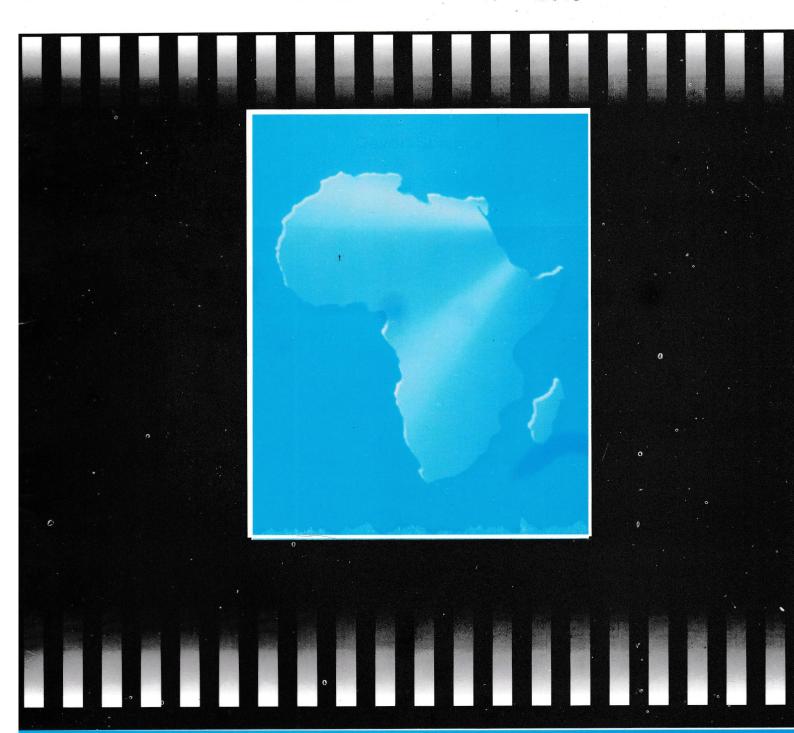
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ANALYSIS OF EFFECTIVENESS OF PRINT MEDIA IN AGRICULTURAL EXTENSION SERVICE DELIVERY IN AKWA IBOM STATE, NIGERIA.

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ABSTRACT

The study assessed the effectiveness of the use of print media in agricultural extension service delivery in Akwa Ibom State, Nigeria. Primary data used 80 respondents randomly selected via a multi-stage sampling procedure. The questionnaire was used for data collection and analysis used descriptive statistics, composite index and fog index. The study revealed that 53.75% of the farmers were aged between 41-60 years, 71.25%were married, and 71.25% had a household size of 5 - 8 persons and 43.75% had attained tertiary level of education. Findings further revealed that 46% of print media messages were perceived as adequate, 88.1% of farmers could read and understand those messages while 61.5% of identified technologies were fully adopted by farmers. However, high cost of newspapers (x = 1.40), late arrival of print media messages (x = 1.40) 1.35), and print media messages not being readily available to farmers (x = 1.32) were considered the most important constraints to effective use of the print media. The study therefore recommended that all stakeholders in the agricultural extension subsector should make print materials available to the farmers in time, and at reduced cost, evolve an arrangement to enhance effective contact and facilitate farmers' accessibility to the print media and intensify the use of print media as an agricultural information source.

Key words: Effectiveness, Print Media, Agricultural Extension, Service Delivery, Akwa Ibom State, Nigeria.

INTRODUCTION

Printing began in Europe in the mid -15th century. Until radio and television began competing as information sources some five centuries later, the print media was the chief means of communication and the most important way to convey and preserve knowledge and 'ideas (The Great Soviet Encyclopedia, 1979). Print media in agricultural extension refers to publications that are distributed in a printed form on paper which are expected to be delivered to farmers in physical form either through hand delivery or purchase (Gregory, 2010). It has the objective of promoting the adoption of improved farming techniques, increasing production efficiency, increasing income, and lifting social and educational standards of the farm families. Agricultural extension service delivery is coterminous with the use of variegated communication strategies which Hoffman (2002) noted required a skillful communicator, sending useful messages, through proper channels, to elicit the desired response.

Effectiveness is the quality of being able to bring about an effect. In Agricultural extension is effective service to meet its set objectives; this involves the identifying and using appropriate and available expertise in the change process which increases the active participation of target beneficiaries usually the rural farming households. It is rightly observed that agricultural extension is primarily concerned with effecting change through adoption of innovation (Everett, 2007). Given prevailing situations in the Akwa Ibom State farming environment, the channel to use to obtain desired results becomes very critical. Extension messages on print media are of little use if they are not distributed. Watson (1996) affirmed that farmers are not aware that innovations exist, in many instances, they are not aware that the innovation is of practical relevance to them. Literacy levels of the farmers for which extension messages on print are intended is also critical to extension services. Even when the printed materials are available and the farmers can understand the message, sometimes, the message seems not to address their felt needs. Printed materials that do not address the needs of farmers will likely have no impact on the target clientele. This runs counter to one principle of communication which advocates harmony, that is, agreement between extension messages and individual goals of farmers (Akinyemiju and Torimiro, 2008). In considering the issue of effectiveness of print media in extension services a number of factors such as socioeconomic characteristics of farmers, adequacy of extension messages,

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readability of extension messages, adoption level for each technology passed are of vital for consideration. A complete analysis of the situation should consider the constraints to effective use of print media in agricultural extension service as well. Studies on print media seem not to consider effectiveness vis a-vis availability (Mapiye and Chikumba,2010 and Okwu and Daudu,2011)of print media in agricultural extension services on its own but focus more on a comparative analysis with other media.

With the great advantage of the print media combining words and pictures to convey accurate and clear information(Swanson, Bentz, and Sofranko ,1997)printed extension materials can be very sophisticated with colour photographs (Garforth, 2003) and a variety of lettering styles can be produced to capture the audience attention. How much extension print materials are understood by its target audience is central to its effectiveness.

Readability is the ease in which a text can be read and understood (Harris (1995). Similarly, Fry (2006), argued that ease of reading print materials by farmers helps learning, understanding and enjoyment. Despite many indices used to determine readability of materials, Robert Gunnings Fog index is the considered a suitable tool for this type of research because the index estimates the years of formal education needed to understand a text on a first reading. The fog index has been used in different fields to confirm that printed materials can be read easily by the intended audience.

METHODOLOGY

Akwa Ibom State is located in the coastal south-southern part of the country lying between latitudes 4°32" and 5°53" north and longitude 7°25" and 8°25" east. The state is bordered on the east by Cross River State and on the south by the Atlantic Ocean and southern-most tip of Cross River State. Akwa Ibom state has a tropical humid climate marked by two distinct seasons; dry season and wet season. The State with six agricultural extension zones namely; Abak, Uyo, Etinan, Oron, Ikot Ekpene and Eket are further divided into blocks and cells. Through a multi-stage sampling technique four cells randomly selected from four blocks formed the sampling frame where five households each was interviewed resulting in a sample size of 80. Descriptive statistical tools such as frequencies, mean, percentages and ranking were used to analyze socioeconomic characteristics of farmers, adoption level for each technology and analysis of constraints to effective use of print media in extension. Fog index otherwise called readability index as given by Robert Gunning (1952) was used to determine the readability of extension messages. The formula for fog index is as follows; Fog index = (Average number of words per sentence) + (number of words of 3 syllables or more) x 0.4. Average number of words per sentence is obtained by dividing total number of words in the passage by the number of sentences. According to Robert Gunning (1952), any value above 12 was too hard for most people to read and understand. Higher values of Fog index therefore connotes difficult materials to understand. Composite index analysis was used to analyze adequacy of extension messages carried on print media. Farmers were asked to indicate how adequate those technologies were in terms of meeting their felt needs. Each response was categorized on a likert scale as follows, Very adequate (VA) = 3, Adequate (A) = 2 and Not adequate (NA) = 1. A critical value of 2 used to determine the degree of adequacy or otherwise.

Scale	Weights(x)	Frequency (f)	Fx
VA	3		
Α	2		
NA	1	$\sum f =$	$\sum fx =$

Response score =
$$\sum fx$$

Where n = sample size

f = frequency (number of response to a particular category on to the scale)

$$\Sigma = sum$$

RESULT AND DISCUSSION

Table 1. Socioeconomic Characteristics of Farmers

Civil services 24 30 Business/trading 36 45 Farming 20 25 Total 80 100 Characteristics Frequency (f) Percentage (%) Religion Christianity 80 100 Non-Christianity 0 0 Total 80 100 Income class N 100	
41 - 60 43 53.75 61 - 70 15 18.75 71 - 90 1 1.25 Total 80 100 Sex Male 38 47.5 Female 42 52.5 Total 80 100 Marital status Single 6 7.5 Married 57 71.25 Divorced 3 3.75 Widowed 14 17.5 Total 80 100 Secondary occupation Civil services 24 30 Business/trading 36 45 Farming 20 25 Total 80 100 Characteristics Frequency (f) Percentage (%) Religion Christianity 80 100 Non-Christianity 80 100 Total 80 100 Income class N 100	
61 - 70	
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Christianity 80 100 Non-Christianity 0 0 Total 80 100 Income class № 100	
Non-Christianity 0 0 Total 80 100 Income class № 100	
Total 80 100 Income class №	
Income class N	
2,000 - 10,000	
35,000 – 50,000 8 10	
51,000-66,000 1 1.25	
67,000 -82,000 2 2.5	
83,000 - 98,000 2 2.5	
Total 80 100	
Household size	
1 - 4 12	
5-8 57 71.25	
9 - 12 8.75	
13 -15 2 2.5 Not indicated 2 2.5	
Not indicated 2 2.5	
Total 80 100	
Years of Formal Education	
1- 6 21 26.25	
7-12 23 28.75	
13 – 18 35 43.75	
Never been to school 1 1.25	
Total 80 100	

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Table1. Showed that most of the respondents (53.75%) were in the middle age class (41-60), that provided the much needed labour in agricultural production; 52.5% were females and were married (71.25%). This agrees with previous research by Donye (2010) and Igben (1998), where marriage was promoted among farming households in rural areas. Furthermore, the study reveals that 36 farmers (45%) were involved in business/trading. There also was an indication of dominance of Christian religion (100% were adherents) in the study area. On the income of farmers results showed that the highest number of respondents (83.75%) had average monthly income of between N3000 and N34000 while 13 respondents (16.25%) had average monthly income of between N35000 and N98000. This result is consistent with previous findings (Umunna, 2010 and Uwem (2009)) which indicated low income level of most farming households. The distribution of household size among the farmers showed that majority of households (71.25%) had between 5 and 8 people per household. This result supports the existence of dominant household size of 5-8 persons in farming communities as reported by Olawepo (2010),Umunna (2010) and Jibowo (1992). On formal education of farmers, 43.75% of the respondents had formal education up to the tertiary level which is consistent with earlier study by Ngongoni (2006).

Adequacy of Extension Messages on Selected Pamphlets Technology

TABLE 2 Distributions of Respondents by Access to Extension Agents

Access to extension agents	Frequency (f)	Percentage (%)		
Yes	74	92.5		
No	6	7.5		
Total	80	100		
Number of times/month				
3	3	6.25		
2	58	72.5		
4	3	3.75		
8	8	10		
Nill	6	7.5		
Total	80	100		
Access to print materials				
Yes	42	52.5		
No	38	47.5		
Total	80	100	1060	

Source: Field survey 2011

Findings from this study (Table 2) indicated that majority of the farmers (92.5%) had access to extension agents with the frequency of contact as follows: only 3 farmers (6.25%) met with extension agents once a month, 6 farmers (7.5%) never met with extension agents and 58 farmers (72.5%) met twice a month. Similarly, this study revealed that 52.2% of the farmers had access to print materials through extension agents while 47.5% never had access to print materials but knew about improved technologies through other sources. This disagrees with previous research by Mazher *et al* (2010) who stated that only 11.5% of farmers used print media as their sources of agricultural information. However, Shahid, *et al* (2007) reported that print media and fellow farmers were information sources by all farmers. The conclusion that can be made here is that use of print media varies among different clientele in different locations.

Table 3 Perceived Adequacy of Selected Technologies by respondent

Tec	chnologies	VA	A	N A	X	Rank
-		f %	f %	f %		
*	How to measure correct quantity of fertilizer to crops.	25 (31.3)	52 (65.0)	3 (3.8)	2.28	3
*	Methods of fertilizer application	23 (28.8)	54 (67.5)	3 (3.8)	2.25	4
*	Recommendations on the use of fertilizers.	19 (23.8)	54 (67.5)	3 (3.8)	2.20	5
÷	Rapid multiplication of yam by minisett technique	11 (13.8)	58 (72.5)	33 (41.3)	1.73	9
*	Weed control methods in yam farms	11 (13.8)	36 (45.0)	27 (33.8)	1.80	8
*	Artificial brooding of local chicks	21 (26.3)	42 (52.0)	16 (20.0)	2.06	6
*	Sources of input in artificial brooding of local chicks.	9 (11.3)	43 (53.8)	23 (28.8)	1.83	7
*	Recommended varieties of cocoyam.	1 (1.3)	20 (25.0)	59 (73.8)	1.28	12
	Land preparation for planting of cocoyam	6 (7.5)	16 (20.0)	58 (72.5)	1.35	11
*	Planting methods for cocoyam	8 (10.0)	16 (20.0)	56 (70.0)	1.40	10
*	Site selection for planting of cassava	30 (37.5)	44 (55.0)	6 (7.5)	2.30	2
•	Land preparation for planting of cassava	32 (40.0)	41 (51.3)	7 (8.8)	2.31	1
	Storage methods for cassava tubers	6 (7.5)	3 (3.8)	71 (88.8)	1.21	13

Source: Field survey 2011. f=frequency, $\% = \overline{percentage}$, $\overline{x=mean}$, VA = very adequate A= adequate, NA = Not adequate.

Table 3 showed that out of 13 technologies carried on selected pamphlets, 6 technologies addressed the farmers felt needs and were considered adequate, while 7 were not adequate. "Land preparation for planting of cassava" (ranked highest $(\bar{x} = 2.31)$ was the most adequate while "storage methods for cassava tubers" was considered the least adequate $(\bar{x} = 1.21)$. This is an important factor to consider, i.e., the felt needs of farmers when designing print materials meant for farmers.

TABLE 4 FOG SCORES FOR SELECTED PAMPHLETS

PAMPHLET		FOG IND	EX SCORE
1 Rapid multiplication of yam by (<u>I</u> technique.	Dioscorea sp) by ministt	11.10	
2 Cassava production (Manihot esculents	<u>a</u>)	12.54	
3 Cocoyam production (Colocasia escul	enta)	10.83	
4 Artifical brooding of local chicks		16.87	
5 Cowpea production (vigna unguiculat	<u>a</u>)	12.09	
6 Soyabeans production (Glycine max)		10.55	
7 Afang production (Gnetum africanum)	11.81	
8 Facts about fertilizer		7.37	
Source: Field survey 2011		El	

Out of the nine pamphlets analyzed, 7 of them had readability index score of 10-11 which means that farmers must have 10-11 years of formal education in order to understand those materials(Table 4). The least readability score was 7 while the highest was 16. Specifically, farmers involved in artificial brooding of chicken will need to have read up to the diploma level or its equivalent to comprehend this print media while a Primary School certificate holder can comprehend the pamphlets on 'Facts About Fertilizer'. As an agricultural enterprise becomes more sophisticated, more education is required to understand the extension literature accompanying it.

TABLE 5 ACCESS TO PRINT MATERIALS BY YEARS OF FORMAL EDUCATION.
YEARS OF FORMAL FREQUENCY (f) PERCENTAGE (%)

EDUCATION			
1-6	5	11.90	
7 - 12	10	23.81	
13 - 18	27	46.29	
Total	42	100	

Source: Field survey 2011

From Table 5, it can be deduced that out 42 farmers that had access to print media, 37 (88.1%) would be able to read and understand the materials. However, while 46.29% farmers could and understand all the extension pamphlets, 23.81% could read and understand slightly two of the materials mainly those pertaining to Cocoyam and Soybeans production. Clearly, almost 12% (11.90) of the farmers will not find any of the extension materials useful to them since their years of formal education was below the Fog Indices of all the pamphlets. This is in tandem with Okwu and Daudu (2011) supporting other findings reported that farmers' educational level and farm size have significant effect on their information sources

ADOPTION LEVEL OF IDENTIFIED TECHNOLOGIES ON THE PRINT MEDIA.

The research reveals adoption based on different levels and the final decision of respondents on each technology carried on print media (i.e whether technologies were adopted or not adopted). The result is presented on table 6

TABLE 6 STAGES OF ADOPTION FOR EACH IDENTIFIED TECHNOLOGY ON SELECTED PAMPHLETS.

Technologies	Not	A	I	Е	T	AD	X	Rank	Remark
_	aware	f (%)	f(%)	f(%)	f (%)	f (%)			
How to measure correct	-	26(32.5)	4(5.0)	1(1.3)	4(5.0)	45(56.	3.4	4	Adopted
quantity of fertilizer to crops. Methods of fertilizer application		26(32.5	4(5.0)	1(1.3)	3 (3.8)	3) 46(57. 5)	8 3.4 9	3	Adopted
Recommendations on the use of fertilizers.		26(32.5)	2(2.5)	6(7.5)	2(2.5)	43(53. 8)	3.3	5	Adopted
Rapid multiplication of yam by minisett technique		26(32.5)	4(5.0)	8(10.0)	17(21. 3)	25(31. 3)	3.1	7	Adopted
Weed control methods in yam	1(1.3)	27(33.8)	5(6.3)	4(5.0)	13(16. 3)	30(37. 5)	3.1	7	Adopted
Artificial brooding of local chicks	1(1.3)	25(31.3)	8(10. 0)	5(6.3)	9(11.3	32(40. 0)	3.1 5	6	Adopted
Sources of input in artificial brooding of local chicks.	-	33(41.3)	6(7.5)	4(5.0)	12(15. 0)	25(31. 3)	2.8	9	Not Adopted
Recommended varieties of cocovam.	2(2.5)	29(36.3)	9(11. 3)	6(7.5)	32(40. 0)	2(2.5)	2.5	12	Not Adopted
Land preparation for planting of cocoyam	1 12	29(36.3)	6(7.5)	11(13.8	28(35. 0)	6(731. 5)	2.7 0	10	Not Adopted
Planting methods for cocoyam	-	31(38.8)	6(7.5)	8(10.0)	28(35. 0)	7(8.8)	2.6 8	11	Not Adopted
Site selection for planting of cassava		16(20.0)	4(5.0)	3(3.8)	8(10.0	49(61. 3)	3.8	1	Adopted
Land preparation for planting of cassava	2(2.5)	16(20.0)	5(6.3)	3(3.8)	6(7.7)	48(60. 0)	3.7 4	2	Adopted
Storage methods for cassava tubers	15(8. 8)	22(27.5)	4(5.0)	4(5.0)	28(35. 0)	7(8.8)	3.3 6	13	Not Adopted

Source: field survey 2011.

Table 6 showed that out of the 13 technologies identified, 8 were fully adopted while 5 were not adopted. "Site selection for planting of cassava" was ranked highest $(\bar{x}=3.88)$ and mostly adopted, while "storage methods for cassava tubers" was ranked lowest $(\bar{x}=2.36)$, that is, least adopted. This is an indication of the enterprise of interest to the farmers, cassava production.

Of the 5 technologies not adopted, most respondents (41.3%) were at the level of awareness for "sources of inputs in artificial breeding of local chicks". Most respondents (13.8%) were at the evaluation stage of "land preparation for planting of cocoyam", while 18.8% were not aware of "storage methods for cassava tubers". Complementary avenues of extension messages will help to finally diffuse technologies introduced to the farmers; these include extension agents, television, radio and workshops/seminars for farmers.

Results also show that majority of the respondents (40.0%) were at the trial level of the technology "recommended varieties of cocoyam". Similarly, the highest number of respondents (11.3%) also showed much interest in the same technology. This indicates that interest was directly related to trial, that is, those at the interest level were also found to also try out the technology which indicated a more advanced stage on the adoption process.

CONSTRAINTS TO EFFECTIVE USE OF PRINT MEDIA BY FARMERS.

A number of constraints to effective use of print media by farmers were divided into direct and indirect constraints. The results are presented and discussed in tables 4 and 5.

TABLE 7 DIRECT CONSTRAINTS TO EFFECTIVE USE OF PRINT MEDIA BY FARMERS

Constraints	Not a Constrain	Minor Constrain	Major Constrain t	X	Rank	Remark	B 10
Inability to read printed materials	21(26.3)	15(63.8)	8(10.0)	0.86	5	Not Constraint	a
Inability to understand the technical language used in printed materials.	27(33.8)	43(53.8)	10(12.5)	0.84	6	Not Constraint	a
Perception of the messages as being unable to adders the needs of the farmers	30(37.5)	37(46.3)	13(16.3)	0.79	7	Not Constraint	a
Distrust of some messages on the print media by the farmers	13(16.3)	22(27.5)	45(56.3)	1.79	7	Constraint	
High cost of newspapers	13(16.3)	22(27.5)	45(56.3)	0.40	1	Not Constraint	a
Missing of printed material collected form extension agents	26(32.5)	29(36.3)	25(31.3)	0.00	4	Not Constraint	a
Messages on print media are not readily available to us	9(11.3)	36(45.0)	32(43.8)	1.32	3	Constraint	
Late arrival of print media messages to farmers	8(10.0)	36(45.0)	36(45.0)	1.35	2	Constraint	

Source: Field survey 2011

Table 4.5.2 shows that 8 factors were considered as possible direct constraints to the use of print media by farmers. On analysis, three were found to be constraints. "High cost of newspapers" ($\overline{x}=1.40$,), late arrival of print media messages to farmers ($\overline{x}=1.35$) and messages on print media not being readily available to farmers ($\overline{x}=1.32$). This result showed that who print media use is constrained by difficulties in delivering to remote areas.

TABLE 6 INDIRECT CONSTRAINTS TO EFFECTIVE USE OF PRINT MEDIA BY FARMERS.

Constraints	Not a Constraint	Minor	Major	X	Rank	Remark
	f (%)	Constraint	Constraint		-	

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	f	(%)	f (%)			7
High cost of fertilizers	3(3.58)	7(8.8)	70(87.5)	1.83	3	Constraint
Unavailability of fertilizers	11(13.8)	5(6.3)	64(80.0)	1.66	8	Constraint
Negative attitude of farmers	24(30.0)	27(33.8)	29(36.3)	1.06	16	Constraint
towards use of						
fertilizers/herbicides						
Unavailability of mature and	15(18.8)	22(27.5)	43(53.8)	1.35	12	Constraint
healthy mother yams.						
High cost of herbicides.	8(10.0)	6(7.5)	66(82.5)	1.73	5	Constraint
High cost of artificial brooding	22(27.5)	20(25.0)	38(47.5)	1.20	15	Constraint
materials						
High mortality rats in the brooding	11(13.8)	36(45.0)	33(41.3)	1.28	14	Constraint
of local chicks						
Lack of access to credit	6(7.5)	8(10.0)	66(82.5)	1.75	4	Constraint
facilities/capital						
Lack of efficient veterinary	3 (3.8)	25(31.3)	52(65.0)	1.61	9	Constraint
services for poultry predication.						
Insufficient land for planting	8(10.0)	23(28.8)	49(61.3)	1.51	10	Constraint
crops/rearing of poultry.						
Land preparation for crop	17(21.3)	21(26.3)	42(52.5)	1.31	13	Constraint
production is very tedious and						
abour demanding.						
Jnavailability of	15(18.8)	12(15.0)	53(66.3)	1.48	11	Constraint
mproved/recommended varieties						
of cocoyam.						
nsufficient planting	3(3.8)	16(20.0)	61(76.3)	1.73	5	Constraint
materials/inputs for cocoyam						
production						
Poor transportation network	7(8.8)	10(12.5)	63(78.8)	1.70	7	Constraint
ack of efficient storage facilities	1(1.3)	9(11.3)	70(87.5)	1.86	1	Constraint
or cassava tubers.						
Damaged cassava tubers cannot be	4(5.0)	3(3.8)	73(91.3)	1.86	1	Constraint
stored.						

Sources: Field survey 2011.

On Table 6, 16 factors were listed as possible constraints. Three factors ranked highest as indirect constraints to effective use of print media. "Storage facilities for cassava tubers (\overline{x} =1.86) and inability of storing damaged cassava tubers (\overline{x} =1.86) as well as High cost of fertilizers (\overline{x} =1.83) were the major hindrances to adoption of technologies on the print media. Of course technology adoption is a function of economic feasibility among other factors. This corresponds with previous research by Mapiye and Chikumba (2010) which identified lack of capital (84.7%) and lack of inputs (95.5%) as major constraints to adoption of innovation by farmers.

The result confirmed the print media as a very effective medium in agricultural extension service delivery as up to 62% of technologies were fully adopted by the respondents. Even more effective is the fact that those not adopted were at various levels of the adoption process. For example, 41.3% of farmers were aware of "Sources of input in artificial brooding of local chicks" even though they are yet to adopt it.

Husain et al, (1993) blamed inadequate adoption and ineffectiveness of most agro-technology transfer medium on lack of consideration of the socio-cultural practices and technology incompatibility with the farmers' felt needs. Studies by Titilola (1994), Igbokwe (1995) and Ayichi (1995) also identified socio-cultural and economic characteristic of farmers, as factors influencing farmer participation and adoption of agricultural technologies in Nigeria.

Major Findings

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Most farmers (53.75%) who were females (52.5%) of the middle age class (41-60) and also married (71.25%) had formal education up to the tertiary level (43.75%) and used the print media to receive messages.

In addition to use of print media, majority of the farmers (92.5%) had access to extension agents in a fortnightly meeting (72.5%) as well as access to print materials (52.2%) through extension agents.

As much as 46% technologies carried on print media addressed the farmers felt needs and were considered adequate while 62% of technologies were fully adopted by the farmers.

The most difficult print material for farmers to understand was on the **artificial brooding of chicken** (16.87) and the least was on **Fact about fertilizer** (7.37).

Most of the educated farmers (13-18 years of formal education) were most accessible to print media (46.29%).

The most important constraints to effective use of print media in extension service delivery were: high cost of newspapers $(\bar{x}=1.40)$, late arrival $(\bar{x}=1.35)$ and unavailability of print media messages to farmers $(\bar{x}=1.32)$.

CONCLUSIONS.

On the strength of these findings the following can be drawn

There is a fairly large supply of well educated agricultural labour engaged in the sector in the study area.

Certain factors act as constraints to the effective use of the print media by all farmers.

Some print media are not easily understood by farmers due to the farmers' years of formal education.

The high accessibility of extension agents and frequent contact with farmers can be used to complement the advantages of the print media messages in extension service delivery.

Despite some constraints, the print media is still an effective medium of technology transfer to farmers in the study area.

RECOMMENDATIONS.

The State agricultural extension agency should intensify the use of print media as an agricultural information source.

Farmers should be involved in the production of print media to ensure their information needs are met while intervention in the agricultural sector should involve subsidizing production and intensifying effort to ensure availability of materials.

Extension agents should also help to provide a supporting service to the farmers in order to comprehend what they read on the print media.

There is need to intensify adult literacy campaign among the rural dwellers. This will make the people more conscious and receptive of innovation

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