

An Assessment of Women Farmers Access to Extension Services in Central Agricultural Zone, Bauchi State, Nigeria

By

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ABSTRACT

Although both male and women farmers contribute to agricultural production significantly, yet inequality in the access of resources between men and women is linked with production in efficiency. The objectives of this study is to examined women farmers' access to extension services in Central Agricultural Zone, Bauchi State, Nigeria. A multi-stage sampling technique was used to select 240 women farmers for the study. Structured questionnaire was administered to collect information from the women farmers. Descriptive statistics and logit regression were used for the statistical analysis. The result of the study indicates that Socio-economic variables such as age, farm size and group membership had significant influence in accessing extension services at 5%, 1% and 5% levels, respectively. The constraints faced by the women farmers were insufficient farm inputs and inadequate farm credit amongst others. It was concluded that women farmers in the study area had access to extension services and radio was the most widely used source of extension information in the area. Likewise, age, farming experience, farm size and group membership influenced the respondents' access to extension services. It was recommended that women farmers should be assisted in acquiring farm inputs at a subsidized rate in the area. The existing women groups should mobilize funds among their members in order to help solve problem of inadequate farm credit.

KEY WORDS: Agricultural, Access, Resources, Farmers, Women, Productivity.

INTRODUCTION

In most developing countries (Nigeria inclusive) agriculture is an important source of livelihood necessary for reducing poverty and food insecurity and can be the engine for growth (ISSER, 2009). The agricultural sector is becoming more technologically sophisticated, commercially oriented and globally integrated which presents opportunities and challenges. One of such challenges is gender based inequalities in accessing agricultural resources (World Bank, 2009).

Women and men make crucial contributions in agriculture and rural enterprises in all developing regions as farmers, traders, processors, farm labourers and entrepreneurs. Their roles, however, vary across regions but, everywhere, women face gender specific constraints such as ownership of land, access to credit and modern technologies (World Bank, 2009). The potential gains that could be achieved by closing the gender gap in resources are estimated by FAO (2011) in terms of agricultural yields, agricultural production, food security and broader aspects of economic and social welfare.

Women, who form the majority of rural dwellers, play a significant role in agriculture (Singh and Vinay, 2013). Rural women contribute substantially to agricultural labour force in many African countries (Ahmed *et al.*, 2012). Women provide reasonable agricultural labour force in countries such as Nigeria, Cameroon and Zambia (FAO, 2011). Despite the huge contribution, their role has yet not been recognized (Jamali, 2009) and extension services do not address women farmers appropriately (Shabanali-Fami, 2009). Different studies show that women farmers' participation in extension programmes such as in farm day, and farm demonstration is approximately 21 percent (Umeta *et al.*, 2011). Agricultural extension can provide opportunities for women farmers to access the needed information, technologies and credits (Abedi *et al.*, 2011). Women play a significant role in agricultural production, growing mostly staple foods and play a major role in household and community survival

strategies and contribute significantly to the rural economy (McIntyre, 2009). Although, the perceived role of women and men in agriculture may differ considerably from region to region; it can generally be stated that women's tasks include land preparation, weeding, harvesting, threshing and storing, as well as production of subsistence crops in the home-garden and small animal husbandry (EARO, 2000).

Despite their essential contributions to the lives of their families and communities, women farmers are deprived of access to productive resources, markets and services (Fontana and Paciello, 2010). Women particularly those in male-headed households tend to participate less than men in formal activities like training, cooperatives and official meetings (FAO, 2011). Women also tend to be less dominant in managing and controlling some of the household resources such as household income, land and capital. Moreover, women shoulder excessive workload and face difficulties of accessing or controlling the key factors of production and lack appropriate information, extension and advisory services (ILO, 2009). Furthermore, programmes and projects do not pay due attention to gender in their activities (World Bank, 2008). Gender based constraints have adverse implications to the performance of agricultural development initiatives, food and nutrition, security and well being of the rural poor in particular (FAO, 2011).

On the other hand, increasing opportunities for women farmers influences productivity and agriculture led growth (FAO, 2011). Furthermore, when women farmers' productivity and income increase, the benefits multiply across families and generations, because women are known by sacrificing certain amount of their income to take care of their children (USAID, 2011). Estimates show that if women farmers had the same access to productive resources and services as their male counterparts, they could increase productions on their farms by 20 – 30% and reduce the number of hungry people in the world by 12 – 17% (FAO, 2011).

Statement of the Problem

Both male and female farmers contribute to agricultural production significantly, yet their access to agricultural resources differs (Quisumbing, 2010).

Inequality in the access of resources between men and women is linked with production inefficiency. The gender gap hinders women farmers' productivity and reduces their contributions to the agricultural sector.

Objectives of the Study

The broad objective of the study is to assess women farmers' access to extension services in Central Agricultural Zone, Bauchi State, Nigeria.

The specific objectives are to:

- i. describe the socio-economic characteristics of women farmers in Central Agricultural Zone.
- ii. examine women farmers' access to extension services in Central Agricultural Zone.
- iii. determine the influence of socio-economic characteristics on women farmers' access to extension services in Central Agricultural Zone.
- iv. identify the constraints to women farmers' access to extension services in the Central Agricultural Zone.

LITERATURE REVIEW

Empirical Findings on Socio-Economic Characteristics of Farmers

Farmers in Nigeria vary greatly in their socio-economic characteristics. These variations in their demographic characteristics play a great role in their farming activities. Most Nigerian farmers can be described as resource poor because they practice subsistence farming with little or nothing to sell to meet other family needs at home. Farming in Nigeria is characterized by smallholdings of less than one to two hectares. This is partly due to the

fact that most farmers operate at subsistence level and are peasants (FAO, 2003). The major concern of most farmers is to feed their families and they will only sell their produce to meet some basic necessities at home.

Agriculture is the basic and fundamental economic activity of most developing nations; this is coupled with providing man's immediate needs in the areas of food, cloth and shelter. Thus, in most part of the world, agricultural production is being encouraged in order to reduce food insecurity and improve the standard of living (FAO, 2003). In Nigeria, studies have revealed that agriculture has primarily been a rural-based occupation engaged in multitude of small scale farmers characterized by small holdings ranging from 0.05 to 3.0 hectares of farm land, rudimentary farming system, low capitalization and low yield per hectare (Kolawole and Ojo, 2007). Empirical studies have shown that the deprivation women face in terms of agricultural production resource access is influenced by the socio-economic characteristics of women. These socio-economic characteristics include women's level of education and credit access, access to extension information and cooperatives (Okunade, 2006), farming experience and decision making powers (Damisa and Yohanna, 2007). The study of Okunade (2006) found that socio-economic factors of respondents in the study affected women's ability to access extension services. The socio-economic characteristics of respondents are important determinants of women's accessibility to extension services.

Women Farmers' Access to Extension Services

Agricultural extension facilitates the access of farmers and their organizations to information and improved technologies, facilitates their interaction and partners in relevant institutions and assist them to develop their own technical, organizational and management skills and practices (Christoplos, 2010; Davis and Heemskerk, 2012). Agricultural extension

includes the support and information required to know about and adopt good agricultural practices (Hird-Younger and Simpson, 2013).

The commonly used measures of access to extension services are the percentage of farmers with access to visits from agricultural extension agents. Using these measures, the studies on African farmers, show that access to extension agents in general services is consistently and statistically significant in the majority of cases less among women than men (Gilbert *et al.*, 2002; World Bank and IFPRI, 2010). In general, the figures available on access to agricultural extension agents suggest that the level of extension provision is low for both men and women farmers but more so for the latter, and this has major implications for attaining higher productivity and agricultural development. The roles of agricultural extension agents are planning, organizing, directing and reporting (Anaeto *et al.*, 2012). Denying women farmers from such opportunities significantly affect agricultural production and household's nutrition status. In developing countries, farming is considered as a family activity and the head of household is considered as the 'farmer'. The extension system too considers the head of the farm household as the appropriate recipient of agricultural extension information. However, many institutions continue to operate under the perception that 'women are not farmers' (World Bank, 2010). In African countries like Ethiopia, women are at best considered as "helpers" of male members in the farm households. Consequent to this bias, women are underserved as clients of extension services. This biased approach ignores women's contributions to the production and harvesting of cash crop (World Bank, 2010).

In the Nigerian context, most of the times, rural male are considered as farmers and women are considered as those who support men with food preparation and child bearing. This cultural bias poses huge challenge for providing equitable extension or advisory services (Azanaw and Merku, 2014; EARO, 2000). Empirical studies on gender and access to

extension services show relatively lower levels of contact between farmers and extension agents, with disproportionately lower levels of access for women. Systematic review of evidences from Nigeria, Ethiopia, India and Ghana revealed that the levels of access to Agricultural extension varied by region and by the type of crop or livestock. It further revealed that women farmers received inadequate service from extension system compared to their male counterparts (World Bank, 2011; Cristina *et al.*, 2013).

Agricultural extension service as tool for rural development

Increasing food production in a sustainable manner, ensuring and enhancing food security and improving livelihoods in rural areas is the main goal of both sustainable agriculture and rural development. To realize this goal, efforts should be made towards educational programmes, efficient utilization of economic incentives and the development of appropriate and new technologies (Mbo' o and Colverson, 2014). Therefore, agricultural extension services could be considered as a main instrument to expand scientific technologies and scientific knowledge which could help boost agricultural production. In addition, by launching strong extension programmes and by adopting participation approach, crop yield, profit margins and income levels can be enhanced. Such practices will result in the development of rural areas depend upon sustainable agriculture (Berhanu *et al.*, 2006).

To support sustainable agriculture which is one aspect of sustainable development, agricultural extension service is one key element and being implemented in Nigeria. In Nigeria, Agricultural extension not only focuses on increasing agricultural production and transferring modern agricultural technologies, but also undertakes many activities leading to rural development. Agricultural extension exploits and explores all possible opportunities and resources and the potential of natural and human resources, delivers educational and

awareness – raising programmes and evaluates development capabilities to improve skills and ways of thinking (Anandajaya-Sekeram, 2008).

Agricultural extension is expected to achieve sustainable rural development by providing the solutions to field-based problems by linking agricultural research, creating awareness, educating farmers to change their old traditional trends with friendly persuasion, developing community resources to reduce agricultural preservation by preventing destruction and degradation, enhancing agricultural productivity through increased efficiency, the productive process on the basis of scientific economic lines and improving the income of rural families which rely on local products (EEPRI, 2006).

Socio-Economic Characteristics and Access to Extension Services

Socio-economic characteristics are among the most common household characteristics which are associated with farmer's access to agricultural extension services. Access to agricultural extension services are influenced by socio-economic characteristics such as age, educational level, marital status and gender of farmers. These variables were reviewed in this study but there is a limitation of empirical study on these variables.

With regards to age, different studies reported different results. Haba (2004), assessed the willingness to pay for agricultural advisory services and information delivery technologies such as print, radio, farmer to farmer, expert visit and television. He revealed that, as age increased, the willingness to pay for these agricultural services and information delivery technologies decreased, meaning that older farmers were less willing to get agricultural information than younger ones. On the other hand, a study conducted by Katungi (2006), on capital and information exchange in rural Uganda revealed that older men are less likely to engage in simultaneous receiving and providing of information, perhaps due to the

low ability to communicate associated with old age. All these points assure that, as age increase the getting of agricultural information decreases.

Duncan (2004) revealed that one's marital status had significant impact on access to extension services. Odoh *et al.* (2009) found that marital status and access to extension services are statistically significant at 5% and 10% as having strong effect on advisory services obtained by small holder cassava farmers. Male farmers have been noted to have higher access to extension services than female farmers due to their ability to attend training and demonstrations. Educational level of farmers also influences access to agricultural extension. A study by Adewale and Ogunniyi (2000) found that formal education of farmers had no significant relationship with their access to extension services. There is a general agreement that education is associated with receiving and absorbing agricultural information and utilization. Because education is believed to increase farmers ability to obtain, process and analyze information and technology disseminated by different sources and helps him to make appropriate decision to utilize agricultural information and advisory services through reading and analyzing in a better way.

Factors Limiting Women Farmers' Access to Agricultural Extension Services

Women play a greater role in the farming operations by their extensive participation in livestock production, crop cultivation, harvesting, pest control and many more. But capacity building programmes are not readily available for women farmers. Additionally, there is lack of orientation to agricultural production practices by targeting gender related constraints to improve their technical knowledge and enhancing their communication skills. Participatory approaches which targeted both men and women farmers are missing in extension method while introducing new innovative farming technologies and training on different issues (Tiruneh *et al.*, 2001).

As a discipline, extension services rely on a number of techniques and methods to deliver advisory services like individual or group visits, organized meetings, use of model farmers, demonstration plots and farmer field day. Accordingly, the plurality of modes of service delivery offers the opportunity to reach various types of farmers with different needs in various setting. However, individual methods of farm visit and training through collective meeting are common. Cultural taboos of sexual issues are not allowing male development agents to discuss freely with women in all areas of the country for individual method case. For group method, home responsibility of cooking, child care and other social factors are hindering them from participating on discussion (Asrat and Getnet, 2014).

Generally, women farmers have more difficulty than men to get access to agricultural extension services. Almost all women, rather than some model women farmers, have less access to and higher effective costs for information, technology, inputs and credit among others. Hence, their productivity is thereby depressed (Asrat and Getnet, 2014). The underlying factors or barriers relate to agricultural extension services access are child-bearing, time, mobility, education and training and an array of socio-cultural characteristics. To design effective extension services which will help women farmers, it is essential to understand the nature of the constraints women face and the implication of these constraints for extension (Asrat and Getnet, 2014).

A large body of empirical evidence indicates that there are many disparities in men's and women's access to and control over agricultural resources. Women usually have less access to land, labour, capital, extension, inputs and resources for agricultural production. (FAO, 2011; Ahmed *et al.*, 2012; World Bank, 2009).

RESEARCH METHODOLOGY

The study area is Central Agricultural Zone of the Bauchi State Agricultural Development Programme (BSADP). The central Agricultural Zone covers four (4) Local Government Areas: Ningi, Darazo, Ganjuwa and Warji the Headquarters is Miya in Ganjuwa Local Government Area

Figure 1: Map of Bauchi State showing Bauchi Central Agricultural Zone



A Multi-Stage Sampling Techniques was used to select 240 women farmers for the study. Structure questionnaire was administered to collect information from the women farmers. Descriptive statistics and logit regression were used for the statistical analysis.

The research utilized primary data which were collected using structured questionnaire. The questionnaire which comprises both close and open ended questions has three sections: Section A: (background information section) to obtain information on socio-economic characteristics of respondents. Section B to obtain information on respondents' access to extension services and Section C to obtain information on constraints to respondents access to extension services as well as suggesting the possible solutions that will address the constraints.

DATA ANALYSIS

Descriptive statistics

This was used to analyse objectives one, two and four. Objective one, that is to describe the socio-economic characteristics of women farmers in Central Agricultural Zone. Objective two is to describe women farmers' access to extension services in Central Agricultural Zone and objective four is to identify the constraints to women farmers' access to extension services in Central Agricultural Zone.

Inferential statistics

Logit regression analysis was used to achieve objective three, that is, to determine the influence of socio-economic characteristics on women farmers' access to extension services. The logit regression model is specified as follows:

$$Y = \ln\left(\frac{P}{1-P}\right) \dots\dots\dots (1)$$

$$\ln\left(\frac{P}{1-P}\right) = b_0 + b_1x_1 + b_2x_2 \dots\dots b_6x_6 + e \dots\dots\dots (2)$$

Where:

Y = Dependent binary variables (Access to extension services)

visited=1, not visited=0

P = Probability of women farmers access to extension services

In = Natural logarithm function

b₀ = Constant

b₁– b₆ = Regression coefficients

x₁ – x₆ = Explanatory variables

X₁ = Age (in years)

X₂ = Marital status (Dummy, 1 if married, 0 if otherwise)

X₃ = Level of education (Dummy, 1 if educated, 0 if otherwise)

X₄ = Farming experience (in years)

X₅ = Farm size (in hectares)

X₆ = Group membership (belong/not belong)

e = Error term

(P/1-P) = Odd ratio (odds in favour of access)

Access to extension services reported by the respondents

Access to Extension Services	Frequency	Percentage
Accessible	214	89.20
Not accessible	26	10.80
Total	240	100.00

Frequency of extension visits

The frequency of extension visits is presented in the above Table. The results indicated that 43.50% of the respondents had extension visits on monthly basis which ranked first, while 24.40% of the respondents had extension visit on weekly basis which ranked second. The results further indicated that 23.40%, 6.70% and 1.90% of the respondents had extension visits fortnightly, yearly and quarterly, respectively. This implies that extension agents mostly visit respondents on monthly basis in the study area. This may be as a result of inadequate funds. Therefore, the extension agents had to wait to receive salary alert at the end of the month to enable them transport themselves to and from the field.

Distribution of respondents according to frequency of extension visits

Extension visits	Frequency	Percentage	Rank
Monthly	91	43.50	1 st
Weekly	51	24.40	2 nd
Fortnightly	49	23.40	3 rd
Yearly	14	6.70	4 th
Quarterly	4	1.90	5 th
Total	209	100	

Years of extension contact experienced

The years of extension contact is presented in the above Table. The result revealed that majority (74.00%) of the respondents had extension contact for between 1 to 10 years while 22.00% of them had extension contact for between 11 to 20 years. Only 4.00% of them had extension contact for 21 years and above. The average extension contact was 9.12 years. The years of extension contact is expected to enhance the respondents access and ability to efficiently utilize their resources through the adoption of new and improved practices.

Ndanitsa and Umar (2008) earlier reported that the number of years of extension contact would increase access to extension services as it guides the farmers from awareness to the adoption stages.

Distribution of respondents according to years of extension contact

Years of contact	Frequency	Percentage	Mean
1 – 10 years	150	74.00	9.12
11 – 20 years	45	22.00	
21 and above	8	4.00	
Total	203	100	

Sources of information on extension services

Respondents sources of information on extension services are presented in the above Table. The results revealed that 49.00% of the respondents received information on extension services through radio. Radio was therefore ranked first as the most important source of information for the respondents. Extension agents were the second widely used source of information as indicated by 29.20% of respondents, while 16.90% and 4.90% of them had access to extension information through mobile phone and television, respectively. This implies that radio is a major source through which information is disseminated to the respondents in the study area. This finding is in line with the report by Jamali (2009) that extension agents are among the major sources of information on environmental management practices among crop farmers.

Distribution of respondents according to sources of information on extension services

Source of information	Frequency	Percentage	Rank
Radio	111	49.00	1 st
Extension agent	66	29.20	2 nd
Mobile phone	38	16.90	3 rd
Television	11	4.90	4 th
Total	226	100	

Extension training methods attended

The extension training method attended by respondents is presented in the above Table. The results revealed that 46.40% of the respondents attended method demonstration which ranked first, followed by result demonstration with 24.90%. Field visit and discussion had 16.70% and 12.00%, respectively. This means that respondents in the study area prefer to attend method demonstration and result demonstration training. Attending method demonstration could be because it emphasized on how to do it, so that the farmers can practically apply it to their farming situation while result demonstration inspires confidence and allows participants to see and judge by themselves.

Distribution of respondents according to method of training attended

Method of training	Frequency	Percentage	Rank
Method demonstration	108	46.40	1 st
Result demonstration	58	24.90	2 nd
Field visit	39	16.70	3 rd

Discussion	28	12.00	4 th
Total	233	100	

Participation of respondents in extension activities

The participation of the respondents in extension activities is as presented in the above Table. The result indicated that 129.50% of the respondents took part in income generating activities such as soap and pomade making, shampoo and liquid detergent, snacks and confectionaries. The result further indicated that 90.80% of the respondents participated in off-farm activities such as attending workshops, seminars and training while 85.50% of the respondents participated in on-farm activities such as transplanting seedlings, working on demonstration plots and planting improved seeds of soya beans, maize, millet, cowpea and accha. This implies that the respondents mostly prefer to participate in income generating activities. This could be due to the fact that the respondents earn income as a result of the sales they made out of those items.

Distribution of respondents according to participation in extension activities

Extension activities	Frequency	Percentage
On-farm activities	206	85.80
Off-farm activities	218	90.80
Income generating activities	231	96.25

* Multiple response were recorded

Socio-economic Factors Influencing the Likelihood of Access to Extension Services

The above table showed that the likelihood estimation of access to extension services based on socio-economic characteristics of the respondents was significant. This was proved by the $LR\chi^2 = 78.54$ which was significant (at 1%). Six explanatory variables age, marital status, level of education, farm size, farming experience and group membership were included in the model. Age, farm size and group membership were positively significant (at 5%, 1% and 5%, respectively). Farming experience was found to be negative but significant (at 1%). The regression coefficient of age showed that age had positive effect on the likelihood of access to extension services. The implication is that young farmers are more likely to access different types of extension services. This finding confirms what Catherine *et al.* (2012) found that age had positive effect on the likelihood of access to extension services.

The coefficient of farming experience is negative with regards to accessing extension services and significant at 1%. This denotes that farming experience retards the farmer's access to extension services. This result contradicts a priori expectation as one would have expected farming experience to hasten the access to extension services as in the case of age. The reason may be that farmers with high farming experience took longer time to assess the potential of the services before making informed decisions based on past experiences with extension services.

Likelihood estimation of access to extension services based on respondents socio-economic characteristics

Variables	B-value	Z-value	Marginal effect
Age	0.224 (0.100)	2.22**	0.000048
Marital status	-1.068 (0.750)	-1.42	-0.0002292

Level of education	-0.657 (0.435)	-1.51	-0.000141
Farming experience	-0.330 (0.125)	-2.64***	-0.0000707
Farm size	5.854 (1.535)	3.81***	0.0012561
Group membership	2.554 (1.203)	2.12**	0.0009422
Constant		-1.65*	

Figures in parentheses are standard deviations.

***, **, *	=	Significant at 1%, 5% and 10%, respectively
LRChi ²	=	78.54
Prob. > Chi ²	=	0.0001
Log likelihood	=	-20.85

The above table also showed that farm size was positively related to extension services and significant at 1%. This implies that the probability of accessing extension services is higher for farmers with large farms. This result is consistent with the finding of Benjamin *et al.* (2015) that farmers with large farm size may be wealthier or better-off in the community and this can influence their access to extension services.

A positive relationship was observed between group membership and access to extension services. This supports the hypothesis that farmers' group can provide information to the farmers about the extension services and the procedure involved in accessing them, thus providing the farmer advantage to stretch out for the services. This finding is consistent with that of Omotesho *et al.* (2012) that members of cooperative societies had better access to extension services, improved varieties of crops, inputs, credit facilities and market for their produce.

Though not significant, the negative sign of the education variable indicates that the probability of accessing extension services is higher among the illiterate respondents. Farmers who are educated may have a comparative advantage over other farmers in accessing extension services. For instance, in terms of information search, education provides the farmer an opportunity to read and understand manuscripts as well as posters about extension teachings and practices. It also presents the farmer information about any extension programme. The a priori expectation therefore was that education will have more influence on farmers' access to extension services. On the contrary, the result means that access to extension services does not require much formal education compared with demand for other services. The result contradicts the studies of Foltz (2003) who argue that, farmers who have better education tend to have greater probability of accessing new ideas than their illiterate counterparts.

Constraints against Access to Extension Services by the Respondents

The above table showed the constraints against access to extension services by the respondents. The results indicated that majority (76.25%) of the respondents agreed that insufficient farm inputs was a major constraint which ranked first, followed by inadequate farm credit and shortage of suitable technologies with 63.75% and 53.33%, respectively. Unavailability of land which constitutes 20.42% was considered the least among the constraints reported by the respondents.

Insufficient farm inputs was a constraint affecting the respondents. The implication could be that the respondents were unable to purchase the inputs recommended by the extension agents. This is in agreement with the findings of Olawepo and Fatulu (2012) that agricultural extension agents are less likely to target farmers who were unable to purchase the recommended inputs. Inadequate farm credit was also considered a constraint by the

respondents. This could be due to inadequate financial assistance by the government, non-governmental organizations and micro finance institutions. This is in agreement with the findings of Oriole (2009) that unless credit facilities are provided to small scale farmers, majority of farmers would be seriously handicapped in adopting new and profitable farm technologies. However, unavailability of land was not considered as a constraint by the respondents. This could be as a result of the fact that land was readily available in the study area.

Constraints limiting access to extension services by the respondents

Variables	Frequency	Percentage	Rank
Insufficient farm inputs	183	76.25	1 st
Inadequate farm credit	153	63.75	2 nd
Shortage of suitable technologies	128	53.33	3 rd
Inadequate mobility	123	51.25	4 th
Inadequate time	90	37.15	5 th
Unavailability of land	49	20.42	6 th

* Multiple response were recorded

Conclusion

In conclusion, most women farmers had access to extension services. Visits by the extension agents and radio were the most widely used sources of information in the study area. Age, farming experience, farm size and group membership also influenced the respondents' access to extension services. The constraints include insufficient farm inputs, inadequate farm credit and shortage of suitable technologies amongst others.

If these aforementioned constraints are tackled, they will help improve women's access to extension services which invariably will lead to increased productivity.

Recommendations

Based on the findings of the research the following recommendations were made:

- i. Stakeholders e.g. State ADPs should assist women farmers to acquire farm inputs at a subsidized rate and at the right time in order to help increase productivity and ultimately production.
- ii. The existing women groups should mobilize funds among its members in order to help solve problem of inadequate farm credit.
- iii. Community Based Organizations (CBOs) should design and implement special interventions for the resource poor women farmers to enable them access suitable technologies.
- iv. Training may need to be divided into short modules by the extension agents to accommodate women's schedules and provide women with the ability to attend meetings and still manage their day-to-day task.
- v. The Women in Agriculture (WIA) should put more effort in attending to women farmers in their respective farms/homes. This will certainly increase their interest and help solve the problem of inadequate mobility.

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