

Source, Availability and Use of Agricultural Information and Innovation in Benishangul Gumuz Region of Ethiopia

Regasa Dibaba^{1*} Afework Hagos¹ Seyoum Mengist¹ Endeshaw Habte² Dawit Alemu³

1.Ethiopian Institute of Agricultural Research/Assosa Research Center, P.O. Box 265, Assosa, Ethiopia

2.Ethiopian Institute of Agricultural Research/Melkasa Research Center, Melkasa, Ethiopia

3.Ethiopian Institute of Agricultural Research, Addis Ababa, Ethiopia

Abstract

Agriculture remains the main source of income for smallholder farmers in Ethiopia. Agricultural information in turn plays a great role in increasing production, productivity and marketing in agriculture. Consequently the study was aimed at assessing the source, use and availability of agricultural information in the study areas and, a total of 38 Development Agents (DAs) and experts were sampled from three districts and nine Kebele Administrations. The research results revealed that, lack of access to agricultural research services, lack of access to agricultural inputs (fertilizer, improved seed and recommended agronomic practices) are mentioned to be the constrained factors of agricultural extension services directly or indirectly for DAs and experts. Finally, the results of inferential statistics showed that the source, availability and use of agricultural information for extension services have statistically associated with access to agricultural information from news paper, access to information from Woreda agricultural bureau, access to up to date information from Woreda agriculture office and NGOs, availability of clear agricultural information obtained from Woreda agricultural offices, field visits, information about new agricultural technologies via extension and audio cassette and knowledge on the current extension packages. Therefore, we suggest that investing in development works by improving the availability and utilization of the current agricultural information would enhance the production and productivity of agriculture in general and effectiveness of extension workers in particular.

Keywords: Extension, agricultural information, innovation

1. INTRODUCTION

The fundamental condition for overall social and economic growth of many developing countries is a dynamic agricultural sector brought about by a steady increase in agricultural productivity. Reports on agricultural production and food security showed that food production has to increase substantially to meet the food demand of growing population (Wikipedia, 1995; Amalu, 1998). In order to speed up and bring about desired change in agriculture sector in particular and the economy in general, innovation system perspectives are very crucial. Innovation systems perspectives on agricultural research and technological change are fast becoming a popular approach to the study of how society generates, disseminates, and utilizes knowledge, and how such systems can be strengthened for greater social benefit (Spilman, 2005).

Though rapid agricultural growth and development is dependent upon the agricultural innovation system, in most cases agriculture is more conservative than innovative though this is wrong in reality (EU SCAR, 2012). That means agriculture and innovation go hand in hand. For this reason, farmers have innovated agriculture before 10,000 years ago and now innovation has happened and on balance has contributed to social welfare.

For the above reason, in the last century agricultural innovation has been professionalised in outsourcing activities to universities and state activities in applied research and extension (advice) and to professional companies. The social return of these activities has been enormous, and often far above market rates for investments (Alston, 2010). Thus, it may help in enhancing food availability in countries that strives to ensure food self sufficiency and security.

Rapid agricultural growth and development is dependent upon the agricultural innovation system. The agricultural innovation system as a process is composed of all interacting actors involved in technology generation, processing, dissemination, and utilization and so on. The system also embraces all other basic functions and environments in which actors operates towards a common goal of agricultural growth development such as marketing, policy formulation, infrastructure, and institutional changes. Strong innovation system maintains the dynamics of all actors' interactions in a meaningful way facilitate cooperation and help achieve institutional objectives. For this reason, public agendas on agricultural development policies have affected the orientation and sometimes the structure of the agricultural knowledge and innovation system and also led to complaints that the old production oriented innovation system was not fit to deliver new farming systems (SCAR 2nd foresight Brunori et al. 2008, IAASTD, 2009)

The OECD (as cited by EU SCAR (2012)) defines innovation as the implementation of a new or significantly improved product (good or service), or process, a new marketing method, or a new organizational method in business practices, workplace organization or external relations. Thus, it implies that innovation

activities are all scientific, technological, organizational, financial and commercial steps which actually, or are intended to, lead to the implementation of innovations. Consequently, this could be achieved through the innovation system created at the ground.

The **World Bank (2007)** defines innovation system as a network of organizations focused on bringing new processes and new forms of organization into social and economic use, together with the institutions and policies that affect their behavior and performance. This is a general understanding of the contemporary concept of innovation that sees innovation not as mere technologies or products but as the process through which knowledge is generated, crafted from various sources and put into use. Thus, innovation may address new creations of social and economic significance, improvements in technical and managerial issues, institutional and policy aspects.

Moreover, agricultural knowledge and innovation system has brought specific insights based in the so called Systems of Innovation thinking concerning innovation policy. **Smits et al. (2010)** distinguish two views on innovation policy: the systems of innovation¹ and the macro-economic² approach. According to **Bergek et al., (2010)** well developed knowledge and innovation systems have seven major functions and analysed based on these functions. These are knowledge development and diffusion, influence on direction of search and identification of opportunities, entrepreneurial experimentation and management of risk and uncertainty, market formation, resource mobilisation, legitimation and development of positive externalities.

However, many agricultural research and development forums have frequently underscored that prevailing weak institutional linkage among important actors falling along the technology generation-utilization continuum resulted both in the generation of less responsive as well as in the underutilization of important research outputs. In attempt to reverse this and realize effective coordination between research, support systems and end users a number of efforts have been made. In Ethiopia, the establishment of the research-extension-farmer linkage department within the research system, during mid 1990s, mainly to reach end users with research outputs and enhances the contribution of agricultural research to address developmental needs by forging an effective link between research and extension was an important case in point. This is similar circumstances to the concept of 'social innovation' was coined in the 1980s to indicate that new 'long wave' technologies involve major institutional changes (Freeman (1987) as cited by EU SCAR, 2012)). Nonetheless, it was noted by institutional economists and others that social institution are slow in changing, also because many different stakeholders have vested interests in fixed routines (Dankbaar and Vissers cited in Smits *et al.*, 2010, pp. 69).

In Ethiopia, quite a number of linkage arrangements (social, institutional and economic) were designed and implemented to synchronize the role of research and extension. On farm activities including demonstration and popularization activities, field days, and capacity building activities viz. trainings and exchange visits were some of the earlier arrangements targeted to link research with extension and end users. In addition, the setting up of research-extension-farmer linkage advisory council has marked an important milestone in bringing key actors in agriculture together (Draft research-extension-farmer linkages department strategic plan, 2005 Unpublished). These innovative systems has played great role in sharing agricultural knowledge and information. For this reason information is being shared both horizontally and vertically thereby meaningfully linked research with other development actors. Since then both functional and institutional linkages of actors involved in the agricultural sectors has improved, at least in frequency of interaction.

As indicated above, the link between the research system and the technology users as well as the intermediaries, in Ethiopia, is more often restricted to field activities (demonstration, field days, visits, and excursion), regular/occasional meetings (advisory council meeting, trainings, workshops) and occasional events such as exhibitions. These are all bounded by time and space that all of them take place in specific locations at certain point in time. Even the purposeful visits paid to research institutes/centers by different stakeholders (including technology users, actors in the support systems and others) are not met by well organized agricultural information delivery mechanisms. Visiting client has to go to different research units (windows) that are spatially spread at different sites both within and across research campuses.

Recently growing interest to connect all districts in the country with wereda NET could be an opportunity to provide for direct interaction and information for the farming community as well as support systems at Wereda level (Lessa et al. (2011)). The realization of such investments may take anytime soon. Yet, it cannot be the determinant element to stimulate other ways of providing easy access to research outputs. While anticipating the establishment of the network complementary promotion activities need to be designed and operationalized to address the needs changing with space and time.

By adopting an AIS perspective, bigger issues come into focus than when adopting a more limited NARS or AKIS concept. By starting at the knowledge-application end, the question of the role of government-extension services in technology diffusion and agricultural growth? What are the relative strengths and weaknesses of each

¹ The macro-economic view tends to see innovation as a linear process from (basic) research via Research and Development to a commercial application. The main rationale is market failure and the main policy

² The systems of innovation view have a more complicated approach to innovation and innovation policy.

diffusion channel? How can they be improved and what can be done to reach more farmers? In answering these questions, it is mandatory to analyze the prevailing systems of innovation with a view to generating information on the major impediments, challenges, success and failure factors and the understand the functioning of the system which will in turn will be used to consolidate the system so as to enhance the contribution of the innovation system to agricultural and economic growth of the country.

There is a greater need for coordination between researchers and technology users. A higher degree of integration needs to be achieved by having a formal management mechanism linking scientists or department in charges of different disciplines (though engaged in interdependent tasks) on the one hand to the technology users on the other. The mechanism for linkage and/or interaction should be with formal, permanent, mandated, facilitated and designated function. Technological and agricultural information needs are timeless. There is no a specific time at which all needs and interests are concentrated. As the human-environment interaction is a dynamic one shaped by observations, experiences and natural phenomena so is the need for problem solving technologies and practices. Obviously, satisfying this demands an organization which ensures timely delivery of information on readily available technologies as the need arises and at any point in time.

In most cases, DAs and agricultural experts differ in their access to and utilization of agricultural information from different sources. Such diversity among extension workers could be related to various personal, social, economic, or institutional factors. Understanding reasons behind such diversity and extension agents current level of access and utilization of agricultural information is of paramount importance. To enhance the production and productivity of agriculture, extension workers should have access to well-organized and relevant information and proper and sufficient utilization of agricultural information requires good facilitation.

Therefore, this study is designed to analyze extension workers' access, availability and utilization of agricultural information in Benishangul Gumuz Regional State as well as to identify influencing factors to make useful policy recommendations, to facilitate meaningful interventions in the areas of agricultural extension so that relevant information is provided in a timely manner.

2. MATERIALS AND METHODS

2.1. Description of the study areas

The research has been implemented in three districts of Benishangul Gumuz Regional State namely Homosha, Oda-Bildiglu and Kamashi Woreda. Homosha and Oda-Bildiglu are located in Assosa zone, whereas Kamashi district is found in Kamashi zone. Homosha Woreda is located at west north and at around 35 km away from Assosa town. It is one of seven Woreda' found in the Assosa zone and the dominant ethnic groups are Berta and few other ethnic like Amhara, Oromo and Tigre. Oda buldigilu is found at Northern part of BGRS, about 76 km from Mendi town at the North West area. The population of the Woreda is dominated by Berta's followed by Oromo. Kamashi Woreda is located at 243 km from Assosa. The major residents in the Woreda are Gumuz and whereas few Oromo groups and Amhara ethnics are made their livelihood.

2.2. Methods of data collection, sampling procedures and data analysis

The research reviewed and analyzed existing secondary data with emphasis on assess the effectiveness of the current information management system and communication in the study areas. All necessary data's related to access, source and use of agricultural information that important for further data analysis were collected from different sources by reviewing secondary data sources such as reports, and documents from Kebeles and Woreda Agricultural and Rural Development Offices and other related institutions. Moreover, to elicit the necessary information, both qualitative and quantitative primary data were collected. It includes; demographic, environmental, socio-economic, institutional, behavioral, as well as access and utilization of agricultural information services that have been provided to end users. The data were collected through formal survey, interview and through discussions and observations.

For the analysis purpose we employed an Agricultural knowledge and Innovation System model¹ (EU SCAR, 2012). Simple random sampling techniques were employed in selecting sampled districts and Kebeles. Accordingly, three districts were selected from twelve districts involved in our mandate areas and then three Kebeles were selected from each district randomly. All DAs within the selected Kebeles and randomly selected SMS those who work at the selected districts were interviewed. Hence about 39 both DAs and SMSs were selected from each Kebeles and districts. However, from the sampled 39 DAs and experts, we remove one sample due to data collected from the sampled expert was not enough to give the necessary information. The quantitative data were analyzed using both descriptive and inferential statistics. The descriptive analysis made use of tools such as mean, percentages, standard deviation and frequency. Moreover, econometric analysis was used to identify the relationships in level of access and utilization of agricultural information in the study area. The statistical

¹ In this model the four sets of actors act upon the knowledge of farmers and rural actors and generate innovations in response to problems and opportunities, desired outcomes, system drivers and regulative policies and institutions.

significance of the variables was tested using chi-square (χ^2) to make inferences.

3. RESULTS AND DISCUSSIONS

The results obtained from the sample respondents are discussed as follows. The descriptive analysis made use of tools such as mean, percentages, standard deviation and frequency. Econometric analysis was used to identify the degree of association of availability of adequate agricultural information with other variables to make meaningful inferences and the statistical significance of the variables was tested using chi-square (χ^2) and F statistics.

Descriptive statistics (Socioeconomic and institutional characteristics)

To elicit the role of agricultural information in enhancing production and productivity of the farming community has a direct and or indirect relationship thereby filling the skill and knowledge gaps of farmers, DAs and experts. As a result we have tried to examine the major sources of income of the farming community this would further enable to craft appropriate extension service policies and strategies. According to the survey results, the major income sources of HHs in the study area are generated from crop production followed by rendering livestock husbandry. Furthermore, additional source of income from off farm activities like trade, traditional mining and hand crafting producing local materials in the study areas.

Table 1: major source of income of the households in the study area

Source of income	Frequency	Percent	Cumulative Percent
Crops	33	86.8	86.8
Livestock	3	7.9	94.7
Forest	2	5.3	100
Total	38	100	

Source : current survey result

According to Leeuwis and Ban (2004), AIS (Agricultural Innovation Systems) the network of organizations, enterprises, and individuals focused on bringing new products, new processes, and new forms of organization into economic use, together with the institutions and policies that affect the way different agents interact, share, access, exchange and use knowledge. Consequently, the major source of income of the households in the study areas is farming. As it is shown from the above table, about 33 (86.8 %) of the respondents replied that households in the study areas got their income mainly from crop production. Thus, implies that according to the experts and DAs point of view, the livelihood of households depend up-on crop production followed by livestock and agro forestry and off farm income. Hence, promotion of agricultural information related to crop production for the DAs and experts may enhance the livelihoods of farmers thereby improving income of the households in the study areas.

More recently the AKIS concept has evolved as it has acquired a second meaning (innovation) and opening up AKIS to more public tasks and to the support of innovation (Klerkx and Leeuwis, 2009). As a result, the important characteristics of an innovation system are the institutional infrastructure, funding mechanisms, network characteristics and market structure (Klein Woolthuis et al. 2005). This implies that innovative policies and strategies that enhance the livelihood of community are very important. Part of this, planning and designing road network to provide optimized connectivity to rural and urban areas and achieving goal of socio-economic development through proper management of road may have a great contribution in communicating agricultural information. Because of this reason, most of the respondents in the study area have road access that is 73.3 percent have all weather road access. And the rest 18.4 percent of the respondents have not access to road still. Therefore, concerned bodies should give due attention to construction, up grading and maintenance of roads and bridges is very important in accessing to all information thereby improving market access, health service, technology transfer and other several services to make the livelihood of the people better and sustainable growth and development in the study areas.

Table 2: easy access to all weather roads

Access to roads	Frequency	Percent	Cumulative percent
Easy Access to Road	28	73.7	73.7
No road access	9	23.7	97.4
No response	1	2.6	100
Total	38	100.0	

Source: current survey result

Agricultural services(extension, credit and information) are expected to enhance farmer skills and knowledge, link farmers with modern technology and ease liquidity and input supply constraints (Lerman, 2004, Gabremadihin et al., 2010), thus are expected to induce market orientation participation. According to the sampled respondents, about 78.9% of respondents' response were the households in the study area had access to credit and about 21.1% of HHs has got difficulty in accessing credit services.

This could be further depicted as availability of financial resource has a decisive role in the agricultural production process; access to credit can address the financial constraints of farmers. Therefore, provision of agricultural credit from formal institution needs to be supported by awareness creation and training in order to achieve the credit desired goals. Farmers having credit access, also have good communication with DAs. Moreover, those farmers having access to credit will have a tendency to search agricultural information and utilize agricultural technologies than farmers who do not have any access.

Table 3: Access to Institutional factors

Variables	Access	Frequency	Percent	Cumulative percent
Credit access	Yes	30	78.9	78.9
	No	8	21.1	100
Access to agricultural research services	Yes	18	47.4	47.4
	No	20	52.6	100
Access to agricultural input services	Yes	15	39.5	39.5
	No	22	57.9	97.4
Access to output markets	Yes	23	60.5	60.5
	No	15	39.5	100

Source: current survey results

The survey results further reveals that though there is availability of credit services at the study areas, majority of respondents (47.4 %) of the respondents responded that the credit access service is moderately satisfactory and 18.4 percent were responded are totally not satisfied with services rendered by credit and saving institutions and the remaining 21.1 percent of them have got good satisfaction about the credit services while the remaining 13.2 percent were not voluntary to respond.

Table 4: credit service satisfaction

Satisfaction level of credit services	Frequency	Percent	Cumulative percent
Good	8	21.1	21.1
Average	18	47.4	68.5
Poor	7	18.4	86.9
Not willing to respond	5	13.2	100.00
Total	38	100	

Source: current survey results, 2012

Boosting agricultural production and productivity using available and promising agricultural technologies is currently the hot issue of government development agenda especially in agriculture sector. However, according to the survey results, most of the respondents replied that the households in the study areas had no access to agricultural research center services such as training, production manuals and use generated technologies with more applicable and 52.6% of the sample respondents have not got any access while about 47.4% have easy access to agricultural research services. This implies that more than half of the households living in the study areas had no access to agricultural research services as mentioned above. Therefore, the research institutes should further expand their investment in areas of research and center development by widening their capacities in terms of quality research and human resources development.

However, in our study areas, only 39.5% of the respondents responded that there is enough agricultural input services access by the households while the majority of the sampled respondents (57.9 %) replied that there is no access to agricultural input services like access to fertilizer, seed, farm implements and the like in the respective study areas. Thus, it implied that may be due to the fact that the selected woredas were somehow remote; there is lack access of agricultural services in the study areas. Hence, to boost the production and productivity in agriculture concerned bodies needs to work to enhance the access of agricultural services thereby providing adequate agricultural information on the use and application of agricultural services.

The ultimate goal of using agricultural inputs is to increase production and productivity. Consequently, households would produce marketable surplus which is usually left from food consumption. According to survey result 60.5% of the respondents believe that there is market access to output market for the households in the study areas while 39.5 % of them did not. However, this is not enough to conclude that the households in the study areas had access to output market or not unless household survey is not conducted.

The role of ICT/ICM in agricultural development is going to be significant in future initiatives for transforming agricultural research for development worldwide (FAO, 2013) A top-level view of advances in ICT/ICM reveals that more and more rural people are using community radio, mobile phones and the Internet. In some contexts, farmers have used video through internet applications to gain advice on crops, animal husbandry, the threats posed by weather, pests and diseases, markets and prices and in the process enhance their access to and use of NARS-derived. Consequently, Benishangul gumuz region, is known widely that crop protection is major challenge in crop production due to the fact the agro ecology is very favorable for the outbreak of different

disease, insect and pests including weeds. This implied that, dangerous crop invaders or weeds, and pests that reduce production and productivity of major cereal crops like maize, sorghum, teff etc and oil crops such as soybean, ground nut, haricot bean and others as simple example we can take striga and termite. Though, crop protection remains the major challenge in the study areas, about 15.8%, 26.3%, 28.9%, 23.7% and 5.3% the experts and DAs were responded that they have almost always, frequently, occasionally, and rarely and almost never access to and source of information about major crops protection respectively.

Table 5: Access and source of information about major crops protection

Access type	Frequency	Percent	Cumulative percent
Almost always	6	15.8	15.8
Frequently	10	26.3	42.1
Occasionally	11	28.9	71.1
Rarely	9	23.7	94.7
Almost never	2	5.3	100.0
Total	38	100.0	

Source: current survey result

An innovation is the implementation of a new or significantly improved product (good or ser-vice), or process, a new marketing method, or a new organisational method in business practices, work-place organisation or external relations. Innovation activities are all scientific, technological, organisational, financial and commercial steps which actually, or are intended to, lead to the implementation of innovations (EU SCAR, (2012).more specifically, Rivera and Zijp (2002) have sought to broaden the AKIS concept to include rural development (RD) which include four actors namely research, extension services, education and training and support systems (all the organizations providing credit, inputs and producers' associations, etc.) with an interest in agricultural/RD innovation.

Based on the above justification and our research results (Table 7 below) reflects that, DAs and experts have obtained information for agricultural extension services from different sources. Consequently, we have tried to evaluate the degree of the information obtained from different sources to that of adequate and reliable information for extension services. Though the analysis seems weak in showing the degree and extent by which the sources of information affect the adequacy of agricultural information for extension services, we use it as a proxy to shade light to make inferences and policy implications.

As a result, the survey results showed that access to agricultural information from news paper is highly associated with adequate information for agricultural extension services at 5 % probability level. This may be due to the reason that agriculture related information reported at and or by news papers are complete and relevant in nature. Therefore, we suggest that the scope and accessibility of agricultural information via news paper must be widened for experts and DAs via different mechanisms.

Table 6: Association between different information sources and uses of information for agricultural services

Variables	Adequate information for extension service		Total	χ^2
	Frequency	Yes No		
Access to animal health services	Yes	17 0	17	2.64
	No	18 3	21	
Access to Agricultural Research Center	Yes	10 8	18	1.62
	No	7 13	20	
Access to agricultural information from news paper	Yes	9 4	13	4.80 **
	No	8 17	25	
Access to adequate Information from Woreda Agricultural Offices	Yes	11 6	17	7.67***
	No	5 14	19	
Access to up to date agricultural information from Woreda Agricultural Office	Yes	7 3	10	4.21**
	No	8 17	25	
Access to up to date information from NGOs	Yes	4 1	5	3.11*
	No	6 11	17	
Clarity of agricultural information obtained from Woreda	Yes	14 11	25	6.12**
	No	1 9	10	
Access to field visit	Yes	12 6	18	6.65***
	No	5 15	20	
Access and availability of new information about agricultural technologies via extension	Yes	15 10	25	6.13**
	No	2 10	12	
Adequate new information about Agricultural technologies in audio cassette	Yes	6 1	7	6.35**
	No	10 20	30	
Knowledge on all current extension packages that are developed by MOA/BoA	Yes	13 11	24	2.79*
	No	4 10	14	

Source: survey results

In addition to the above statement, access to information from Woreda agricultural office is highly related to access to adequate information for agricultural extension services at 1 % probability level. This implies that access to adequate information given/available for Woreda experts may be enabling to transfer knowledge and information via training to other experts at Woreda level and DAs. Therefore, enhancing information access at Woreda level would have a spillover effect on adequate information access for extension services.

Furthermore, access to up to date information agricultural information obtained from Woreda agricultural office and NGOs is related to access to adequate information for extension services at 5 % and 10 % probability level respectively. This may be due to up to date information agricultural information had an effect on the access of adequate information for extension services. Therefore, enhancing the access of up dated agricultural information would help to improve the access to adequate information for extension services used by experts and DAs.

It is clear that access and availability of clear agricultural information for extension services has its contribution in facilitating and implementing extension activities for the farming community. As a result, our survey results indicated that access to clear information obtained from Woreda agricultural office is related at 5 % significance level. Thus, implies that clear information in any aspects agriculture is necessary and this could further help experts and DAs to have clear image of their extension works.

Research results indicates that field activities like demonstration, field days, visits, and excursion, regular/occasional meetings and occasional events such as exhibitions have positive impacts in enhancing agriculture information for extension services. The survey results revealed that access to field visits is strongly related to access to agricultural information for extension services at 1% significant level. Therefore, access to field visit would have an important role in improving access to agricultural information for extension services thereby improving field visit exposures to experts and DAs because seeing is believing and this could simplify extension services directly or indirectly.

Among the many institutional support services that need to catalyze/support the transformation process in agriculture sector the agricultural extension service plays a critical role, since it contributes to the development of the skill and knowledge of farmers to adopt new and improved technologies (seed varieties and animal breeds, implements, chemicals and practices), and the approaches and processes with which the skill development and access to information are realized (Berhanu *et al.*, 2006). Access to information about agricultural technologies from different sources and types were used by the experts and DAs, though some of them have not accessed information about agricultural technologies. Accordingly, the survey result indicates that access and availability of new information about agricultural technologies via extension and audio cassette showed high association with adequate information for extension service at 5 % significance level. Thus, implies that extension services

in promoting new technologies should be supported the principles of extension approach and also by audio cassette thereby impressing and widening their knowledge about new technologies. Therefore, extension materials like manuals, brushes, flyers and audio cassettes must be prepared about newly generated technologies to foster technology dissemination and popularization in the study areas.

Finally, Ministry of Agriculture and Regional Bureau of Agriculture has set clear policy and strategies on agriculture sector. In many countries this concept was implemented through a strong integration, generally at national level, of public research, education and extension bodies, in many cases under the control of the Ministry of Agriculture. Knowledge on the current extension packages has vital role in implementing the policy and strategies. Accordingly, it is not surprising knowledge on current extension packages is related to agricultural information for extension work though the significant level is at 10 %. This implies that training on the information on the current extension package would enhance information for extension services of the sampled respondents thereby giving continues training and information on the current agricultural policies, strategies and packaged designed to implement the policies and strategies is necessary. This finding is in line with Leeuwis and Van den Ban (2004)¹.

4. SUMMARY

Agriculture sector has a vital and prominent role in determining the overall social and economic growth of many developing countries like Ethiopia thereby a steady increase in agricultural production and productivity. However, in order to speed up and bring about desired change in agriculture sector in particular and the economy in general, agricultural information takes the lion share in enhancing the knowledge and skills of the farming community this days. Therefore, the study was intended to assess the source, availability and use of agricultural information at Assosa and Kamashi Woredas in Benishangul Gumuz region. However, it provides additional and relevant information about socio-economics, institutional and other factors that determine and or associate with agricultural information used to speed up extension services.

As a result, the survey results collected from 38 sampled respondents showed that access to credit services, agricultural research outputs, input service providers and crop protection were very limited for the experts and DAs while access to output markets and all weather roads were mentioned as good opportunities in creating linkage and facilitation of agricultural information used for extension services.

Finally, the results of inferential statistics showed that the source, availability and use of agricultural information for extension services had statistically associated with access to agricultural information from news paper, access to information from Woreda agricultural bureau, access to up to date information from Woreda agriculture office and NGOs, availability of clear agricultural information obtained from Woreda agricultural offices, field visits, information about new agricultural technologies via extension and audio cassette and knowledge on the current extension packages. Therefore, we suggest that policy issues that fill the gap of the access, clarity, reliability, use and availability of agricultural information would enhance, strengthened and smooth extension services given by and to the experts and development agents in the study areas.

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¹ Leeuwis and Van den Ban (2004), claim that the Agricultural Knowledge System concept originated in 1960s, driven by an interventionist agricultural policy that sought to coordinate knowledge and innovation transfer in order to accelerate agricultural modernization.

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