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Farmers Perception for Effective Extension Teaching Methods in Katcha and Bida LGAs of Niger State, Nigeria

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Abstract

The study assessed farmers' perception for effective extension teaching methods in Niger State. The specific objectives were to describe the socioeconomic characteristics of farmers in the study area, identify the extension teaching methods used by extension agents in and examine the farmers' perception of effectiveness of the extension teaching methods. Multi-stage sampling technique was used for this study. A total of 114 respondents were randomly selected from Badeggi, and Katcha in Katcha LGA, Dangana and Bida in Bida LGA. Data was collected with the aid of structured questionnaire. Descriptive statistics such as frequency and percentages and Mean scores was used to analyze objectives. The majority of the farmers (39.5%) were between ages of 20-29. The mean age was 31 years. The findings also showed that the majority (60.5%) of the respondents were male. The majority (50%) of the farmers were married, most (42.1%) had farming experience of 1-10 with a mean of 12 years. Results also showed that the majority (50%) of household size were between 1-5 in the study area. The mean was 9. Group discussion (\bar{x} =4.33) was perceived by the respondents to be highly effective method in transmission of information to the farmers and ranked 1st while Use of radio (\bar{x} =3.83) was agreed by the respondent to also be effective method and ranked 2nd. The results showed that the extension teaching methods that were preferred by the farmers were group discussion, demonstration and radio ranked 1st, 2nd and 3rd with mean scores 4.33, 3.67 and 3.50 respectively. It was concluded that the extension methods utilized by the extension agents proved to be effective. It is recommended that more extension agents should be employed to reduce the farmer to extension agent ratio, it is also recommended that government should budget more money to extension institutions that provide services to small farmers and rural communities in Nigeria, extension personnel should also make their contacts regular with farmers for rapid adoption and diffusion of improved agricultural technologies and extension workers activities should be supervised periodically on regular basis by a monitoring and evaluation supervisors.

Keywords: Assessment, Farmer's perception, Effectiveness, Teaching methods

Introduction

Agricultural extension still remains one of the most crucial and critical means to reach farming households in the rural areas globally. The goal of agricultural extension is to

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disseminate agricultural technologies for improving productivity, farmers' welfare and household nutritional status (Fabiya, 2015). Ineffective agricultural extension services have been identified as major constraint to the performance of the agricultural sector, while one of the serious problems in Nigeria's agricultural extension services was the poor rate at which available research results were transferred to farmers (Aysha and Mohammad, 2012).

Although Training and Visit (T and V) as the main approach for extension delivery was adopted with distinct home grown modifications, the withdrawal of World Bank funds in the last two decades has proved that the system is not sustainable. While the system is supposed to incorporate feedback from farmers, they are often passive receivers of agricultural information. Like in many other countries where the T and V are being implemented, messages are typically based on perceptions of farmers' needs or on the requirements or desires of public sector agencies like the Agricultural Development Program (ADP) in the case of Nigeria. In Nigeria, where institutions (economic and political) are weak and opportunistic, counter-productive behaviors (corruption and cheating) have led to marked increases in transaction costs thus, weakening service delivery. For instance, because of the poor funding, funding instability and the activities of corrupt officials, extension agents are not paid their salaries for months; materials for field work and transportation facilities which were formerly provided are no longer available. Even where they are provided, the materials do not get to the officials. All these have increased the cost of monitoring and dissemination of technology to farmers as government ensures additional expenses in order to reach farmers. Since technology improves by the day, numerous approaches have evolved and been applied to ensure valuable broadcasting of extension service to improve the standard of living of Nigeria rural farmers.

Farmers have also been blamed for poor adoption on the ground that they are conservative. The level of adoption should not always be used in measuring success or failure of extension delivery because the effectiveness of the extension delivery mechanism is to a large extent responsible for success or failure of extension programme. An alternative means of evaluating extension programmes is measurement of the learning situations provided, which is extension delivery mechanism or process as means of measuring extension effectiveness. Adoption focuses on behavioural changes in the farmer, while learning situations focus on extension personnel and their activities. The effectiveness of extension personnel in conducting his activities can be used to assess success of extension programme. This is because if appropriate teaching/learning situation is provided, it follows that learning or relatively permanent and positive change in behavior of the farmer would take place. Such teaching/learning situations are effectiveness indicators.

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Extension effectiveness indicators are used to assess the effectiveness of extension personnel. Hence, extension effectiveness may be determined by the level of awareness of extension services created among the farmers, number of visits paid by the village extension worker, percentage of scheduled meetings held between farmers and extension workers, number of field meetings held, regularity of meetings held by village extension worker, number of field days organized by village extension worker , monthly or quarterly, etc., number of demonstrations organized by the village extension worker within specified time frame (monthly, quarterly, annually), number of supervisory visits, number and regularity of research-extension linkage workshops and farmer training sessions/farmers trained.

Poor participation of farmers in research-extension-farmer linkage activities has been attributed to top-down approach in contrast to participatory approach to mainstream the resource-poor farmers into research-extension activities (Morris & Igbokwe, 2001). Extension efforts aimed at improving agriculture require an understanding of existing farming systems along with how resources and technology (local and foreign) can help overcome farmers' production problems. Moreover, opportunities exist for integration of local and foreign technology in a compatible and economically sound manner, and should be vigorously pursued since horizontal transfer of technology from developed to less developed countries of the world as well as top-down transfer of technology has been very successful.

Often times, people measure success or failure of extension delivery based on the level of adoption without consideration of the effectiveness of extension teaching methods used in extension service. Extension service delivery in words of Oguremi and Olatunji (2013) is the process by which extension providers bring extension services inform of technical advice, advice on credits and other farm inputs, marketing information and all other innovation from the research institutes to the farmer. It is the responsibility of extension providers to provide learning situations, make farmers aware of research findings and persuade them to change their behaviours in favour of the services. The change in behaviours of farmers towards adopting extension services is an indicator of the effectiveness of the programme. An effective extension communication system is therefore a necessity for extension service to achieve its broad set goal of farmers acquiring knowledge, skill and attitude and in the overall, better their economic strength and hence their level of living.

Specific objectives were to:

- i. describe the socio economic characteristics of farmers in the study area;
- ii. identify the extension teaching methods used by extension agents;
- iii. examine the farmers' perception of the effectiveness of the extension teaching methods.

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Methodology

The study was conducted in Katcha and Bida LGAs of Niger State. Niger state is located in the North central zone in the Middle Belt region of Nigeria (Alamu, 2013) with a population of 3.9 million people. It is one of the largest states in the country spanning over 86,000 km² in land area with 80% of the land mass conducive for agriculture. Multi-stage sampling technique was used for this study. The first stage involved purposive selection of 2 LGAs Bida and Katcha based on the intensity of their involvement in agricultural activities in the areas. In the second stage, two (2) villages were randomly selected from each LGAs. They include Badeggi, and Katcha in Katcha LGA, Dangana and Bida in Bida LGA. Finally, simple random selection of farmers from each villages giving a total of 120 respondents but only 114 copies of questionnaire were recovered. Data were collected with the aid of structured questionnaire. Descriptive statistics such as frequency and percentages were used to achieve objective (i) while Mean Scores was used in objective (ii) and (iii).

Results and Discussion

Socio-Economic Characteristics of respondents

Results from Table 1 reveal that the majority of the farmers (39.5%) were between age of 20-29, 27.2 % were between 30-39, while the least been less than 20 years with 4.4%. The mean of the age was 31 years. This is in line with the study by Muhammad *et al.*, (2015) that asserted that the majority 35% of the respondents were between 26-35 years. The findings also showed that the majority (60.5%) of the respondents were male. This implies the dominance of male in agricultural activities in the study area.

Table 1 also shows that the majority (50%) of the farmers were married, 21.1 % were single, 28.9 % were widowed. This result is in agreement with a study by Muhammad *et al.*, (2015) who revealed that the majority (57%) of the respondents were married. This implies that the household size will possibly be large and so the family can employ family labour. Findings also revealed that most 44.7% had secondary education while the least is no formal education (13.2%). This implies that the majority had one form of formal education or another. It also shows the importance of literacy and its positive implication on efficient use of productive resources and adoption of farm innovation.

The result further reveals that the majority (42.1%) had farming experience of 1-10 with a mean of 12. This is also in line with the study of Muhammad *et al.*, (2015) that asserted that most (47%) had experience of 6-10 years. Results also showed that the majority (50%) of household size was between 1-5 in the study area, 30.7% had 6-10, 10.5% had 11-15 while 8.8% had 16-20. The mean was 9. This finding is in line with Abdulrahman *et al.* (2015), who indicated that large household size assists more on farm and other household activities.

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Most of the farmers (50.9%) were non-members of a cooperative, while 48.2% were members. Most of the famers (60.5%) had extension contact while 39.5% had no extension contact.

Table 1: Socio economic characteristics of the respondents

Variables	Percentage	Mean
Age		
Less than 20 Years	4.4	
20 -29 Years	39.5	
30 – 39 Years	27.2	31
40 – 49 Years	14.9	
50 – 59 Years	14	
Sex		
Male	60.5	
Female	39.5	
Marital Status		
Single	21.1	
Married	50.0	
Widowed	28.9	
Educational Level		
No formal education	13.2	
Primary education	14.9	
Secondary education	44.7	
Tertiary education	27.2	
Farming Experience		
1-10 Years	42.1	
11-20 Years	28.9	
21-30 Years	19.3	12
31-40 Years	8.8	
Household Size		
1-5	50.0	
6-10	30.7	
11-15	10.5	9
16-20	8.8	
Cooperative Membership		
Non-member	50.9	
Member	48.2	
Extension Contact		
Contact	60.5	
No contact	39.5	

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Extension Teaching Methods used by Extension Agents

The scoring of the extension teaching methods used by extension agents was made by using a 5 point Likert scale and ranked according to their effectiveness.

Result in Table 2 shows that Group discussion (\bar{x} =4.33) was perceived by the respondents to be highly effective method in transmission of information to the farmers and ranked 1st. By utilizing group technique, an extension worker can reach more people than is possible. Use of radio (\bar{x} =3.83) was agreed by the respondent to also be effective method and ranked 2nd. Demonstrations (\bar{x} =3.50) was ranked 3rd most effective method in transmitting information to the farmers.

Telephone call (\bar{x} =2.33), farm and home visit (\bar{x} =2.29) and farmers training (\bar{x} =2.15) were ranked 4th, 5th and 6th respectively in information transmission to the farmers. Farm visit was prominent among the methods used in reaching the farmers (37.5%).

Table 2: Extension teaching methods used by extension agents

Method	Mean	Rank
Group discussion	4.33	1
Radio	3.83	2
Demonstration	3.50	3
Telephone call	2.33	4
Farm & home visit	2.29	5
Farmers training	2.15	6

Perception on Effectiveness of Extension Teaching Methods

The results in Table 3 show that the extension teaching methods that were preferred by the farmers were group discussion (\bar{x} =4.33), demonstration (\bar{x} = 3.67) and radio(\bar{x} =3.50) ranked 1st, 2nd and 3rd respectively. This is in line with the study by Ahmad *et al.*, (2016) who asserted that group meetings, result demonstrations were the highest ranked with mean of 3.19 and 3.12 respectively. The advantage of this is that it facilitates information passage and promotes sharing of experiences and knowledge by the extension worker and the farmers.

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These were followed by farmers training, farm and home visit and telephone calls ranked 4th, 5th and 6th respectively. This could be attributed to the low number of extension workers in the study area.

Table 3: Farmers perception on effectiveness of the extension teaching methods

Method	MS	Rank
Group discussion	4.33	1
Radio	3.50	3
Demonstration	3.67	2
Telephone call	2.00	6
Farm and home visit	2.50	5
Farmers training	2.83	4

Conclusion and Recommendation

Farmers' perception of extension services proves that it is effective. The group discussion was the most effective method for extension service delivery in the study area. It is recommended that more extension agents should be employed to reduce the farmer extension agent ratio. It is also recommended that government should budget more money to extension institutions that provide services to small farmers and rural communities in Nigeria. Extension personnel should also make their contacts regular with farmers for rapid adoption and diffusion of improved agricultural technologies. Extension workers activities should be supervised periodically on regular basis so that they could perform their duties properly for agricultural development by a monitoring and evaluation team.

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