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THE ROLE OF MASS MEDIA IN VEGETABLE PRODUCTION IN KHANA LOCAL GOVERNMENT AREA, RIVERS STATE, NIGERIA

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ABSTRACT

The study assessed the role of mass media in vegetable production in Khana Local Government Area of Rivers State, Nigeria, the study describes the socio-economic characteristics of vegetable farmers, identify their farming experience, ascertain their household size, looked at their monthly income, accessed their awareness and use of mass media channels for information dissemination, identified constraints to the role of mass media to vegetable farmers in the study area. Multi-staged sampling technique was used to randomly draw 100 respondents from the study area. Data were collected with the aid of a structured questionnaire and analyzed using frequency, means, percentages and correlative analysis. The study found that females dominated the population, with 56.0% of the respondents being married, 18.0% divorced/separated, while single and widowed individuals each accounted for 13.0%. The age distribution ranged from 21 to 60 years and above, with respondents within the age bracket of41-50 years constituting 35.0%, followed by 31.0% for the 51-60 years age group. The majority (58.0%) had secondary education, while 18.0% had tertiary education. The highest percentage, 39.0%, was recorded for those with 11-15 years of experience, followed by 25.0% for 6-10 years of experience. The largest percentage, 48.0%, had household sizes of 5-8 members, and the highest percentage, 27.0%, fell within the N31,000 - N41,000 income range. The study identified radio, education centers, and SMS as the most acceptable and available sources of information for the farmers, while mass media such as television, newspaper, magazine, Facebook, Instagram, Twitter, WhatsApp, SMS, bulletin, and flier/pamphlet were regarded as ineffective mass media channels in the study area. The study concluded that age and educational level of the vegetable farmers in Khana Local Government Area, Rivers State had a significant relationship with their awareness and use of mass media channels for information dissemination. The study recommends improving infrastructure, developing localized content and interactive platforms in local languages, collaborating with the private sector, offering media literacy training, and integrating mass media with on-the-ground extension services for effective agricultural communication.

Keywords: Role, Mass Media, Vegetable, Production

INTRODUCTION

According to Smith and Huitric, (2017), mass media platforms such as television, radio, newspapers, magazines, and online platforms play a vital role in raising awareness and educating the public about the importance of vegetable consumption. Through various media channels, mass media can effectively disseminate information on the nutritional value, health benefits, and role of vegetables in maintaining a balanced diet. By providing accurate and accessible information, mass media campaigns and programs can encourage individuals to prioritize vegetables in their daily meals, thus driving the demand for sustainably produced vegetables. Furthermore, mass media plays a crucial role in disseminating knowledge and best

practices to vegetable farmers. As highlighted by Brevik and Cerdå (2018), mass media platforms provide a means for agricultural experts, researchers, and successful farmers to share their expertise andexperiences. Through interviews, articles, and educational programs, mass media facilitates the transfer of valuable information on innovative techniques, pest and disease management, soil health, and sustainable farming methods by leveraging mass media, farmers can access knowledge that can enhance their farming practices, increase productivity, and adopt sustainable approaches to vegetable production.

Mass media refers to various forms of communication channels that reach a large audience simultaneously. It encompasses a wide range of mediums, including print media (newspapers, magazines), broadcast media (television, radio), digital media (websites, social media platforms), and other forms of communication such as billboards and posters. Mass media plays a crucial role in disseminating information, news, entertainment, and advertising to a broad audience, often influencing public opinion, shaping cultural norms, and facilitating the exchange of ideas on a mass scale McQuail (2010).Vegetable production plays a crucial role in providing essential nutrients, vitamins, and minerals to human diets, contributing to food security and nutrition. Vegetables are rich sources of dietary fiber, antioxidants, and phytochemicals, which are beneficial for overall health and disease prevention (Liu, 2013).Vegetable production refers to the cultivation and management of edible plants that are primarily grown for their vegetative parts, including leaves, stems, roots, and flowers, which are consumed as food. It involves the entire process of growing, harvesting, and handling vegetables for commercial or subsistence purposes (Hochmuth & Hochmuth, 2014).

In vegetable production, farmers employ various cultivation techniques, such as seed selection,landpreparation, planting, irrigation, fertilization, pest and disease management, and postharvest handling, to ensure successful crop growth and maximize yields (Bhattarai *et al.,* 2015).Vegetable production is a critical component of agricultural systems worldwide, contributing to food security, nufrition, and sustainable development. As the global population grows and dietary preferences evolve, the demand for fresh, nutritious vegetables is increasing. In this context, the role of mass media becomes increasingly relevant, as it has the potential to significantly benefit vegetable production through its influence on consumer behavior, knowledge dissemination, and advocacy efforts.

Moreover, mass media serves as a conduit for market information and trends, benefiting both vegetable producers and consumers. As noted by Carpio et al. (2019), mass media platforms enable the dissemination of information on market demand, prices, consumer preferences, and seasonal produce. This information empowers farmers to make informed decisions about crop selection, timing of production, and marketing strategies. Simultaneously, consumers can access about the availability, quality, and nutritional attributes of different vegetables, enabling them to make informed choices when purchasing vegetables. Additionally, mass media plays a crucial role in advocating for the vegetable production sector. According to Bessette *et. al.,* (2020), mass media provides a platform for experts, policymakers, and stakeholders to discuss and raise awareness about issues related to vegetable production.

Objectives of the Study

The broad objective of the study was to assess the roles of mass media in vegetable production in Khana Local Government Area. The specific objectives were to;

i. describe the socio-economic characteristics of vegetable farmers in the study area.
ii. identify the sources of mass media used by vegetable farmers in the study area.
iii. ascertain the level of awareness of mass-media role.
iv. ascertain the effectiveness of mass media role in vegetable production and

v. identify the constraints to the role of mass media in vegetable production in the study area.

Hypothesis of the Study

Ho_1: There is no significant relationship between socio- economic characteristics and access to mass media information on vegetable farming in study area.

METHODOLOGY

The study was carried out in Khana Local Government Area (LGA) of Rivers State Nigeria Khana Local Government Area is one of the 23 local government areas in Rivers State, Nigeria. It is located within the longitude and latitude of4.80520 N, 7.3191 0 E. in the south-westernpart of rivers state and is bordered by Gokana, Tai, and Eleme LGAs to the north, south, and west respectively. To the east, Khana LGA shares a border with Andoni LGA, which is located across the Bonny River home to several communities, including Bori, the traditional headquarters of the Ogoni people. The local government area has a land area of approximately 1,189 square kilometre and a population of over 300,000 people, according to the 2006 census. The area is known for its rich cultural heritage, as well as its natural resources, including oil and gas deposits Khana Local Government has about Fourty (40) communities. Khana local government has three (3) clans which are Nyokhana, Ken-khana and Babbe. And combination of many communities which includes; Taabaa, Okwale, Sogho, Bangha, Bianu, Opouko, Kalaoko, Kpong, Kor, Nyokuru, Luebe, Loore, Yae, Dean, Wiisue-ko, Lueku, Kpaa, Bane, Kono, Kwawa, Buan, Luubara, Duboro, Pue, Kpean, Eweh, Wiiyaakara, Kaani, Gure, Boue, Kaa, Sii, Gwara, Eeken, Betem, Luawii. These communities are predominantly occupied by the Ogoni ethnic group, which is one of the major ethnic groups in Rivers State.

RESULTS AND DISCUSSION

This part of the study is very important as it covers the respondent's Sex, Marital Status, Age (years), Educational Level, Farming Experience (years), Household Size and Income (₦). The result is presented in the table below using frequencies and percentage and mean.

Table 1: Socio-economic Characteristics of Vegetable Farmers in the Study Area

Variables	Category	Frequency	Percentage (%)	Mean
Sex	Male	41	41.0	
	Female	59	59.0	
	Total	**100**	**100.0**	
Marital Status	Single	13	13.0	
	Married	56	56.0	
	Divorced/Separated	18	18.0	
	Widowed	13	13.0	
Age (years)	21 – 30	8	8.0	
	31 – 40	20	20.0	46 years
	41 – 50	36	35.0	
	51 – 60	31	31.0	
	60 and above	5	5.0	
Educational Level	No formal education	12	12.0	
	Primary education	12	12.0	
	Secondary education	58	58.0	
	Tertiary education	18	18.0	
Farming Experience (years)	1 – 5	11	11.0	

	6 – 10	25	25.0	12 years
	11 – 15	39	39.0	
	16 – 20	23	23.0	
	21 and above	2	2.0	
Household Size	1 – 4	36	36.0	
	5 – 8	48	48.0	**6 persons**
	9 – 12	11	11.0	
	13 and above	5	5.0	
Income (₦)	21,000 – 30,000	19	19.0	
	31,000 – 40,000	13	13.0	
	41,000 – 50,000	27	27.0	
	51,000 – 60,000	10	10.0	
	61,000 – 70,000	13	13.0	₦51,300
	71,000 – 80,000	5	5.0	
	81,000 – 90,000	7	7.0	
	91,000 – 100,000	6	6.0	

Field Survey, 2024

Table 2: Sources of Mass Media Information for Vegetable Farming among Vegetable Farmers in the Study Area

Sources of Mass Media used	Frequency	Percentage (%)	Ranking
Radio	84	84.0	1st
	16	16.0	
Newspaper	32	32.0	2nd
	68	68.0	
Television	39	39.0	3rd
	61	61.0	
SMS	82	82.0	4th
	17	17.0	
Periodicals	11	11.0	5th
	89	89.0	
Facebook	27	27.0	6th
	73	73.0	
Magazine	12	12.0	7th
	88	88.0	
WhatsApp	21	21.0	8th
	79	79.0	

Field Survey, 2024

Table 3: Effectiveness of Mass Media among Vegetable Farmers in the Study Area

Variables	VE (4)	E (3)	LE (2)	NE (1)	Mean	Decision
Telephone	10	31	47	11	2.40	Disagree
Television	11	16	17	56	1.80	Disagree
Radio	20	45	22	13	2.72	Agree
Newspaper	0	15	27	58	1.58	Disagree
Magazine	0	4	17	79	1.25	Disagree
Facebook	0	8	15	77	1.31	Disagree

Instagram	0	4	9	87	1.17	Disagree
Twitter	0	4	12	84	1.20	Disagree
WhatsApp	2	7	20	71	1.40	Disagree
SMS	11	28	53	8	2.42	Disagree
Bulletin	1	1	20	78	1.22	Disagree
Flier/pamphlet	1	14	60	25	1.89	Disagree

Field Survey, 2024
Criterion Mean: ≥ 2.50

Table 4: Level of Awareness of the Use of Mass Media among Vegetable Famers

Variables	VE (4)	E (3)	LE (2)	NE (1)	Total	Mean	Decision
Television	11	15	15	59	100	1.79	Disagree
Radio	19	43	28	10	100	2.70	Agree
Newspaper	1	21	26	53	100	1.68	Disagree
Magazine	1	7	19	73	100	1.33	Disagree
Facebook	1	14	20	65	100	1.48	Disagree
Phone	13	21	55	11	100	2.36	Disagree

Field Survey, 2024
Criterion Mean: ≥ 2.50

Table 5: Constraints to the Use of Mass Media among Vegetable Farmers in the Study Area

Constraints	SA (4)	A (3)	D (2)	SD (1)	Sum	Mean	Remark
Language barriers	90	6	2	2	100	3.86	Agree
Lack of adequate information	10	80	9	1	100	2.98	Agree
Illiteracy of the farmers	29	25	40	5	100	2.79	Agree
Inadequate fund	58	35	6	1	100	3.53	Agree
Erratic power supply	30	37	23	1	100	3.16	Agree
Poor access to network	52	35	12	1	100	3.40	Agree

Field Survey, 2024
Criterion Mean: ≥ 2.50

Table 6: Correlation Analysis of the Relationship between the Socio-Economic Characteristics of Respondents and the Effectiveness of the Role of Mass Media in the Study Area

Socio-economic characteristic	Telephone	Television	Radio	Newspaper	Magazine	Facebook	Instagram	Twitter
Sex	0.492	0.669	0.552	0.400	0.450	0.450	0.730	0.974
Marital status	0.302	0.171	0.241	0.500	0.186	0.103	0.556	0.808
Age	0.135	0.017^{*-}	0.002^{-*-}	0.021^{*-}	0.072	0.008^{-*-}	0.197	0.915
Educational Level	0.751	0.067	0.405	0.003^{++}	0.127	0.051^{+}	0.025	0.013^{++}
Experience	0.459	0.885	0.811	0.566	0.635	0.671	0.314	0.169
Household size	0.737	0.957	0.960	0.825	0.858	0.598	0.868	0.671
Income	0.425	0.460	0.122	0.554	0.771	0.124	0.115	0.095

Field Survey, 2024
+*- Positive/Negative Correlation significant at the 0.05 level (2 – tailed)
++-*- Positive/Negative Correlation significant at the 0.01 level (2 – tailed)

DISCUSSION

Result from table 1 above showed that 41% of the vegetable producers in Khana Local Government Area of Rivers State were males while 51% were females. Although there were considerable participation of both gender in vegetable farming in the study area, the result showed females dominance.

Marital status: About 13% of the respondents were single, 56% were married, 18% were divorced/separated while 13% were widows/widowers. The result showed that vegetable farming in the area was dominated by married persons. Majority of the respondents in the study area are married indicating that most of the rural women in the area tend to participate actively in farming when they are married which, according to Anderson *et. al.,* (2017) could be a quest to achieve financial freedom and successfully meet the needs of the family.

Age: The result from Table 1 showed that 8% of the respondents were between the age bracket of 21-30years, 20% were within the age range of 31-40years, 36% were between the age bracket of 41-50years, 31% were within the age bracket of 51-60years while 5% were above 60years.The average age of the vegetable farmers reported was 46years.

Educational level: About 12% of the respondents had received no formal education, 12% had received primary school level education, 58% had received secondary school level education while 18% of the vegetable farmers in Khana Local Government Area of Rivers State had received higher institution educational training. According to Kirtti and Phanindra (2018), the level of educational of farmers influences the level of awareness and the ease to adopt new farming technologies and techniques.

Years of farming experience: The result showed that 11% of the respondents had 1-5years of farming experience, 25% had 6-10years farming experience, 39% have had 11-15years experience in farming, 23% had 16-20years of farming experience while 2% had over 20year of38experience in vegetable farming. The average years of farming experience of the vegetable farmers reported was 12years. Farming experience can play an important role in shaping farmers' decisions and practices, from the adoption of new technologies to the adoption of sustainable innovations and the perception of climate change impacts (Stuiver *et al.,* 2011).

Household size: The result from Table 1 showed that 36% of the respondents had between 1-4 persons in their household, 48% had between 5-8 persons in their households, 11% had between 9-12 persons in their households while 5% had over 12 persons in their households. The average household size of the vegetable farmers reported was 6 persons. According to Leonard *et. al.,* (2012), the size of the household can affect the amount of food that needs to be produced to meet the household's consumption needs. Rashidin *et. al.,* (2020) found that an increase in household size leads to a decrease in per capita farm income.

Monthly income: About 19% of the respondents earned between N21,000 - ₦30,000 monthly, 13% earned between ₦31,000 –₦40,000 monthly, 27% earned between ₦41,000 - ₦50,000 monthly, 10% earned between₦51,000 –₦60,000 monthly, 13% earned between

₦61,000₦70,000 monthly, 5% earned between ₦71,000 - ₦80,000monthly, 7% earned between ₦81,000 - ₦90,000 per month while 6% of the vegetable farmers in Khana Local Government Area of Rivers State earned between ₦91,000 –₦100,000 monthly. The average monthly income reported was ₦51,300. Income is a broad measure of profits in the farm sector, it can have a significant impact on the farm sector, affecting profits, expenses, and farm size. It can also have implications for nutrition within agricultural projects (USDA, 2023).The results is presented in table 1 above using frequencies, percentages and means.

Table 2 above shows the distribution of information for vegetable farmers. From the descriptives statistics, variable below mean threshold of 1.50 were considered not available as source of information but those above 1.50 were accepted freely available for sources of information. Therefore, variable such as Television (1.42), Newspaper (1,35), Magazine (114), Facebook (1,29), WhatsApp (1.24), Bulletin (1.11), were not readily available sources of information for the farmers. However, variable such as Radio (1.84), SMS (1.83) were the ones identified for providing acceptable and available information to vegetable farmers in the study area.
The result is consistent with the findings of FAO (2013) which reported that in rural areas, the most widely used electronic mass medium is radio, primarily because of its versatility which allows for the rapid diffusion of important messages on new agricultural production ideas and techniques as well as on health, nutrition, family planning, and other social and cultural issues. Radio can also be used for training and the transfer of technologies, and it can promote dialogue and debate on the major issues of rural development as well as providing a platform for the expression of rural women's needs, opinions, and aspirations. The result indicated that most of the vegetable farmers in the study area are living in rural areas which explains why they had limited access to mass media (MSU, 2020).According to BenYishay and Mobarak (2013), farmers prefer interpersonal communication sources over mass media sources. While social networks and other forms of technology can be useful for communicating with farmers, communicators who face conditions most comparable totarget farmers are the most persuasive. However, information in rural areas is best delivered face-to-face, from family and friends.

Results on table 3 showed that Radio (2.72) with mean score greater than 2.50 (which is the benchmark according to Liker Scale Rating) was accepted by the vegetable farmers as an effective medium among the listed mass media channels through which they receive information in the study area. Telephone (2.40), Television (1.80), Newspaper (1.58), Magazine (1.25), Facebook (1.31), Instagram (1.17), Twitter (1.20), WhatsApp (1.40), SMS (2.42), Bulletin (1.22) and Flier/pamphlet (1.89) which had mean scores less than 2.50 were regarded by the vegetable farmers as ineffective mass media channels in the study area.
Radio programmes are most effective when produced with audience participation, in local languages and with consideration for cultural traditions. FAO (2013). This could be due to the limited access to digital and television media, low literacy rates, lack of interest, and reliance on word of mouth which make mass media, apart from radio, less effective in rural areas. Rural areas often have limited access to the internet and cable television, which limits the reach of digital and television media. Rural areas often have lower literacy rates, which can make it difficult for people to read newspapers or other print media. Rural residents

rely more on word of mouth for some types of local information. This means that information spreads through personal networks rather than throv.gh mass media. Radio continues to be the main source of news and entertainment in rural areas. This is because radio is more accessible and affordable than other forms ofmass media (Miller *et. al.,* 2012).

The results from table 4 showed that the respondents were aware (as indicated by their mean scores which were greater than 2.50) of mass media channels like Radio (2.70) with the latter being most popular. The level of awareness of the respondents about Television (1.79), Newspaper (1.68), Magazine (1.33), Facebook (1.48) and phone (2.36) however was not significant (as indicated by their mean scores which were less than 2.50) indicating that majority of the respondents were not aware of such mass media channels.
Most rural areas in developing countries do not have access to ICT networks and computers, which limits their level of awareness and the use of web-based media in disseminating agricultural knowledge (Mtega,2018). Rural farmers prefer radio and face-to-face communication over other mass media, which is an indication of a very high level of awareness in such media. This could be because radio is a cost-effective way to reach a large audience, and it can be accessed even in areas with limited internet connectivity. Face-to-face communication is also preferred because it allows tanners to ask questions and receive Immediate feedback (Ussery, 2021). There is however, limited research works on the level of awareness of mass media use among vegetable farmers in the study area.
The results from table 5 showed the respondents' agreement on language barriers (3.86), lack of adequate information (2.98), illiteracy of the farmers (2.79), inadequate fund (3.53), erratic power supply (3.16) and poor access to network (3.40) as challenges/constrains to the use of mass media in the study area.
Language barriers can prevent farmers from participating in dialogue and debate on the major issues of rural development, expressing their needs, opinions, and aspirations, and receiving feedback from other farmers and experts. Farmers who do not speak the language used in mass media may not be able to access important information on new agricultural production ideas and techniques, health, nutrition, family planning, and other social and cultural issues. When interacting with media content, farmers may create their own meaning influenced by their cultural values, resulting in some adopting, rejecting, or modifying the information 'presented inthe media (Ndhlovu and Mpofu, 2016). Farmers may not have access to the necessary information to make informed decisions about their farming practices. This can lead to poor yields, low income, and other negative outcomes (Liu *et. al.,* 2023). Illiteracy negatively affects the use of mass media among rural farmers in several ways. For instance, low levels of ICT literacy skills can result in a digital divide and low adoption of mass media among rural farmers, which can limit their access to adequate information (Alant and Bakare, 2021). Inadequate funds can lead to poor communication systems, which can make it difficult for farmers to access agricultural information sources and services. Erratic power supply is a problem that hinders the use of information and communication technologies (ICTs) among farmers. Most mass media devices require power, and the absence of this could interfere with their functioning or use (Ani et al., 2015). Poor access to network and inadequate extension services are also major problems that hinder the use of ICTs among farmers (Abubakar, 2021).

In table 5 the correlation analysis showed that age and educational level of the vegetable farmers in Khana Local Government Area, Rivers State had significant relationship ($p \leq 0.05$) with the effectiveness of the role of mass media in the study area. Other socio-economic characteristics like sex, marital status, experience, household size and income however, showed no significant influence on the effectiveness of the role of mass media in the study area. According to Yaseen *et.al.,* (2016), education level is positively associated with farmers' accessibility to agricultural information from media sources. If education level of rural farmers is increased one time, it will increase farmers' accessibility to agriculture information from media source by 1.21 to 1.23 times. Moyo and Salawu (2019) reported that age-group and education are associated with communication preferences of some media. From the result above, the null hypothesis which stated that there is no significant relationship between the socio-economic characteristics and the effectiveness of the role of mass media in the study area was therefore, rejected.

CONCLUSION

The study revealed that mass media, except Radio, had less popularity, adoption and usage in the study area. The result indicated that age and education influenced the effectiveness of the role of mass media among vegetable farmers in Khana Local Government Area of Rivers State. Again, the use of Mass Media in the study area was constrained by language barriers inadequate Kind, illiteracy, erratic power supply etc. It is therefore, imperative 10 increase digital literacy to improve adequate information transfer among the vegetable farmers in the study area.

RECOMMENDATIONS

According to results, the following recommendations were made:

1. To overcome language barriers, communication approaches that use local languages and dialects should be developed and implemented. The use of audiovisual materials, such as videos and pictures, can also help overcome language barriers and promote dialogue and debate among farmers.
2. Increasing digital literacy to improve adequate information transfer among the vegetable farmers in the study area.
3. Policies, regulations, investments, and required capacities that would allow communication for development (ComDev) to be mainstreamed as a component of family farming agriculture and rural livelihoods can be implemented.

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