



## WOMEN FARMERS' PERCEIVED EFFECTIVENESS OF MASS MEDIA IN ACCESSING AGRICULTURAL INFORMATION IN KWARA STATE, NIGERIA

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### ABSTRACT

Despite the numerous benefits of mass media in accessing agricultural information, unfavourable perception of women farmers about mass media has negatively influenced the usage. This study examined women farmers' perceived effectiveness of mass media in accessing agricultural information in Kwara State, Nigeria. Multistage sampling was used to select 120 women farmers for this study. Primary data were gathered using an interview schedule. Data collected were analyzed using descriptive statistics and regression analysis. Findings reveal that respondents highly rated the effectiveness of mass media in accessing information that promote farmers' interactions (mean=3.33), access to market information (mean=3.28) and access to agricultural innovation (3.24) but were least effective to overcome local barrier/language (mean=2.59), linkage to extension agents (mean=2.83), and attend farm training (mean=2.87). Result of the regression analysis further shows that years of experience and amount of income earned had a positive significant ( $p < 0.05$ ) relationship while farm size shows negative significant relationship with aggregated contribution of about 60% ( $R^2 = 0.602$ ,  $F = 14.836$ ,  $p < 0.01$ ) on how women farmers perceived the effectiveness of mass media in accessing agricultural information. Extension information dissemination targeting women farmers should entails proper investigation of their needs, convenient time of listening and dissemination through radio and television.

**Keywords:** Mass media; farm input; markets information; interaction; agricultural innovation

### INTRODUCTION

Communication to farmers for the purpose of disseminating improved practices is the primary role of extension personnel, a function that has been recognized for playing a significant role for high adoption of improved agronomic practices and agricultural development in any agrarian society. According to Anyanwu and Udoh (2022) the uses of mass media (print, broadcast and digital) in disseminating useful agricultural information help farmers to make productive decision. Mass media is a means of mass communication that employ several arrays of technologies to reach numerous audiences. These technologies

used in performing the communication comprises of many outlets disseminated by (i) electronic/broadcast media which include radio, television, audio, and video record; (ii) digital media using mobile phone, internet website, social media, internet radio and television (Anyanwu & Udoh, 2022; Adebisi *et al.*, 2021). Extension personnel use mass media to disseminate improved agricultural technologies to farmers. Agricultural communication through radio and television channels is very much essential in agricultural technology dissemination. According to Mtega and Msungu (2013) radio was the highest ranked communication media used by the farmers in Tanzania.

However, effectiveness is the capacity or validity and or influence of something to provide the expected results (Khan *et al.*, 2017). Thus, effectiveness of mass media could be described as the capacity of mass media to disseminate and receive/collect feedback. Effective mass media aid smooth adoption of technology and increase farm produce when adequately used by farmers (Akwiwu & Patric, 2020). Commonly used mass media tools among farmers in Nigeria include print, television, radio, telephones, mobile phone, and internet (Bolarin, Komolafe & Kolade, 2022).

Empirical evidence on farmers' perception on mass media effectiveness in disseminating and accessing agricultural information among women farmers in Kwara State is rarely available in literature, despite the numerous research conducted among women farmers and agricultural extension organizations' efforts to provide adequate extension services in reaching more women farmers. Women farmers are largely marginalized in terms of access to extension services which has caused low agricultural produce despite the efforts of extension organizations in using mass media to communicate information to large number of farmers in Kwara State (Ajibola *et al.*, 2015). It is against this background, this paper examined how women farmers perceived the effectiveness of mass media to access information disseminated by agricultural extension agents in Kwara State. Specifically, the study was designed to: identify the commonly used mass media by women farmers in the study area, assess the benefits of accessing agricultural information using mass media, examine the perceived effectiveness of mass media used by the women farmers, identify the constraints faced by women farmers in using mass media to access agricultural information; and explore the influence of socioeconomic characteristics on perceived effectiveness of mass media in accessing agricultural information.

## METHODOLOGY

### Study Area

The study area is located between latitudes 8° and 10° North and between longitudes 3° and 6° East, occupying land area of 36,825 km<sup>2</sup> (KSMANR, 2010). Kwara State has sixteen Local Government Areas (LGAs). The state is grouped into four agricultural ecological zones which include: Baruteen, Igbaja, Edu, and Shao. Farming is the foremost occupation of people in the state.

### Sampling Technique and Sample size

The population of Asa Local Government Area is 126,435 and that of Offa Local Government Area 108,432 inhabitants as at 2006 while the projected population as at 2022

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was estimated at 3,551,1023 persons (NPC, 2020). The target populations of this study are mainly women farmers in Asa and Offa LGAs.

Multistage sampling was used to select respondents. First, Asa and Offa Local Government Areas were purposively selected because of the larger agrarian settlements and high number of women involvement in farming. Secondly, nine (9) and six (6) farming communities were randomly selected in Asa and Offa LGAs respectively. The third stage involved random selection of eight (8) women farmers in each community selected to give a total sample size of 120 respondents.

### Data Collection and Analysis

Data were collected in form of interview schedule with the selected respondents. Professionals in the field of agricultural extension performed content validity of the interview schedule before it was administered to sampled respondents. The respondents were requested to indicate effectiveness of agricultural information accessed through mass media on the scale of always effective, sometimes effective, rarely effective and never effective while nominal scores of 3, 2, 1, and 0 were assigned respectively. Coded data were analysed using frequency counts, percentage, and mean statistics while multiple linear regression was employed to establish relationship between socioeconomic factors and effectiveness of mass media delivery to women farmers.

## RESULTS

### Socio-economic Characteristics of Women Farmers

This section presents results on socio-economic characteristics of the respondents. Details of the results are presented in Table 1.

Table 1: Socio-economic characteristics of the respondents (n=120)

Variables	Frequency	%	Mean (SD) Range
Age (years)			34.5(10.31)21-55
18 – 25	30	25.0	
26 – 35	40	33.3	
36 – 50	32	26.7	
Above 50	18	15.0	
Household size (persons)			5.20 (2.85)1-11
1 – 5	77	64.2	
6 – 10	28	23.3	
Above 10	15	12.5	
Farming experience (years)			4.80(4.47)1-20
1 – 5	84	70.0	
6 – 10	31	25.8	
Above 10	5	4.2	
Farm size (hectares)			3.45(2.17)0.7-8.1
Less than 1.0	27	22.5	
1.0 – 5.0	64	53.3	
Above 5.0	29	24.2	
Monthly income (₦)			150,100 (110,010) 100,000 – 310,000
100,000 and below	40	33.3	

101,000 – 150,000	5	4.2
151,000 – 200,000	17	14.2
Above 200,000	58	48.3
Marital status		
Married	67	55.8
Divorced	12	10.0
Widowed	5	4.2
Single	36	30.0
Primary occupation		
Crop farming	97	80.8
Fishing	12	10.0
Trading	11	9.2
Level of education		
Tertiary school	68	56.4
Secondary school	23	19.2
Primary school	12	10.0
No formal education	17	14.2

### Mass Media Used by the Women Farmers

Results in Table 2 showed that radio (mean=3.62), television (mean=3.12), newspaper (mean=2.81), poster (mean=2.76), and extension bulletin (mean=2.66) were ranked first, second, third, fourth and fifth positions respectively as the commonly used mass media adopted by respondents.

Table 2: Commonly used mass media adopted by the women farmers

Variables	Always	Sometimes	Rarely	Never	Mean (SD)	Rank
Radio	74(61.7)	46(38.3)	0	0	3.62(.488)	1 <sup>st</sup>
Television	25(20.8)	84(70.0)	11(9.2)	0	3.12(.537)	2 <sup>nd</sup>
Newspaper	31(25.8)	46(38.3)	32(26.7)	11(9.2)	2.81(.929)	3 <sup>rd</sup>
Poster	27(22.5)	37(30.8)	56(46.7)	0	2.76(.799)	4 <sup>th</sup>
Extension bulletin	23(19.2)	51(42.5)	23(19.2)	0	2.66(.957)	5 <sup>th</sup>

### Benefits of using Mass Media to Access Agricultural Extension Information

Result on the benefits of mass media to access agricultural innovation is presented in Table 3.

Table 3: Benefits of using mass media to access agricultural innovation

Variables	Mean (SD)	Rank
Mass media brings about development for agricultural production	4.19(.639)	1 <sup>st</sup>
Better farm produce processing Methods	3.92(1.058)	2 <sup>nd</sup>
Mass media helps to encourage commercial farming in the community	3.74(.992)	3 <sup>rd</sup>
Enhance access to market information	3.74(1.048)	3 <sup>rd</sup>
Mass media to disseminate agricultural information on farm produce	3.58(.940)	4 <sup>th</sup>
Enhanced storage and retrieval of agricultural information	3.53(1.174)	5 <sup>th</sup>
Enhance linkage between farmers and research	3.48(1.053)	6 <sup>th</sup>
Ease the training of women farmers	3.36(1.151)	7 <sup>th</sup>
Reduce the cost of accessing extension information	3.09(1.021)	8 <sup>th</sup>
Promote early warning on pest/diseases or disaster outbreak	3.06(1.176)	9 <sup>th</sup>

## Women farmers' perceived effectiveness of mass media

Mass media brings about development for agricultural production (4.19) was ranked first, better farm produce processing methods (3.92) was ranked second position, mass media helps to encourage commercial farming in the community and enhance access to market information (3.74) were both ranked third position.

### Effectiveness of the Mass Media Used by the Women Farmer

On the effectiveness of mass media among women farmers, Table 4 showed that respondents always use mass media for marketing agricultural produce (50.0%). Other purposes some appreciable number of the respondents uses mass media for were to promote interaction among farmers (47.5%), provision of information on agricultural inputs (42.5%), and promoting early warning on pest/disease outbreak (40.8%), indicating that respondents in the study area mainly effectively use mass media for the purpose of agricultural marketing.

Table 4: Perceived areas of effective use of the mass media by the women farmer

Areas of effectiveness	Mean (SD)	Mean rank
Promotion of interaction among farmers	3.33(.771)	1
Access to markets information	3.28(.809)	2
Access to agricultural innovation	3.24(.550)	3
Promote early warning and control of pest/disease outbreak	3.18(.785)	4
Provision of information on farm inputs	3.12(.909)	5
Access to weather forecast information	2.98(.772)	6
Storage and retrieval of agricultural information	2.88(.762)	7
Attend farm training	2.87(.916)	8
Linkage to extension agents	2.83(1.079)	9
Overcome language and location barriers	2.59(.948)	10

The level of effectiveness of mass media among women farmers indicated in Table 5 showed that 53.3% were highly effective in the use of mass media, 46.7% were moderately effective in the use of mass media while none was found in the low category of the effectiveness level.

Table 5: Level of effectiveness of the mass media adopted by the women farmer

Effectiveness	Frequency	Percentage	Mean
High (3.0 – 4.0)	64	53.3	3.0
Moderate (2.1 – 2.9)	56	46.7	
Low (1.0 – 2.0)	0	0.0	
Total	120	100.0	

### Constraints to the Use Mass Media in Accessing Extension Information

Some top-rated constraints to access mass media as indicated by respondents in Table 6 were limited coverage of farmers' needs (2.50), and time of broadcast of programme (2.48). Other prominent constraints include erratic power supply (2.42), high cost of services (2.38), high cost of devices (2.32).

Table 6: Constraints faced against the use of mass media by the women farmers

Variables	Mean (Std. Dev.)	Mean rank
Limited coverage of farmers' needs	2.50(.594)	1 <sup>st</sup>
Time of broadcast of programme	2.48(.579)	2 <sup>nd</sup>
Unstable power supply	2.42(.643)	3 <sup>rd</sup>
High cost of services by network providers	2.38(.651)	4 <sup>th</sup>
High cost of devices	2.32(.809)	5 <sup>th</sup>
Cultural barriers	2.17(.823)	6 <sup>th</sup>
Language barrier	2.11(.838)	7 <sup>th</sup>
Poor infrastructural development	2.10(.793)	8 <sup>th</sup>

Results of regression analysis in Table 7 showed that some socio-economic factors significantly influenced how women farmers' perceived the effectiveness of mass media in accessing agricultural extension services with aggregated contribution of about 60% ( $R^2 = 0.602$ ,  $F = 14.836$ ,  $p < 0.01$ ).

Table 7: Multiple linear regression showing socio-economic factors as predictors of women perceived effectiveness of mass media

Variables	Coef.	Std. Error	t-statistics	p-value
Age in years	-0.003	0.008	-0.362	0.718
Marital status (married 1, otherwise 0)	-0.054	0.059	-0.913	0.363
Household size in persons	-0.021	0.015	-1.432	0.155
Level of education (years of schooling)	0.009	0.022	0.426	0.671
Farm size in hectares	-0.196	0.064	-3.060	0.003**
Years of experience	0.049	0.013	3.673	0.000**
Income in naira	2.096E-6	0.000	6.325	0.000**
(Constant)	3.277	0.271	12.106	0.000
R-square = 0.602 = 60.2%				

## DISCUSSION

On the perceived benefits of mass media, findings show that women farmers acknowledged the importance of mass media as a tool to source for information on agricultural production practices, processing, market, and distribution of agricultural products as well as trends of knowledge update. According to Jiriko, Mbah and Demenongu (2020), mass media is an enriched medium of accessing agricultural information for farmers.

The average score of usage was 3.0 indicating a value assigned to the scale of "sometimes", implying a moderate effective usage of mass media for agricultural purposes. This showed that information accessed through mass media has not effectively benefitted the respondents, which may result to low farm output among women farmers in the study area. Effectiveness of extension information accessed brings about positive impact on agricultural produce of farmers (Buehren *et al.*, 2019; Adesiji *et al.*, 2017).

Findings on constraints indicating limited coverage of farmers' needs and time of broadcast of programme is similar to report by Idigie and Ojomo (2020) that agricultural information disseminated through mass media are not in line with farmers' needs. However, availability of required, timely and dependable agricultural information is important to accelerate farm production (Zhang *et al.*, 2016). On erratic power supply found in this study, similar study by Amusat and Oyedokun (2018) also reported irregular power supply ranked

first as major constraint faced by farmers in accessing agricultural information through mass media.

The regression results showed that years of experience and income indicated positive significant relationship while farm size shows negative and significant relationship. This implies that years of experience and income earned from farming are factors expected to have taught the farmers lessons on the effectiveness of mass media in accessing agricultural extension services. That is, more years of experience and more income earned as a result of agricultural information accessed through mass media the more, they perceived mass media as effective. Meanwhile women farmers' perceived effectiveness of mass media may decrease when their farm size increases. This is expected as large-scale farm may not be effectively managed with information accessed through mass media only. Larger scale farmers are often agri-entrepreneurs who produce for market purposes (Komolafe, Adesiji & Akanbi, 2022). They invest huge amount of money, thus, access agricultural consultant/experts to information to manage farm rather than information relying solely on information via mass media.

### CONCLUSION

According to findings of this study, it can be inferred that radio, television, and newspaper were the leading mass media used by women farmers. Mass media are effectively used by women farmers at moderate level mainly for marketing agricultural produce, promoting interaction among farmers, provision of information on agricultural inputs, and promoting early warning on pest/disease outbreak. Also, limited coverage of farmers' needs, time of broadcast of programme, erratic power supply, unaffordable cost of services to enable access to internet, and high-priced devices were the constraints facing women farmers to effectively use mass media to access information. Socio-economic factors significantly influenced the effective access to extension information through mass media.

Findings have far-reaching implications for extension policy formulation, planning and implementation of agricultural programme geared towards the effective dissemination of extension information via radio, television and farmers group that will address local language/barrier, linkage to extension agents, and attend farm training for women farmers in Nigeria. Planning stage should entail proper investigation of women farmers' need, convenient time of listening so that implementation of information dissemination via key mass media used by the women will be demand driven. Furthermore, relevant government agencies should ensure regular power supply and low cost of electronic devices and services are provided for the women farmer.

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