

Effectiveness of extension service delivery among arable farmers in Irepodun Local Government Area, Kwara State

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ABSTRACT

The study evaluated the effectiveness of extension service delivery among arable crop farmers in Irepodun Local Government Area (LGA), Kwara State. One hundred and twenty farmers were randomly selected from six communities in the LGA. Data were analyzed using descriptive and inferential statistics like mean, frequency, standard deviation, correlation coefficient and chi-square. Findings show that majority (92.5%) of the respondents were male and married (91.7%) with mean age of 49.7±8.00 years. More than half (58.3%) of the farmers had less than 5 contacts with extension agents in a year. The major services delivered to farmers were: creating awareness (93.3%), training and visit to farmers (92.5%), holding scheduled meetings (91.7%), farmers training programme (90.0%), advisory services (82.5%), and marketing facilities (58.3%). Only two (social networks for farmers and organisation of audio-visual shows) out of the thirteen extension services rendered were perceived effective. Farming experience ($r = 0.186$; $p \leq 0.05$), number of years of schooling ($r = -0.247$; $p \leq 0.01$), number of contact with extension agents ($r = 0.356$; $p \leq 0.01$), and number of training received ($r = 0.33$; $p \leq 0.01$) had positive and significant relationship with the effectiveness of extension service delivery. For extension to be more effective there is a need to provide more extension agents so as to ensure effective dissemination of improved practices and discharge of extension duties.

Keywords: Agricultural extension service, Arable crop farmers, Effectiveness.

INTRODUCTION

Human race is totally dependent on agriculture and as the world population continues to grow, there must be continuous reassessment of agricultural practices to optimize their efficiency (Mugabe, 2003). According to Yahaya *et al.* (2000) the diffusion and adoption of innovations remains the back bone of the expected development in agriculture. It has been noted over the years that the development and production of relevant and appropriate technologies is one of the pre-requisites for sustainable agricultural production. Others include dissemination of these technologies as well as their eventual utilization. Nigerian government has addressed the issue of development of appropriate technologies through the establishment of research institutes and creation of universities of technologies and agriculture.

Agricultural extension delivery has its major goal of getting farmers to adopt improved agricultural technological recommendations with a view to increasing yield and productivity. Hence, the attainment of millennium development goal on food security would be influenced by how extension recommendations are packaged to reflect farmers felt need and how effectively they are delivered among their variables (Agbarevo, 2012). The focus of extension services have been poverty alleviation, food security, employment creation, provision of raw materials and the sustainable management of natural resources. The importance

of agricultural extension in agricultural development is widely acknowledged, particularly in developing countries such as Nigeria where public participation has been into all aspects of this economy including direct agricultural production (Adedoyin, 2004; Ozor and Madukwe, 2004).

Evaluation is often used to characterize and appraise subjects of interest in a wide range of human enterprises, including the arts, criminal justice, foundations, non-profit organizations, government, health care, and other human services (Datta, 2006). Agricultural extension programmes are therefore under pressure to change because of growing fiscal pressure and questions about the effectiveness and efficiency of their services (Rivera *et al.*, 2000). According to Ekumankma and Nwankwo (2002), the poor exposure of farmers to appropriate agricultural information is one of the major reasons for low yield recorded by many Nigerian farmers. This has been of great concern to agricultural communicators, administrators and policy makers in the country over the years. It is in the light of the foregoing that this study therefore seeks to evaluate the level of effectiveness of extension services delivered to farmers and with the following research objectives:

1. describe the socio-economic characteristics of arable farmers in the study area;
2. identify the services delivered by extension agents to arable crop farmers in the study area;

3. determine the level of effectiveness of the services as perceived by the farmers; and to
4. identify the constraints to extension access in the study area

METHODOLOGY

The study was carried out in Kwara State which is situated between parallels 8° and 10° north latitudes and 3° and 6° east longitudes, with Niger State in the north, Kogi State in the east, Oyo, Ekiti and Osun States in the south and an international boundary with the Republic of Benin in the west. Arable farmers in Irepodun Local Government Area of Kwara State constituted the study population. Twenty ADP arable farmers were randomly selected from six villages making 120 farmers. Data collection was done using structured interview schedule. The data was analysed using descriptive and inferential statistics like mean, frequency, standard deviation correlation coefficient and chi-square.

Measurement of variables

The effectiveness of extension service, which is the dependent variable of this study was measured by given farmers 13 item statements on the effectiveness of extension services delivered to farmers based on the objectives of the services on a 5 point scale of very effective, effective, fairly effective, rarely effective and not effective and scores of 5, 4, 3, 2 and 1 were assigned, respectively. The maximum score obtainable was 65 while minimum was 13, to ascertain the level of effectiveness of extension service. Based on total scores, farmers were grouped into 3 categories; high, low and medium. This was placed within mean and standard deviation, the low within mean – standard deviation, while medium within mean +/- standard deviation range. The independent variables are the socio-economic characteristics of the farmers.

RESULTS AND DISCUSSION

The mean age of the farmers was 49.7±8.00 years. This implies that they are still strong, vibrant, able

bodied, agile, young, men and women who have the strength to embrace farm work and thereby producing high quality farm products. Ajala (2013), cited Tsoho (2004), reported that young farmers have higher aspiration to accept new technologies than conservative older farmers that always seem to be more satisfied with their traditional methods. Study further shows that majority (92.5%) of the farmers were male, while 7.5% were females. This may also be attributed to the fact that arable crop farming is mostly a male dominated work in the study area due to the arduous nature of the tasks involved. However, male dominance in the agricultural sector is a common phenomenon in most communities in the study area. Majority (91.7%) of the arable crop farmers were married, which indicates that farming activities is always made easy due to family labour instead of hired labour, that is, family members are usually engaged in the farm work. Also majority (60%) of the respondents were Muslims.

Majority of the farmers (80.0%) had non-formal and primary education only. This may influence their response to adoption of innovations. Akinleye (2006) submitted that education is an important factor which influences farm productivity. It determines farmers' access to information and adoption of new farming ideas, skills and technology. Farmers with farming experience of 20 years and above were 52.5%. This study further shows that majority of arable crop farmers had long years of farming experience. Simon *et al.*, (2013), reported that experience influence farmers' decision to use, discontinue use or reject farm innovations. Such experience is desirable as the greater the experience, the better the farmers are able to cope with shocks and stresses. More than half (53.3%) were involved in mixed cropping, while 40.0% were involved in mixed farming. This further shows that half of the farmers were into mixed cropping. Mixed cropping reduces the risk of crop failure and ensures that farmers have stable income over time. It helps the farmer to spread his harvest over the season and so ensure a regular supply of food. The farmer makes optimal and maximal use of the land at any cropping season.

Table 1: Distribution of respondents by their socio-economic characteristics

Variable	Frequency	Percentage	Mean±Std. Dev
Age (years)			
30.00 - 39.00	14	11.7	
40.00 - 49.00	42	35.0	49.7±8.00
50.00 - 59.00	51	42.5	
60.00+	13	10.8	
Sex			
Male	111	92.5	

Variable	Frequency	Percentage	Mean±Std. Dev
Female	9	7.5	
Marital status			
Married	110	91.7	
Single	3	2.5	
Divorced	3	2.5	
Widowed	4	3.3	
Religion			
Christians	39	32.5	
Muslim	72	60.0	
Traditional	9	7.5	
Level of education			
Non formal	70	57.5	
Primary	27	22.5	
Secondary	17	14.2	
Adult literacy	1	0.8	
Post secondary	1	0.8	
Tertiary	4	3.3	
Years of experience in arable farming			
< 10.00	14	11.7	
10.00 - 19.00	43	35.8	20.1±10.1
20.00+	63	52.5	
Type of farming			
Mono-cropping	8	6.7	
Mixed- cropping	64	53.3	
Mixed- farming	48	40.0	

Source: Field survey, 2015.

Extension services delivered to farmers

Data in Table 2 show the percent delivery of major extension services to farmers as follows: creating awareness of the extension service (93.3%), training and visit to farmers (92.5%), holding scheduled meetings (91.7%), farmers training programme (90.0%), advisory services (82.5%), marketing facilities (58.3%). It is very clear from the foregoing that all the core extension technical duties that require funding by the extension agencies such as organisation of field days, organisation of method demonstrations, organisation of result demonstrations, organisation of audio-visual shows, cooperative facilities, credit

facilities procurement, social networks for farmers have been neglected. This is in line with Ajala *et al.*, (2014) Ferroni and Zhou, (2012) and Obiora, (2013) submission that the problems of extension delivery include: poor motivation of extension staff in terms of remuneration, inadequate provision of transport facilities to visit the farmers, living far away from the farmers thereby minimizing interaction between them and the farmers, poor funding since the withdrawal of the World Bank counterpart funding, inadequate capacity building, poor access to information on new technologies, weak or poor linkages between extension and knowledge generating institutions.

Table 2: Distribution of farmers based on the extension services delivered to them

Variable	Frequency	Percentage
Creating awareness of extension services	112	93.3
Training and visit to farmers	111	92.5
Holding scheduled meetings	110	91.7
Farmers training programme	108	90.0
Advisory services	99	82.5
Marketing facilities.	70	58.3
Organisation of field days	62	51.7
Organisation of method demonstrations	54	45.0
Cooperative facilities	53	44.2
Organisation of result demonstrations	49	40.8
Credit facilities procurement	46	38.8
Organisation of audio-visual shows	35	29.2
Social networks for farmers	16	29.2

Effectiveness of extension service

Data in Table 3 show that only social network for farmers (x=3.33) and organization of audio visual show (3.31) are the most effective services provided by the extension agency. This explains the fact that social networking of the farmers by the extension agency is very effective. That is, farmers are not only aware of the social network, but they make use of it effectively to get information and adopt innovations that will improve their standard

of living through increase in their farm yield. This agrees with Ben (2013), who opined that social networks have the potential to aid in spreading sustainable agricultural practices in sub-Saharan Africa, where poverty, low yields, and unsustainable practices often go hand-in-hand. It also fall in line with Esther, et al, (2010), report that the contribution of extension service such as social network in improving productivity is essential to understanding effective ways of productivity.

Table 3: Distribution of famers by level of effectiveness of extension services received

Variable	Mean	Rank
Social networks for farmers	3.33*	1 st
Organisation of audio-visual shows	3.03*	2 nd
Cooperative facilities	2.90	3 rd
Credit facilities procurement	2.84	4 th
Organisation of method demonstrations	2.80	5 th
Organisation of result demonstration	2.72	6 th
Marketing facilities	2.64	7 th
Organisation of field day	2.62	8 th
Holding scheduled meetings	1.91	9 th
Training and visit to farmers	1.90	10 th
Advisory services	1.88	11 th
Farmers training programme	1.45	12 th
Creating awareness of extension	1.31	13 th

**High

Constraints to effectiveness of extension service

As shown in Table 4, the constraints to effective extension services in the study area ranged from absence of extension service (4.38), illiteracy (3.68), lack of money (3.54), lack of access to information (3.44), inappropriate scheduling of meeting (3.41), inadequate extension service (3.29), unavailability of information (3.19), insufficient contact with extension agent (3.15) among others. Illiteracy on the part of the farmers

was also among the majority of constraints faced by extension service. This is as a result of farmers not having any formal education which seems to affect them and their crop yield. This also agrees with Umunna (2010) submission that education enables the individual farmers to know how to seek for and apply information on improved farm practices. This is because as the individual gained the ability to read, he is able to extend the scope of his experience through the print media.

Table 5: Distribution of constraints to effectiveness of extension service in the study area

Constraints	Mean	Status
Absence of extension services	4.38**	High
Illiteracy	3.68**	High
Lack of money	3.54**	High
Inappropriate scheduling of programmes	3.41**	High
Lack of access to information	3.44**	High
Inadequate extension services	3.29**	High
Insufficient contacts with extension agents	3.15**	High
Unavailability of information sources	3.19**	High
Insufficient SMS	3.09**	High

**High

Test of hypothesis

The test of correlation between some selected socio-economic characteristics of the farmers and the level of effectiveness of the extension services shows that farming experience ($r= 0.186$), years of schooling (-0.247), number of extension contact (0.356), number of trainings received (0.333) had

significant relationship with respondents' rating of effectiveness of the extension services. This implies that the arable farmers' farming experience, years of schooling, number of extension contact, number of trainings received is associated with their productivity and standard of living and by implication the effectiveness of the services delivered by extension to them.

Table 6: Results Chi-square analysis showing significant association between socio-economic characteristics and level of effectiveness of of extension service delivery

Characteristics	χ^2 value	Df	P-value	Decision
Sex	86.70*	1	0.05	S
Marital status	284.5**	3	0.01	S
Religion	23.65	2	0.72	NS
Education level	218.2**	4	0.01	S
Source of information	74.80*	5	0.05	S
Membership of organisation	112.13**	3	0.01	S
Source of capital	34.13*	2	0.05	S

Source: Field survey, 2015.

*Significant at 0.05 level
 **Significant at 0.01 level.

Table 7: Results of Correlation analysis showing the relationship between farmers socio-economic characteristics and level of effectiveness of extension service delivery

Variables	Correlation Coefficient (r)	Coefficient of Determination (R ²)	Decision
Age	0.059	0.003481	NS
Farming experience	0.186*	0.034596	S
Farm size	-0.058	0.003364	NS
Year of schooling	-0.247**	0.061009	S
No. of contact with Extension agents	0.356**	0.126736	S
No of trainings received	0.333**	0.110889	S
Expenditure total	-0.052	0.002704	NS
Annual income	0.141	0.019881	NS

Source: Field survey, 2015.

*Significant at 0.05 level
 **Significant at 0.01 level

CONCLUSION AND RECOMMENDATION

The study revealed that the level of effectiveness of extension service in the study area was very low to have a positive impact the productivity and hence the standard of living of the farmers. This was due to illiteracy, low extension contact, inadequacy of extension services among other constraints. Extension service should be revitalized through proper funding and provision of transport facilities, better remuneration and incentives. There should be provision of more extension agents so as to ensure effective dissemination of extension services. Also, extension agents should be motivated in order to improve the effectiveness of their services.

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