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Extension Activities for Arable Crops Production in Akure South Local Government Area, Ondo State, Nigeria

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Abstract
The study examined agricultural extension activities for arable crops production in Akure South Local Government Area (LGA), Ondo State, Nigeria. Multistage sampling procedure was used to select respondents. Data were collected using interview schedule, and analyzed using descriptive statistics and Chi-square. Most respondents (65.6%) were male, 77.1% had formal education with a mean age of 47 years and an average household size of five (4). Furthermore, 80.2% had less than five hectares of land for arable crop farming while 40% of the respondents farmed for family consumption only. Major source of extension services was government agencies. The most accessed services were; choosing of planting dates and introduction to improved seedlings with a mean score of 3.18 and 3.13 respectively. A significant relationship existed between farmers' perception about extension service and most socio economic characteristics such as; age ($\chi 2$ =57.92, P≤0.05) and farm size ($\chi 2$ = 65.283, P≤0.05). The study concluded that extension services in the study area were highly accessed and that farmers have high perception about extension services. It recommends more private agencies participation in extension services.

Keywords: Extension service, arable crop farmers and perception.

Introduction
The importance of extension in promoting agricultural development cannot be overemphasized. Agricultural extension is a general term meaning application of scientific research and new knowledge to agricultural practices though farmer education. According to Anderson (2008), the term agricultural extension service which equally means extension advisory services refers to the entire set of organizations that support and facilitate people engaged in agricultural production to solve problems and to obtain information, skill and technologies to improve their livelihood. Arokoyo (2014), described Agricultural extension services as the provision of educational services to farmers in the wide range of agricultural enterprise. It also encompasses all activities carried out by extension agencies to create positive change in the farmers' living standards through increased productivity and enhanced income. Extension

services include: facilitating the free flow of information about new technologies from researchers to grassroots farmers, teaching farmers how and when to cultivate their farms; how to use improved seeds; when and how to apply fertilizer; connecting farmers with banks where they could obtain loans; and ultimately connect them with markets where they can sell their yields at higher profits (Miko, 2014). The overall function of the agricultural extension is to teach the farmers or rural people to raise or improve their standard of living within minimum assistance by their own efforts. Agricultural advisory services are under an obligation to demonstrate that they have made an economic and social impact on the well-being of the farmers they serve, mainly through the quantitative and qualitative enhancement in crop productivity and in farmers' net income. This impact should be environmentally and economically sustainable (Blum, Lowengart-Aycicegi, and Magen, 2010).

With the lofty roles of extension services and their great importance to the economy, Nigerian extension services is still bewildered by a lot of challenges ranging from underfunding, ageing and dwindling staff arising from low employment rate and retirement of old staff. This has resulted in extension services being somewhat inactive (Mohammed, 2014). Even after communicating the ideas, some of the farmers cannot subsequently translate the ideas into practice and most farmers are financially poor to procure the needed inputs. In many developing countries, rural populations are heavily dependent on agriculture as well as different social services for their livelihoods. Yet access to adequate knowledge, improved technologies, financial services and other relevant social services remains a critical issue (Mbo'o-Tchouawou and Colverson, 2014). This has resulted to low agricultural production and thus make farmers to live below an acceptable standard. Jibowu (2000), however asserted that if these and similar problems were solved, extension could become an instrument for effective agricultural development.

As Nigeria aspires to become one of the 20 largest economies in the world by 2020; efforts ought to be made to boost farming via the adoption of agricultural extension services (Arokoyo, 2014). For extension to be successful in delivering on its mandate, it is imperative to assess the level at which it is operating. Specifically, the study ascertained the socio-economic characteristics of respondents in the study area, identified extension services accessed by respondents, determined the frequency of contact with extension agents and determined the perception of farmers towards extension services. It was hypothesized that there was no significant relationship between the socio-economic characteristics of respondents and their perception about extension services.

Methodology

The study was carried out in Akure South Local Government Area (LGA) of Ondo State, Nigeria. It is situated on latitude 7^0 36' North and longitude 5^0 13' East and located within the deciduous forest zone with average rainfall of 1700mm and appreciable harmattan annually. The temperature ranges

between 27 – 32 ^{0}C (Ondo Sate Government, 2014). Some of the arable crops grown in the LGA are: yam, cocoyam, cassava, maize, plantain/banana, and varieties of vegetables. Multistage sampling procedure was used to select respondents. Five villages which are; Oda, Aule, Ita Oniyan, Abusoro, and Aponmu were purposively selected based on their involvement in the cultivation of arable crops in the LGA, while 30, 24, 20, 20, 16 farmers were randomly selected from each of the villages respectively to make a hundred and ten respondents for the study. A structured interview schedule was used to obtain data from the selected respondents. Ninety-six copies of the questionnaire were found usable for the purpose of this study. Farmers' perception about extension services was ascertained using a 5-point Likert-type rating scale on a list of fourteen perception statements. Extent of respondents' access extension services was determined on a four-point Likert-type scale of High, Moderate, Low and Not at all and scored as 4, 3, 2 and 1 respectively. Using a mean statistic, the mean is 2.5. Any extension service that has a mean equal to or above 2.5 is rated as high while any one that has a mean below 2.5 is rated as low. Both descriptive and inferential statistics were used to analyse the data. The descriptive statistics used included frequency counts, mean statistics and percentages while the inferential statistics employed was Chi-Square.

Results and Discussions

Socio-Economic Characteristics

Table 1, reveales that 58.3 percent of the respondents were between the age group of 36 to 55 years with a mean age of 47years. This implies that, more than half of the respondents were at their active working age. Also, 65.6 percent of the respondents were male and 77.1 percent had formal education. The average farm size of respondents was 4.41 hectares with the majority (80.2%) cultivating less than five hectares. This is in tandem with Ayanwuyi, Adeola, and Oyetoro (2013), that the majority (77.7%) of the respondents were between 31 to 50 years, with about 74.1percent male and the majority (61.6%) had a farm size between 1-5 hectares. Only 58.3 percent were able to produce for family consumption and still able to sell while 41.7 percent produced for family consumption alone. This could explain while the majority (94.8 percent) still bought some of the crops produced from the market after exhausting the ones produced from their farms. This implies the practice of subsistence farming in the study area.

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Table 1: Respondents' distribution according to socio-economic characteristics

Age (Years)	Percent	Mean
25-35	24.0	
36-45	28.1	
46-55	30.2	47
56-65	17.7	
Sex		
Male	65.6	
Female	34.4	
Farm Size		
1-5	80.2	4.41
6-10	13.5	
11-15	4.2	
16-20	2.1	
Marital status		
Single	14.6	
Married	59.4	
Widow	17.7	
Divorced	8.3	
Religion		
Christianity	50.0	
Muslim	22.9	
Traditional	27.1	
Household Size		
1-3	40.6	
4-6	46.9	4
7-9	10.4	
10-12	2.1	
Educational Status		
Formal Education	77.1	
No Formal Education	22.9	
Membership of Cooperative		
Yes	84.4	
No	15.6	
Secondary Occupation		
Business/Artisan	51.0	
Civil Service	16.7	
None	32.3	
Farming consumption type		
Farming for family consumption only	41.7	
Farming for family consumption and sale	58.3	
Does not buy any of the cultivated product from market		
Yes	94.8	
No	5.2	
Mode of Farm Land Acquisition		
Inherited	30.2	
Bought	42.7	
Hired	27.1	

Source: Field Survey, 2015.

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Crops Cultivated

Figure 1 shows that most of the farmers were actively engaged in cultivation of most arable crops. Maize, cassava and yam were the most cultivated with 95.8 and 88.5 and 74.0 percent respectively. All the respondents cultivated more than one crop. This is in line with Ayanwuyi *et al.,* (2013) that most farmers crop farmers in Nigeria, cultivated yam, cassava, maize, vegetable, cocoyam and cowpea.

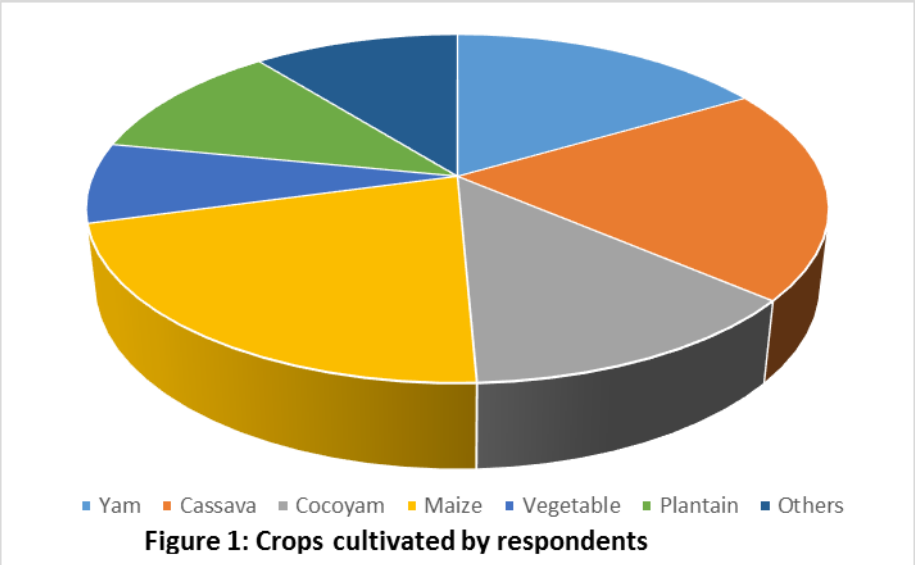

Figure 1: Crops cultivated by respondents

Source: Field Survey, 2015. Multiple responses *

Assessment of Extension Services

Table 2, shows that the majority (90.6%) of the respondents agreed that extension services had improved their farming skills, and 87.5 percent agreed that contact with extension services had increased their production, while 50.0 percent rated their proceeds as high. This implies that, extension services are relevant in crop production in the study area. This corroborates the findings of Imoloame and Olanrewaju (2014), that most farmers are of the opinion that extension service provided has improved their skills and productivity and that extension service received is of good quality. The main source of extension services to the respondents was government agency (80.6%) while only one percent benefitted from private and nine percent benefitted from others such as faith based organizations, cooperative and non-governmental organizations. This is contrary to the findings of Imoloame and Olanrewaju (2014), that non-governmental organizations (NGO) provided most of the extension service in the study area. Ogunbameru (2005), admitted that it is not possible for government alone to support extension programme and that private sector needs to play a more active role in both funding and the physical transfer of the available improved technologies.

Table 2: Distribution of respondents' assessment of extension services

Assessment of extension services	Percentage
Has extension services improved your farming skills?	
Yes	90.6
No	9.4
Has extension services increased your productivity?	
Yes	87.5
No	12.5
Sources of extension services?	
Government Agencies	89.6
Private	1.0
Others (Cooperatives, faith based, NGOs)	9.4
Do you pay for extension services?	
Yes	4.2
No	95.8
What is the rating of your proceeds after contact with extension services?	
High	50.0
Medium	36.5
Low	13.5

Source: Field Survey, 2015

Frequency and Means of Contact with Extension Agents

Most (72.9 percent) of the respondents had access to extension services once in a year, while 3.1 percent met with extension agents yearly (Table 3). Furthermore, 45.8 percent had contacts with extension agents on individual basis while only 2.1 percent had contact through letters or mail. This implies a low access and contact to extension services. Mbo'o-Tchouawou and Colverson, (2014), affirms that increasing use of ICTs can potentially speed up the effective dissemination of information. Adhikarya (1994), also admitted that Extension workers' workload could be reduced by mobilizing appropriate rural and community-based resources, including the increasingly accessible and low-cost mass communication channels (e.g., local radio stations, rural press, folk/traditional media, posters, flip charts, silk-screened printed materials, audio-cassettes, slide-tape presentations, leaflets, comics) to disseminate standardized and packaged extension messages, and by using local volunteers (e.g., school teachers, children, local and religious leaders) to serve as intermediaries in reaching farmers.

Table 3: Respondents' distribution of frequency and means of contact with extension agents

How often did extension agent visit you	Percentage
Fortnightly	24.0
Monthly	72.9
Yearly	3.1
Means of contact	
Group meeting	30.2
Physical contact	45.8
Letters or mail	2.1
Contact through village head	21.9

Source: Field Survey, 2015

Extent of Access to Extension Services

Table 4 shows the extent of access of respondents to extension services. Almost all the identified extension services such as; introduction to improved varieties of seed, introduction to appropriate use of agro chemicals soil conservation method, have a mean above 2.5 and thus, were highly assessed. The extension services rated as low were; training on good family living, facilitating access to credit facilities and linkage to research institute. Thus, implying that, extension services were highly accessed. It also implies that, there is low facilitation to credit facilities and training on good family living in the study area.

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Table 4: Extent of respondents' access to extension services

Extension Services Benefitted	Mean	Standard deviation	Ranking
Choosing of different planting dates	3.18	.995	1st
Introduction to improved verities of seed	3.13	.909	2nd
Introduction to shortening length of planting growth	3.10	.989	3rd
Introduction to appropriate use of agro chemicals	2.99	.852	4th
Introduction to storage facilities/processing facilities	2.93	.849	5th
Introduction to appropriate spacing for planting	2.86	1.130	6th
Soil conservation method	2.77	.761	7th
Introduction to harvesting technique	2.70	.872	8th
Introduction to the use of fertilizer	2.66	.881	9th
Linkage to research institute	2.39	.933	10th
Training on good family living	2.14	.936	11th
Facilitated access to credit facilities	1.67	.660	12th

Source: Field survey, 2015.

Farmers' Perception about Extension Services in the Study Area.

Result in Table 5 indicates the respondents' perception about extension services. Respondents either strongly agreed or agreed with most of the statements provided. The first rated ones are; that extension agents advise on new technologies ($\bar{x}$ = 4.28), extension agents demonstrates and motivates to try new ideas ($\bar{x}$ = 4.14) and that having extension agents is important in the community ($\bar{x}$ = 3.79). This reveals that the farmers have a high perception about the relevance and usefulness of the extension services in meeting their needs and enhancing their productivity. However, the only statement with a low perception was innovations introduced were always better and very easy to practice ($\bar{x}$ = 2.16). This needs to be given special attention because the ease of use is a paramount factor in the adoption of technologies.

Table 5: Respondents' perception of the extension services.

Perception statement	Mean	SD
Extension agents advice on new technology	4.28	1.21
Demonstrate and motivate you to try new idea	4.14	1.18
Having an extension agents is important in the community	3.79	1.38
Extension agents only give comments on what he/she observes on the farm and no motivation to try new idea	2.09	1.11
Method/technology introduced by the extension agents are on the desirable to the tradition of your community	3.79	1.12
Availability of extension agents has contributed to the performance of your farm on addressing production constraints	3.84	1.06
The program introduced as improved our accessibility to source of inputs	3.12	1.02
The innovation introduced was always better than previous techniques and very easy to practice	2.16	1.15
Having an extension agents has not improved the output of your farming operation	3.65	1.17
The program introduce is not easily accessible	3.20	1.32
The innovation introduced is good but very difficult to practice	4.67	0.70
Advice giving by extension agents are not relevant with my present farming.	4.84	0.51
Extension agents do communicate in the language we do not understand hence extension agents services are not needed	4.98	0.14
Innovation introduced contradicts the culture of the community	4.93	0.26

Source: Field survey, 2015

Constraints Faced by Arable Crop Farmers in Extension Services.

Table 6 shows respondents' distribution according to problems encountered with extension services. However, the most prominent constraint was inadequate fund to acquire innovations introduced. Farmers not being carried along before introducing any innovation was the least identified constraints. This implies sustainability for innovations being introduced by the extension agents.

Table 6: Distribution of respondents according to constraints with extension services

Constraints with extension services	Mean	Ranking
Inadequate funds to acquire innovation	2.35	1st
Extension agents not consistent and trustworthy	1.88	2nd
Complex nature of innovation	1.83	3rd
Not carried along before introducing technology	1.80	4th

Source: Field survey, 2015

Relationship between Respondents' Socio-Economic Characteristics and Perception of Extension Services

Table 7, shows that there was significant association between the following respondents' socio-economic characteristics; age, marital status, education status, religion, farm size, and perception of extension services. This implied that the above stated socio-economic characteristics have meaningful effect on the respondents' perception of extension services. This is in line with the findings of Ayodele, Alfred and Akinnmoyegun (2015), that socio-economic characteristics of farmers affected their perception of cassava production. Adekoya and Ajayi (2000) affirms that those with higher education would have a higher perception than those with low education. Also, Ayanwuyi *et al.,* (2013) confirms that farm size /land holdings increased after contact with extension services.

Table 7: Relationship between farmers' socio-economic characteristics and their perception about extension services

Relationship	X^2 Cal	Df
Age	57.92*	36
Sex	20.30	12
Marital status	60.47*	36
Education status	136.34*	96
Household size	45.28	36
Religion	44.00*	24
Farm Size	65.28*	36
Source of Extension Service	96.00	24

* P ≤ 0.05 Source: Field survey, 2015

Conclusion and Recommendation

Arable crop farmers have a high perception about extension services on their production, which is expected to make them receptive to innovations. Level of education, farm size are great factors that influences the perception of extension services. There should be more private organization participation in extension services in order to increase the number extension services providers and improve farmers' accessibility to extension services.

More extension agents should be employed to increase the use of demonstration and farm / home visit

Extension agents should embrace more use of mass media in reaching their target beneficiaries so as to increase frequency of contacts with farmers considering the low farmer to extension agents' ratio.

- Extension agents should see training of farmers on good family living as part of their mandates and thus improve more on that service to farmers.

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