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# Assessing the Effectiveness of Extension Media in Disseminating Agricultural Innovations to Youth Farmers in Oyo State, Nigeria

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***Abstract***
*The study identified appropriate means of disseminating agricultural innovation to farmers, the efficiency of these practice will enhance the level of agricultural productivity among youth farmers in Orire Local Government Area of Oyo state, Nigeria. A Multistage sampling procedure was employed to select 83 respondents for the study. A well-structured questionnaire was used to collect data on socio-economic characteristics of the respondents, existing and sources of Information and Communication Technology facilities and the utilization level of ICT facilities by the extension agents. Descriptive and Inferential statistics (Pearson Product Moment Correlation) were used to analyze data. The mean age of respondents was 35years with an average of 12 years of farming experience and respondents had 9 years as mean years of formal education. The youth farmers need information mostly in areas of leadership skills development (97.6%) and marketing of agricultural products (91.6%). However, the youth farmers were usually deprived of adequate access to agricultural innovation due to poor access to timely information (85.9 %) and lack of involvement of youth in the development programme (83.9%) Moreover, extension media such as radio (WMS=4.30) and cell phone (WMS=3.77) were found to be effective in disseminating agricultural innovations to youth farmers in the study area. Results of Pearson Product Moment (PPM) showed that age (r=0.728***), years of farming experience (r =0.642***), household size (r =0.350***) and years of schooling (r =0.355***) were found to be significantly (p < 0.05) related with the effectiveness of the use of extension media in the dissemination of agricultural innovations to youth farmers. This study therefore recommends that adequate cooperation between youth farmers and extension agents is imperative especially through youth forums to allow adequate access to agricultural innovations which will invariably boost agricultural production as well as community development.*

***Keywords****: Effectiveness, Extension media, Youth farmers, Innovations.*

## Introduction

Over the years, agricultural extension has been at the fore-front in the delivery of adequate information to farmers for increased productivity. According to Agbamu (2007), agricultural extension service delivery all over the world has been concerned with communicating research findings and improved agricultural practices to farmers.

The efficiency with which these information and practices are conveyed to farmers to a large extent would determine the level of agricultural productivity. Extension organizations have been concerned with what should be the appropriate means and approaches in getting the right agricultural information to the end-users (farmers). In other words, ICT represents the collection of hardware and software that is used for producing, preparing, transferring and storing data via devices such as computers, radios, televisions, etc., and it includes an extensive scope of traditional and modern media (Norad, 2002). The world bank also acknowledged the power of mobile phones in stimulating economic growth with a capability of stimulating entrepreneurship and productivity within an economy (World bank, 2012).

Agricultural extension depends largely on information exchange between farmers and broad range of other actors who are the front line extension workers that are the direct link between farmers and other actors in the agricultural knowledge and information system Omotayo (2005). Decline in agricultural development is attributed to a number of constraints that include inappropriate national agricultural development policies, lack of adequate information provision, low adoption of agricultural technologies and ineffective institutional frameworks (Asiabaka, 2009). However, inadequate provision of relevant, reliable and comprehensive information support to stakeholders in agricultural production has been identified as a major constraint (Kiplangot, 2003).

Information and communication technology have become an increasingly powerful tool for improving the delivery of basic services and enhancing local development opportunities. Today, a new paradigm of agricultural development is fast emerging in both developing and developed countries. The overall development of rural areas is expanding in new directions; old ways of delivering important information services to citizens are being challenged; and traditional societies are being transformed into knowledge societies all over the world (Meora *et al*., 2004). In Nigeria, the government having recognized the importance of ICT in extension service delivery.

However, it is important to know that youth and Agriculture are two important factors for sustaining growth of any developing country yet these young farmers conduct their farming activities under a lot of constraints including inadequate market information for their agricultural produce and lack of information on better farming practices which could be an apparent reason why they migrate to the urban sector for better opportunities. Youth are known for their enthusiastic capability and capacity to bring not only significant changes in agricultural means and processes but also bringing in the right policies and proper grooming, this could be possible if youth participate in decision making processes and engage new technologies and innovations in agriculture.

Youth's access to knowledge and information is crucial for addressing the main challenges they face in agriculture. In order for rural youth to shape

agricultural policies affecting them directly, in terms of access to markets and finance as well as green jobs and land, they need to receive appropriate information and education (FAO, 2014) Pesticide Action Network Asia and the Pacific (PANAP, 2011) reported that In spite of the best agricultural practices available, majority of rural young farmers are unable to receive information in a timely manner. This is an indication that the gap in information needs to be addressed effectively. In addition to this, the cost involved in face-to-face information dissemination at the right time and difficulties of reaching the market have also created an opportunity for information and communication technologies (ICT) to fill up these gaps.

The study therefore assessed the effectiveness of extension media in disseminating agricultural innovations to youth farmers. It further described the socio-economic of the youth farmers in Oriire LGA of Oyo State, identified the existing and sources of ICT facilities for extension agents in the study area and assessed the access and utilization level of ICT facilities by the extension agents in the study area.

**Methodology**

The study was conducted in Orire Local Government Area of Oyo State. The local government area has a total land area of 2,040 km2 with population of about 42,242 people. It has an annual rainfall of 11000mm to 1250mm and average temperature of 25$^{o}$C and 35$^{o}$C. The Local government is agrarian and the predominant food crops grown are maize, cassava, yam, soybean, cowpea, tomatoes, pepper and sorghum. The population of this study included all the youth farmers in Orire LGA of Oyo State. The list was collected from Oyo state Agricultural Development Programme (OYSADEP) to serve as a frame work eighty three (83) respondents were selected using simple random sampling. Data was collected from the respondents using a structured questionnaire which was administered in form of interview schedule. Descriptive statistics such as frequency counts and percentages were used to ascertain the socio economic characteristics of the respondents and to identify the existing and sources of ICT facilities and the only hypothesis of the study was tested using Pearson Product Moment Correlation(PPMC)

**Results and Discussion**

**Selected socio economic characteristics of the respondents**

Table 1 shows that 49.4 percent of the respondents were between the ages of 31 – 40 years, 31.3 percent were between 21 – 30 years, while 18.1 percent were above 40 years and 1.2 percent were below or equal to 20 years. The mean age of the respondents was found to be 34years which is an indication that they are still in their youthful age and will be more likely to be proactive in the adoption of extension media. Most of the respondents were males, this may be because of the vigorous nature of agriculture activities. This study also found out that most of them are married (83.1 percent). This is an indication of the fact that marriage is held as a

very serious institution especially in the rural areas; as no adult would be deemed responsible without been married (Yekinni and Ajayi, 2011). Their marital status will also go a long way in helping them in their livelihood activities especially farming. The result also revealed that the mean household size was 4 persons indicating that that the respondents had small household size which may likely be due to the fact that they may be controlling child birth. Respondents had 9 years of formal education which implied that respondents in the study area were fairly educated and this may help them to likely adopt improved technologies through various information dissemination media. The table further reveals that the youth farmers have an ample experience in farming with an average of 12 years.

**Table 1: Distribution of respondents by selected socio economic characteristics**

| Variables | Frequency | Percentages | Mean |
|---|---|---|---|
| **Age(Years)** | | | |
| **≤ 20** | 1 | 1.2 | 34 years |
| **21 – 30** | 26 | 31.3 | |
| **31 – 40** | 41 | 49.4 | |
| **Above 40** | 15 | 18.1 | |
| **Total** | 83 | 100.0 | |
| **Sex** | | | |
| **Male** | 55 | 66.3 | |
| **Female** | 28 | 33.7 | |
| **Marital status** | | | |
| **Single** | 13 | 15.3 | |
| **Married** | 69 | 83.1 | |
| **Separated** | 1 | 1.3 | |
| **Total** | 83 | 100.0 | |
| **Household size** | | | |
| **1-2** | 55 | 66.3 | |
| **3-4** | 20 | 24.1 | 4 people |
| **5-6** | 3 | 3.6 | |
| **Above 7** | 5 | 6.0 | |
| **Years spent in school** | | | |
| **No formal education** | 13 | 15.7 | |
| **1-6 years** | 11 | 13.3 | 9 years |
| **7-12 years** | 42 | 50.5 | |
| **>12 years** | 17 | 20.5 | |
| **Years of farming experience** | | | |
| **≤ 10** | 37 | 44.6 | |
| **11 – 20** | 45 | 54.2 | 12 years |
| **Above 20** | 1 | 1.2 | |

Source: Field survey, 2016 N=83

**Problems facing the dissemination of agricultural innovations to the youths**

Table 2 highlighted problems faced by the youths in accessing adequate information on available agricultural innovations. The major constraints identified include poor

access to timely information on youth development (85.5%), lack of involvement of youth in the development programme (83.1%), lack of cooperation between youth and extension agents (81.9%), poor access to resources to implement extension recommendations (81.9%), lack of cooperation among different youth forums (77.1%) and conflict of interest between the innovation introduced by the extension agents and those intended by the youth (72.3%). This result implies that youth do not have access to timely information on agricultural innovations and youth development programme which may hamper their production rate in farming activities and the community. It was also vividly revealed that youths are usually neglected in the developmental programme especially at the rural communities which had significantly limited their level of participation especially in area of agricultural development and in the overall rural development.

**Table 2: Distribution of respondents According to problems facing the dissemination of agricultural innovations to the youths**

| Problems facing the dissemination of agricultural innovations to the youths | Frequency* | Percentage |
|---|---|---|
| Lack of cooperation between the youth and the extension agents | 68 | 81.9 |
| Poor access to timely information on youth development | 71 | 85.5 |
| Poor access to resources to implement extension recommendations | 68 | 81.9 |
| Lack of cooperation among different youth forums in the rural area | 64 | 77.1 |
| Lack of involvement of youth in the development programme | 69 | 83.1 |
| Conflict of interest between the innovation introduced by the extension agents and those intended by the youth | 60 | 72.3 |

*Multiple responses Source: Field survey, 2016

## Information need of youth farmers

Table 3 shows the distribution of respondents according to the agricultural information need for agricultural production in rural development programme. It was observed that most youth farmers need information in the areas of leadership skills (97.6%), marketing of agricultural products (91.6%), conflict resolution (90.4%), value addition to products (90.4%), storage of agricultural products (86.7%), group formation (85.5%) and formation of cooperative society (84.3%). Based on this finding, most youth farmers need information in the area of leadership skills which will invariably influence their level of participation in the agricultural production, community development as well as nation building, since they are the future of any nation. This is in line with Ziip (2002) who stated that although farmers usually have rich knowledge of local conditions and valuable practical knowledge or experience of how best to successfully exploit their environment, they require timely and innovative information generated from research and development to cope with exigencies of weather and pestilence and other agricultural activities.

**Table 3: Distribution of respondents by information needs areas**

| Information needs areas | Frequency * | Percentage |
|---|---|---|
| Leadership skills | 81 | 97.6 |
| Conflict resolution | 75 | 90.4 |
| Formation of cooperative society | 70 | 84.3 |
| Group formation | 71 | 85.5 |
| Storage of agricultural products | 72 | 86.7 |
| Marketing of agricultural products | 76 | 91.6 |
| Value addition to products | 75 | 90.4 |

*Multiple responses Source: Field survey, 2016

## Effectiveness of extension media in the dissemination of agricultural innovations to the youth farmers

Table 4 shows the distribution of respondents according to effectiveness of extension media in the dissemination of agricultural innovation to the youth farmers. Based on the result, radio was found to be most effective extension media for agricultural innovations to the youth farmers with weighted mean score (wms) of 4.30, followed by cell phone with wms of 3.77. Other extension media in their rank order include television (wms = 2.28), pamphlets (wms = 1.78), bulletin (wms = 1.69), magazine (wms = 1.42), internet (wms = 1.13), slide (wms = 1.11) and projected objects (wms = 1.10). Based on the finding, radio, cell phone and television were found to be most effective extension media in the dissemination of agricultural innovations to youth farmers which may be probably due to their flexibility of operation, low cost of purchase and accessibility to most of the resource poor farmers. For instance, radio is usually affordable and may not need electrical power supply for its operations. Radio has been proved as the important tool for the enhancement of agriculture in the rural area. In the developing countries, radio is the powerful and effective medium to project the information and knowledge related to agriculture. It is also the reliable medium that can cover wider area and can reach to the large number of people. (Nakabugu, 2001, FAO, 2001, Sharma, 2008)

**Table 4: Distribution of respondents by effectiveness of various extension media in the dissemination of agricultural innovations to the youth farmers**

| ICT Facilities | Outstanding | Exceed expectation | Fairly good | Need improvement | WMS | Rank |
|---|---|---|---|---|---|---|
| **Radio** | 76(91.6) | 3(3.6) | 2(2.4) | 2(2.4) | 4.30 | 1st |
| **Television** | 7(8.4) | 10(12.0) | 65(78.3) | 1(1.2) | 2.28 | 3rd |
| **Cell phone** | 75(90.4) | 0(0.0) | 3(3.6) | 5(6.0) | 3.77 | 2nd |
| **Internet** | 2(2.4) | 0(0.0) | 5(6.0) | 76(91.6) | 1.13 | 7th |
| **Magazine** | 0(0.0) | 0(0.0) | 35(42.2) | 48(57.8) | 1.42 | 6th |
| **Bulletin** | 0(0.0) | 0(0.0) | 57(68.7) | 26(31. 3) | 1.69 | 5th |
| **Pamphlets** | 1(1.2) | 0(0.0) | 63(75.9) | 19(22.9) | 1.78 | 4th |
| **Slide** | 0(0.0) | 0(0.0) | 9(10.8) | 74(89.2) | 1.11 | 8th |
| **Projected objects** | 0(0.0) | 0(0.0) | 13(15.7) | 70(84.3) | 1.10 | 9th |

*WMS = Weighted Mean Score Source: Field survey, 2016*

**Relationship between socio-economic characteristics and effectiveness of the use of extension media in disseminating agricultural innovations to youth farmers**

The result of Pearson Product Moment (PPM) shows that age (r=0.728***), Farming experience (r =0.642***), household size (r =0.350***) and years of schooling (r =0.355***) were found to be significantly ($p < 0.05$) related with the effectiveness of the use of extension media in the dissemination of agricultural innovations to youth farmers. This result implies that a unit increase in one of the variable will lead to an increase in the use of the extension media to the youth farmers.

This findings corroborate with Ango *et al*.(2013) who confirmed that there is significant relationship between age, farming experience and years of schooling of the farmers.

**Table 5: Summary of Pearson' Product Moment Correlation showing relationship between socio-economic characteristics and effectiveness of the use of extension media in disseminating agricultural innovations to youth farmers**

| Socio-economic characteristics | r-value | P-value | Remarks |
|---|---|---|---|
| Age | 0.728*** | 0.000 | S |
| Years of farming experience | 0.642*** | 0.000 | S |
| Household size | 0.350*** | 0.001 | S |
| Years spent schooling | 0.355*** | 0.001 | S |

S= Significant *** Significant at 1% level Source: Field survey, 2016

**Conclusion**

Based on the finding, youth farmers frequently need information in the areas of leadership skills development, marketing of agricultural products, conflict resolution as well as value addition to products. Radio, cell phone and television were found to be most effective extension media for dissemination of agricultural innovations to the youth farmers in the study area.

**Recommendations**

Based on the result of finding, the following recommendations were developed:

i. There is need to foster adequate cooperation between youth farmers and extension agents especially through youth forums to allow for adequate access to agricultural innovations which will invariably boost agricultural production as well as community development.

ii. Effort should also be made by extension agencies to identified programme which are in harmony with youth farmers' interest to allow for sustainability of programme especially through youth farmers full participation.

iii. Youth farmers should be given adequate access to resources especially through all stakeholders in agricultural development in order to implement extension recommendations in order to improve their level of contribution to agricultural development.

**References**

Agbamu, J.U (2007). *Essentials of Agricultural Communication in Nigeria*. Malthouse Press Limited Lagos. page. 20-24, 91-93.

Alexander, G.F (2004). Information and Communication Opportunities for Technology Transfer and Linkages; Paper presented during the Expert Consultation on Agricultural Extension, Research- Extension-Farmer Interface and Technology Transfer, Food and Agriculture Organisation Regional office for Asia and Pacific, Bangkok, Thialand.

Asiabaka, C (2009). Promoting Sustainable Extension Approaches: Farmer Field School (FFS) and Its Role in Sustainable Agricultural Development in African." http://www.codesria.org/Links/conferences/ifs/Asiabaka.pdf.

FAO. (2005). FAO Final report. Rome: France.

Kiplangot, J (2003). Does Agricultural extension have a new beginning because of ICTs? Reflections on experience in sub-saharan Africa keynote paper presented at ICT observatory 2003; ICTs transforming agricultural extension wageningen, 23–25 September 2003.

Mamman, A.B (2000). *Nigeria: A People United, A future Assured* (Sokoto State). Gabumo Publishing Co. Ltd., Lagos, Nigeria. P. 298.

Meora S N, Jhamtani A, Rao DUM (2004). 'Information and communication technology in Agricultural development: a comparative analysis of three projects from India'. Agric. Res. Extension. Network. 135:13.

Nakabugu, S.B. (2001). The Role of Rural Radio in Agricultural and Rural Development Translating Agricultural Research Information into messages for farm Audiences. Programe of the workshop in Uganda, 19th February 2001

Norad A (2002). Information and Communications Technology (ICTs) in Development Cooperation Network Agency for Development Cooperation.

Omotayo, O.M (2005). ICT and Agricultural Extension: Issues in transferring agricultural technology in developing countries proceedings of 3rd annual conference of AESON Ilorin. pp. 132-135.

Pigato, M (2004). Information and Communications Technology Poverty and Development in Sub-Saharan Africa and South Asia, Africa Region Working Paper Series. P. 20.

Sharma. N.K. (2008). Impact Study of Farm radio Program produced by Agriculture information and Communication Centre: A case Study from the farmers of Phalebas Kannigian V.D.C. of Parvat District, Unpublished Master's

Thesis, T.U.

World bank (2012): Information and Communication for development: Maximizing Mobile Conference Edition. Website http//www.worldbank.org/iot/2012

Yekinni,O.T and O.E.Ajayi (2011): Palm oil Enterprises Contribution to Household Welfare in Irewole Local Government Area of Osun state. Nigeria. *Journal of Rural sociology*: 12(1):27-36

Zijp W. (2002). Changing the Way World Bank thinks about and supports Agricultural Extension, Washington D.C.: World Bank.