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Analysis of Mass Media Utilization among Yam Farmers in Benue and Niger States, Nigeria

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Abstract

This study analysed mass media utilization among yam farmers in Benue and Niger States, Nigeria. Multi-stage sampling technique was used in the selection of 399 yam farmers for the study. Data were collected from primary source using structured questionnaire. Descriptive statistics such as frequency, percentages and mean were used for data analysis. Results revealed that 86.2% of the respondents were males with mean age of 42 years. Majority of the respondents (85.2%) utilized mass media. Also, 78.9% of the respondents' utilized radio, 67.7% utilized telephone 27.9% and 24.6% utilized newspaper and book. Insufficient access to credit facilities ranked 1st and poor electrification ranked 2nd were the major constraints with mass media utilization in the study area. It is recommended that credit should be made available by government through financial institutions, cooperative and other farmers in order to increase the level of mass media utilization and efforts should be made governments and people involved to ensure the programme on yam is always communicated in the best language understand by farmers.

Keyword: *Mass Media; Utilization; Yam; Farmers*

Introduction

Yam (*Dioscorea*) is a popular energy food in most of the tropics where its production and yield is high. As the number one carbohydrate source and it is said to provide up to 40% of all the calories consumed in Africa (Aniedu. 2016). It is becoming more important in world commerce, a relatively cheap energy feed source for ruminant and other livestock. Yam is an important item in the bride price in traditional marriage contracts among many tribes in Nigeria. Yam tubers can be eaten boiled, roasted, fried or pounded and could be chipped, dried and processed into yam flour for the preparation of "Amala" (Usongo *et al.,* 2014). Yam is also known to contain medicinal properties for the treatment of diabetes mellitus and hyperchosterolemia (Ume *et al.*, 2013). Yam production is constrained majorly by high cost of seed yam, high cost of labour in land preparation, staking materials, inadequate and high cost of agrochemicals which has increased the cost of production (Ewuziem *et al.,* 2015). Mass media have played important roles in yam production. Mass media include channels of communication which can expose larger number of yam farmers' to vital information, at the same time and within a short period of time. Mass media utilization in yam may include the use of sound, moving pictures or print that could be of immense benefits to farmers. However, yam farmers may experience challenges with respect to the use of mass media, dissemination and access to information technology to increase their agricultural information and knowledge. In Nigeria, information technology application in agriculture to rural farmers is highly limited because of insignificant level of attention on the part of the government, which has affected the free flow of information on production capacity of yam farmers in terms of marketing of farm produce, pest and disease control, land cultivation and other farm activities in Nigeria, among others (Ogaraku and Usman, 2008). The aim of this study was to analysed mass media utilization among yam farmers in Benue and Niger States, Nigeria. The specific objectives were to:

i. describe the socio-economic characteristics of the yam farmers using mass media in the study area;
ii. examine the type of mass media from which yam farmers source information on improved yam production technologies

examine the constraints associated with mass media utilization on improve yam production technologies of the respondents.

Methodology

The study was conducted in Benue and Niger States of Nigeria. Benue State derives its name from River Benue, the second largest river in Nigeria. The State created in 1976 and it is located in the Middle Belt area of Nigeria. Located between Longitudes 6^0 35'E and 10^0 30'E and between Latitudes 6^0 30'N and 8^0 10'N. The State has abundant land estimated to be 5.09 million hectares. This represents 5.4 percent of the national land mass. Arable land in the State is estimated to be 3.8 million hectares. The State shares boundaries with five other States, namely: Nasarawa to the North, Taraba to the East, Cross River to the South- East, Enugu to the South West, Kogi to the West. The South East part of the State also shares boundary with the Republic of Cameroon. Administratively, the State is divided into three Agricultural Zones namely; Eastern, Northern and Central Zones, having 23 Local Government Areas with its headquarters at Makurdi. The State is predominantly rural with an estimated 75 percent of the population engaged in rain-fed subsistence agriculture (Benue State Government, 2015).

The State is made up of 413,159 farm families with a population of 4,219,244 people (NPC, 2006). These farm families are mainly rural dwellers. Farming is the major occupation of Benue State indigenes. Benue State is referred to as the "Food Basket of the Nation" because of the abundance of its agricultural resources. The State is a major producer of food and cash crops like yam, cassava, rice, groundnuts and maize. Others include sweet potatoes, millet, sorghum, sesame and a wide range of others like soyabeans, sugarcane, oil palm, mango, citrus and banana. Irrigation farming along the bank of Rivers Benue and Katsina-Ala is a common feature.

Niger State is situated in the Northern Central geo-political zone of Nigeria and was excised from the defunct North-Western State. The State is bordered to the North by Zamfara State, to the Northwest by Kebbi State, to the south by Kogi State, to southwest by Kwara State; while Kaduna State and Federal Capital territory border the state to northeast and southeast respectively. Furthermore, the State shares a common international boundary with the Republic of Benin at Babanna in Borgu Local Government area of the state. Administratively, Niger state is divided into three Agricultural Zones namely; A, B and C Zones

with each having 8, 9, and 8 local government Areas (LGAs) respectively (Niger State Geographical Information System (NIGIS), 2018). The state lies between Latitude $8^{o}22^{l}$S to $11^{o}30^{l}$S and longitude $3^{o}30^{l}$E to 7^{o}20E. Currently the state covers a total land area of 74,244 sq.km, or about 8% of Nigeria's total land area. This makes the state the largest in the country. According to the 2006 national population census, Niger State had a total population of 3,950,249 (National Population Commission, Niger State, 2006). Niger State is one of the largest states in Nigeria covering about 86,000km2 (or about 8.6million hectares) representing about 9.3% of the total land area of the Country (NIGIS, 2018). The people of the state cultivate food crops like yam, maize, guinea corn, rice, soyabeans, cassava, okro, tomatoes, pepper, melon, shear butter and leafy vegetable of all kinds. It also has ample opportunities for grazing, fishing and forestry.

Multi–stage sampling technique was employed in selecting respondents for the study. The first stage involved random selection of one Local Government Area from each of the agricultural zones in the selected States to get six LGAs. This is because yam production is predominant in the selected areas. The second stage involved the proportionate 10 percent (10%) selection of the sample size of the villages from the sample frame for both Benue and Niger State. The total sample size selected for this study was 399. Primary data were collected using structure administered questionnaire through personal interview. Descriptive statistics such as frequency distribution, percentage and mean were used to analyse objective i ii and iii

Result and Discussions

Socio-economic characteristics of yam farmers

Entries in Table 1 showed that the mean age of respondents in Niger State was 43 years while that of Benue State was 40.7 years. The pooled results showed a mean age of 42years. The result generally implies that majority of the respondents were within their productive age, very active and desirous of innovation such as the use of different types of mass media in order to improve their production techniques. This is related to the report by Bande (2011) that age is related to use of new/improved agricultural practices as it may have influence on utilization. Table 1 showed that majority 95.0% and 77.5% of respondents in Niger and Benue States respectively were males. The pooled result revealed that 86.2%. More males might be due involvement of women in

domestic and cultivation of less strenuous arable crops. This finding is in agreement with the study Nahanga and Becvarova (2014) who reported that majority of yam farmers in Benue State, Nigeria were male which constitutes a greater proportion of the yam producers in the area.

Table 1 revealed that 60.5% of yam farmers in Benue State had between 6-10 persons per household with a mean household size of 9 persons per household while About 42.7% of the yam farmers in Niger state had 6-10 persons per household with a mean household size of 9 persons per household. The pooled results revealed that 51.4% of the respondents had 6-10 persons per household with average household size of 8 persons in the study area. The result showed there is no difference in the number of household size across the States. The larger household size (8 persons) of yam farmer could be of advantage in terms of farm labour supply. This agrees with Okoedo and Onemolease (2014) who reported large household size among yam producers in Edo State, Nigeria.

Table 1 showed that 38.5% of yam farmers in Benue State had tertiary education while just few (6.5%) had no formal education while 34.7% of the yam farmers in Niger State had secondary education while (24.6%) had no formal education. The pooled result of the educational status of the respondents revealed that majority (84.4%) of the yam farmers had formal education while on few (15.5%) had no–formal education. This finding showed that there was a high level of literacy attainment among farmers in the study area. However, having attained this will have the ability to acquire new mass media and utilize them in yam production. This contradicts Pelemo *et al.* (2018) who reported low literacy level among yam farmers in Niger State. The mean farming experience of yam farmers in Niger State was 20.4 while that of Benue State was 18.9 years. The pooled result presented a mean farming experience of 17.4 years. This implies that most of the respondents across the States of the study area are experienced farmers which could have a significant influence on their decision making on the use of mass media that would have positive impact on their production. This study agreed with Agbarevo and Nwachukwu, (2014) who reported high farming experience among adopters of mass media in Cross-River State, Nigeria.

The mean farm size of yam farmers in Niger State was 3.4 hectares while that of Benue State was 1.6. This implies that farmers in Niger State were more into yam production. The pooled result revealed a mean farm size of 2.5 hectares, implying that yarm farmers and small scale farmers producing mainly for

consumption and little for sales. This is in line with the findings of Pelemo *et al.* (2018) reported majority of yam farmers in Niger State, Nigeria are small scale farmers.

Table 1: Distribution of the respondents according to socio–economic characteristics

Variables	Benue State (n=200)		Niger State (n=199)		Pooled (n=399)	
	Freq	Percentage	Freq	Percentage	Freq	Percentage
Age (years						
< 26	14	7.0	4	2.0	18	4.5
26 – 35	28	14.0	46	23.1	74	18.5
36 – 45	68	34.0	112	56.3	180	45.1
46 – 55	88	44.0	32	16.1	120	30.1
> 55	2	1.0	5	2.5	7	1.8
Mean	43.14		40.68		41.92	
Gender						
Male	155	77.5	189	95.0	344	86.2
Female	45	22.5	10	5.0	55	13.8
Household size						
< 6	40	20.0	53	26.6	93	23.3
6 – 10	121	60.5	85	42.7	206	51.6
11 – 15	27	13.5	57	28.6	84	21.1
> 15	12	6.0	4	2.0	16	4.0
Mean	8.46		8.63		41.92	
Educational status						
Primary	24	12.0	44	22.1	68	17.0
Secondary	42	21.0	69	34.7	111	27.8
Tertiary	77	38.5	25	12.6	102	25.6
Non formal	13	6.5	49	24.6	62	15.5
Adult	44	22.0	6	3.0	50	12.5
Qura'nic	0	0.0	6	3.0	6	1.5

Farming experience						
< 11	52	26.0	27	13.6	79	19.8
11 – 20	94	47.0	99	49.7	193	48.4
21 – 30	36	18.0	54	27.1	90	22.6
> 30	18	9.0	19	9.5	37	9.3
Mean	17.43		20.37		18.90	
Farm size						
< 1.1	102	51.0	37	18.6	139	34.8
1.1 - 3.0	83	41.5	78	39.2	161	40.4
> 3.0	15	7.5	84	42.2	99	24.8
Mean	1.62		3.44		2.52	

Field survey, 2019

Utilization of Mass Media by Yam Farmers

Entries in Table 2 revealed that majority (88.4%) and (82.0%) of the respondents in Niger and Benue respectively utilized mass media. The pooled results showed 85.2% of the respondents' utilized mass media. This is an indication larger proportion of the respondents' utilized mass media**.** This finding agrees with that of Obiakku and Hursh (2015), that radio, television and newspaper are the most potentially useful mass media to farmers

Electronic media utilized

Table 2 showed that 82.9% and 75.0% of the respondents in Niger and Benue States respectively utilized radio. The pooled results indicated that 78.9% of the respondents utilized radio. This finding indicated that radio is the most frequently used electronic media for disseminating of vital information to yam farmers. This might be owing to its flexibility, durability and cheap to maintain compare to other electronic media. Moreover, radio programmes are usually timely and capable of extending messages to the audience no matter where they may be as long as they have a receiver with adequate supply of power. This finding agreed with Akioya *et al.* (2019), who reported that radio is the major means of transmitting information to rural farmers in Nigeria. Also, 70.9% of the respondents in Niger State utilized television while only 49.5% of respondents in Benue State utilized television. This showed that television is

more utilized in Niger State. This might be due efforts by the States government in ensuring that do not have only audio but audiovisual.

Print media utilized

Table 2 indicated that 39.0% and 39.0% of respondents in Benue State utilized newspaper and books while only 16.1% and 10.6% in Niger States utilized newspaper and books. This finding shows that the level of utilization of newspaper and books are high in Benue State. This might be owing to high literacy level in Benue than Niger. The pooled showed that 27.9% and 24.6% utilized newspaper and books. Also, 33.2% and 14.0% in Niger and Benue States utilized flier. This showed that flier is more utilized in Niger State than Benue. The pooled results showed that 23.6% used flier. Akioya *et al.* (2019) further reported that print media such as newspaper and farm magazine are still commonly used, as they are cheap, affordable and can easily be read at the convenient of the reader.

New media utilized

Table 2 revealed that 82.9% and 52.5% of the respondents in Niger and Benue States respectively utilized telephone. This finding showed that telephone is more used in Niger than Benue. This might be due to farmers' participation in e-wallet programme and other agricultural supports programme that make use of telephone. The study is supported the finding by Falola *et al.* (2017) that mobile phone is another ICTs tool embraced by farmers for receiving and sending information. The pooled results showed that 67.7% utilized telephone. Also, 40.5% and 9.0% of the respondents in Benue and Niger States respectively utilized internet. This shows that the utilization of internet in more in Benue State. This might due to level of exposure among the yam producers in the State. This agreed with Sobalaje *et al.* (2013), who emphasis that internets are only used by small percentage of yam farmers that are literate.

Table 2: Utilization of mass media and various mass media utilized, frequency of utilization and language used

Variables	Benue State (n=200) Freq (%)	Niger State (n=199) Freq (%)	Pooled (n=399) Freq (%)
Utilization of mass media by the respondents			
Yes	164 (82.0)	176 (88.4)	340 (85.2)
No	36 (18.0)	23 (11.6)	59 (14.8)

Electronic media utilized			
Radio	150 (75.0)	165 (82.9)	315 (78.9)
Television	99 (49.5)	141 (70.9)	240 (60.2)
Print media utilized			
Newspaper	78 (39.0)	32 (16.1)	110 (27.6)
Billboard	10 (5.0)	21 (10.6)	31 (7.8)
Books	78 (39.0)	20 (10.1)	98 (24.6)
Magazine	45 (22.5)	31 (15.6)	76 (19.0)
Flier	28 (14.0)	66 (33.2)	94 (23.6)
New media utilized			
Telephone	105 (52.5)	165 (82.9)	270 (67.7)
Computer	12 (6.0)	10 (5.0)	22 (5.5)
(Internet	81 (40.5)	18 (9.0)	99 (24.8)

Sources: Field survey, 2019

Multiple responses

Constrains associated with Mass Media Utilization among Farmers

Table 3 showed that insufficient access to credit facilities (= 2.59) ranked 1st the major constraints associated with utilization of mass media in the study area. This is in line with Ani *et al.* (2015) who posited the unavailability of credit could prevent rural farmers, many of who is resource poor to purchase information device thus limiting their access to agricultural information. This could also impede utilization of mass media by farmers. Poor electrification (= 2.43) ranked 2nd. This is a serious constraint owing to the fact that most of the mass media required electricity to function well. Also, high level of poverty (= 2.40) ranked 3rd and lack of accessibility (= 2.30) ranked 4th. This finding agreed with that of Adeniyi and Yekini (2020) who pointed that there is a problem of irregularities of power supply, lack of accessibility and high poverty which hampers consistent flow of agricultural information associated with the use of mass media for agricultural dissemination of information. Further findings showed that non-availability (= 2.25) and poor television and radio signal (= 2.23) ranked 5th and 6th. Other constraints showed that broadcast not on native language (= 2.20), incompatibility (= 2.05), illiteracy (= 2.01), lack of money to buy newspaper (= 1.98) and complexity were ranked 7th, 8th, 9th, 10th and 11th respectively.

Table 3: Constraints associated with mass media utilization among farmers

	Benue State (n=200)			Niger State (n=199)			Pooled (n=399)		
Constraints	**WS**	**MS**	**Rank**	**WS**	**MS**	**Rank**	**WS**	**MS**	**Rank**
Lack of money to buy newspapers	369	1.85	11th	422	2.11	8th	791	1.98	10th
Insufficient access to credit facilities	483	2.43	1st	550	2.75	1st	1033	2.59	1st
Non –accessibility	479	2.41	2nd	437	2.19	5th	916	2.30	4th
Non-availability	467	2.35	4th	432	2.16	6th	899	2.25	5th
Illiteracy	426	2.14	9th	376	1.88	10th	802	2.01	9th
Incompatibility	449	2.26	7th	367	1.83	11th	816	2.05	8th
Complexity	402	2.02	10th	386	1.93	9th	788	1.97	11th
Poor electrification	475	2.39	3rd	493	2.46	3rd	968	2.43	2nd
Broadcast not on native language	428	2.15	8th	451	2.26	4th	879	2.20	7th
Poor television and radio signal	465	2.34	5th	424	2.12	7th	889	2.23	6th
High level of poverty	457	2.30	6th	501	2.51	2nd	958	2.40	3rd

Sources: Field survey, 2019

Note: WS= Weighted Score, MS=Mean Score

Conclusion and Recommendations

Based on the findings, it can be concluded yam farmers in the study area were in their middle age and majority of them had formal education. Further findings showed that majority of yam farmers' utilized mass media. It is also shown that majority of the respondents' utilized electronic media (radio and television) and new age media (telephone). Also, radio as electronic media and telephone as new age media were the most mass media utilized in accordance to their level. In conclusion, insufficient access to credit facilities, poor electrification and high level of poverty were the major constrains associated with mass media utilization. Insufficient access to credit was one of the major constraints to mass media utilization among yam farmers. It is recommended that credit should be made available by government through financial institutions, cooperative and other farmers in order to increase the level of mass media utilization. The level of utilization bill board and computer as new age media was low in the study area. However, farmers should be enlightened by extension officers and other

learner farmers on the important of bill board and computer in yam production and efforts should be made governments and people involved to ensure the programme on yam is always communicated in the best language understand by farmers.

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