood and marriage relations. Members of the village are therefore more likely to have many things in common and therefore likely to be more willing to work together and support each other knowing that whatever benefits accrue from their working together are going to benefit them as blood relations. DAESS structures at the village level are therefore more effective in the implementation of agricultural extension activities.

Most respondents consulted at both the district level and DAES also expressed the need to establish a national stakeholder panel. They indicated that most of the extension service providers who operate at district or lower levels get their mandates from their headquarter offices at national level. Most of the activities they implement are planned at the national level offices and it is difficult to change such plans at the district level. This creates problems when the priorities identified through DAESS structures at district or lower levels differ from the priorities of the national level offices of the service providers. A national stakeholder panel where central offices of the service providers are represented would help to create an environment where the role of DAESS structures would be more appreciated. The national stakeholder panel would be a good forum for discussing priorities of both the DAESS structures and the central offices thereby providing good opportunity for harmonizing such priorities.

Table 4 also shows that farmers' demands were very diverse ranging from demands for services, such as credit and training, to demands for actual products, such as planting materials for various crops, livestock species and breeds as well as irrigation equipment. Nine of the sixteen types of demands made were responded to by various types of service providers. These ranged from

**Table 4.** Types of demands generated from farmers through the DAESS structures at area, group village and village levels

Types of demands generated by farmers	Whether responses to the demands were provided	Types of responses provided	Types of service providers that provided the responses
Chalimbana groundnut seeds	Yes	Provision of seed	FAO/FICA Project, WVI, Plan International
Soya bean seeds	Yes	Provision of seed	FAO/FICA Project, WVI, Plan International
Bean seeds	No	NA	NA
Hybrid maize seed	Yes	Provision of seed	FAO/FICA Project, WVI, Plan International
Improved cassava cultivars	No	NA	NA
Potato seed	No	NA	NA
Improved poultry breeds (both layers and broilers)	Yes	Soft loans	COYIDA
Improved Goat breeds	No	NA	NA
Sheep	No	NA	NA
Large white, pigs	Yes	Provision	FAO/FICA Project, WVI, Plan International
Fish farming	No	NA	NA
Treadle pumps	Yes	Provision of treadle pumps	FAO/FICA Project
Training on goat sheep and pig management (housing, record keeping, parasite and disease control)	Yes	Training	DAES and SSLPP
Training on how to use and maintain treadle pumps	Yes	Training	FAO/FICA Project
Training on chicken rearing	No	NA	NA
Training on pond construction and fish feeding practices	Yes	Training	DAES and WVI

DAES which is a government department; non-governmental organizations which included

World Vision International (WVI), Plan International, Community Youth in Development Activities (COYIDA), Small Scale Livestock Promotion Programme (SSLPP) as well as a project implemented by the Food and Agricultural Organization (FAO) with support from the Flanders International Cooperation Agency (FICA).

Seven other demands could not be responded to by the service providers that existed at the time of the study. This demonstrates the value of involving many different service providers and the need for the service providers to be properly coordinated together in order to satisfy the diverse types of demands that farmers have in their communities. DAESS is a system which provides a good forum for such coordination.



The demand for planting materials and improved livestock breeds was expressed several times among the farming communities as shown in Table 4. Usage of high quality, improved seeds and livestock breeds has a very big impact on agricultural development. Malawi does not have a very good seed system for its crop and livestock sector. The formal seed sector is mostly engaged in producing and marketing seeds for hybrid crops such as maize. Planting materials for open pollinated crops such as legumes and tubers are mostly neglected and this creates a serious shortage of such seeds in the country. The problem is also very serious in the livestock sector where there is shortage of organized breeding programmes for most of the livestock species. This is the major reason for the high demand for such materials among the farmers consulted.

It was however noted that most of the farmers demanded inputs or physical items rather than actual extension services such as demonstrations, meetings, field days, etc. The only specific services demanded were for training associated with expected inputs and physical structures. This scenario is similar to the local government experiences where local communities tend to always demand physical structures such as school blocks, teachers houses and bridges. They rarely demand actual services such as health delivery or education delivery. In their eyes, development is mostly in terms of physical assets which they can see physically and not services.

## CONCLUSION AND RECOMMENDATIONS

Well organized and effective agricultural extension services are a must for sustainable agricultural growth and development to be achieved. Such extension services usually constitute a number of approaches and methodologies provided according to the needs in particular situations. The extension services need to be provided under a particular extension system in order to ensure that they are properly managed and coordinated. Malawi has since the advent of multiparty politics chosen to follow an extension system which allows bottom up approaches where many service providers provide services in a decentralized system of governance after trying several top-down systems and approaches which were dominated by public service provision. In tandem with the multiparty democracy where emphasis is on giving power to the people, the extension services are demand-driven. Pluralistic, demand-driven and decentralized extension services need to be harmonized, standardized, properly coordinated and managed under a well defined system if the quality of such services is not to be compromised. DAESS is a system which is designed to promote harmonization, standardization, coordination and quality control of the agricultural extension and advisory services in Malawi. The results of this study

show that the system is effective but needs to be enhanced by formalizing the creation of additional structures at the village, group village and national level. The study has revealed the need to train and sensitize stakeholders in order to appreciate the system as well as to establish and start using it.

It is therefore recommended that the DAESS guideline be revised to include village, group village and national level structures. There is also need to provide additional and adequate sensitization on DAESS over and above the sensitization conducted when the system was first introduced. Sensitization sessions will help the stakeholders to understand the system and encourage them to use the system which will lead to the provision of well organized and effective extension services in the country.

## Conflict of Interests

The authors have not declared any conflict of interests.

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