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# ANALYSIS OF ACCESS AND USE OF SOCIAL MEDIA FOR AGRICULTURAL INFORMATION AMONG POULTRY FARMERS IN ABIA STATE, NIGERIA

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**ABSTRACT**
*The study analyzed access and use of social media for agricultural information among poultry farmers in Abia State, Nigeria. The specific objectives were to: describe the socio-economic characteristics of the respondents; determine the level of utilization of social media for agricultural information; and determine the level of access to social media for agricultural information of the poultry farmers in the study area. Multi-stage random sampling techniques were used to select 126 poultry farmers. Data were collected with the aid of a structured questionnaire. Data were analyzed using simple descriptive and inferential statistics. The results revealed that the majority (65.10%) of the respondents were males and married (82.5%), with an average age of 45.1 years. The majority of the respondents (68.3%) attended post-secondary education. Facebook* ($\bar{x} = 3.46$)*, and WhatsApp* ($\bar{x} = 3.40$) *were highly accessed for agricultural information, and utilized* ($\bar{x} = 3.29; 3.60$)*. The result of the relationship between the selected socioeconomic characteristics of poultry farmers and use of social media for agricultural information showed that age (p-value = -4.998), farming experience (p-value = 1.924), educational level (p-value = 2.399) and Membership of cooperatives (p-value = 2.083) influenced the use of social media for agricultural information. The study recommended that the ADP's campaigns should prioritize utilizing popular youth-centric platforms such as WhatsApp, Facebook, and YouTube to reach graduate agripreneurs and farmers of livestock programmes.*

**Keywords: Information, Agriculture, Social media, Poultry, Farmers.**

## INTRODUCTION

Conventionally, farmers' access to agricultural information has been through networks of friends, relatives, and, formally, through contacts with extension agents and input suppliers (Fidel Ugwuowo, 2021, and Mtega, 2021). Currently, there are shortcomings from these conventional sources; therefore, the need for improved information sources (Mtega, 2021), such as the innovations in the area of Information and Communication Technologies (ICT).

Social media, as one of the recent advancements in ICT, is a means of interaction where people create, share, and exchange information and ideas in virtual communities and networks. Social media has been defined as an online medium where users can communicate and interact with one another for the interchange of information and networking (Nwachukwu,2023; Briandana and Dwityas, 2019). Eke *et al.* (2014) viewed social networking sites as modern interactive communication channels through which people connect, interact, share ideas, experiences, pictures, messages, information of interest, and collaborate. These platforms provide high interactivity through reliance on mobile and web-based technologies. Social media integrates technologies, social interaction, and content creation to collaboratively connect online information (Chiemela *et al.*, 2015).

Poultry farming, defined as the rearing of domesticated chicken, turkey, guinea fowl, and other game birds by a farmer (Abiola and Edeoghon, 2014). As one of the integral aspects of livelihood for both rural and urban middle income earners around the world, poultry farming is a good source of income, and according to the Food and Agriculture Organization (2010), it occupies about 33% of the total global animal protein production for household consumption. Poultry production thus requires constant access to relevant information.

Social media has transformed the method of communication and interaction of people universally, thus impacting businesses in positive ways. More attention needs to be paid to its utilization and effects in poultry farming in Abia State. Traditionally, access to information by most poultry farmers in the State has been through extension workers, television, radio, and libraries (Onyeneke *et al.,* 2016). Ifeoma et al. (2023) opined that advancement in poultry production can be achieved by providing reliable information via channels easily accessible to farmers. The use of communication methods such as farm and home visits, use of contact farmers, and print media by extension workers in the state is becoming inefficient and, therefore, calls for the use of more proactive means by agricultural information providers for the benefit of farmers and other users (Olaniyi, 2013). Previous research by Onyeneke *et al.* (2016) showed that among other communication sources, farmers use mobile phones to communicate with each other. Some of these phones have internet connectivity and the extent poultry farmers in the study area utilize it to connect to social media for agricultural information, little work has been reported; be it on: marketing of their produce, accessing production information, weather forecasting and other meteorological information, feeding and nutrition, credit and loan procurement, and other relevant information. Against this backdrop, the study analyzed the access and use of social media in agricultural information search among poultry farmers in Abia State, Nigeria.

This study was necessary because social media has become a powerful tool that connects people globally from the comfort of their homes, alongside traditional media. This study will identify ways of employing social media in communicating with smallholder poultry farmers towards sustaining increased production and improving their livelihood.

The specific objectives of the study were to determine the level of utilization of social media for agricultural information among the poultry farmers and to determine the level of access to social media for agricultural information among the poultry farmers in the study area.

$H_0$: It was hypothesized that there is no significant relationship between selected socio-economic characteristics of respondents and the use of social media for agricultural information.

## METHODOLOGY

The study was carried out in Abia State, Nigeria. Abia is a State in the southeastern part of Nigeria. The research adopted the multi-stage random sampling technique. The first stage consisted of randomly selecting two (Ohafia and Umuahia) out of the three (Umuahia, Aba, and Ohafia) agricultural zones of the State. At the second stage, three ADP blocks were randomly selected from each zone, giving a total of 6 blocks. At the third stage, 3 circles were purposively selected from each block based on areas with a larger population of poultry farmers, giving a total of 18 circles. At the fourth stage, seven poultry farmers were randomly selected from each circle to give a total of 126 farmers who served as respondents.

The study used primary data collected from poultry farmers in Abia State with the aid of a validated structured questionnaire. The data were analyzed using descriptive statistics such as frequency counts, percentages, and mean, and mean score realized from a 5-point Likert rating scale. The time spent in the use of social media platforms for agricultural information was graded as: Hourly = 5, Daily = 4, Weekly = 3, Monthly = 2, and Never = 1. While, extent of use of social media to obtain agricultural information was scaled thus: Very often = 5, Often = 4, Sometimes = 3, Rarely = 2, Never =1. Based on the mid-score of 3.00, variables with mean scores equal to or above 3.00 were regarded as high, while those with mean scores less than 3.00 were regarded as low.

## RESULTS AND DISCUSSION

### Socio-economic Characteristics of Poultry Farmers in Abia State:

The results of data analysis on selected socio-economic characteristics of poultry farmers in the study area are presented in Table 1.

**Table 1: Distribution of respondents by socio-economic characteristics**

| Variables | Frequency | Percentage | Mean |
|---|---|---|---|
| **Gender** | | | |
| **Male** | 82 | 65.1 | |
| **Female** | 44 | 34.9 | |
| **Total** | **126** | **100**.0 | |
| **Marital status** | | | |
| **Married** | 104 | 82.5 | |
| **Not married/separated** | 22 | 17.5 | |
| **Total** | **126** | **100** | |
| **Age (years)** | | | |
| **≤40** | 50 | 39.7 | |
| **41-50** | 39 | 30.9 | |
| **≥51** | 37 | 29.4 | |
| **Total** | **126** | **100.0** | **45.1** |
| **Educational Level** | | | |
| **Primary Education** | 8 | 6.3 | |
| **Secondary Education** | 32 | 25.4 | |
| **Tertiary Education** | 86 | 68.3 | |
| **Total** | **126** | **100.0** | |
| **Flock size** | | | |
| **≤500** | 63 | 50.0 | |
| **501-600** | 12 | 9.5 | |
| **601-799** | 14 | 11.1 | |
| **≥ 800** | 37 | 29.4 | |
| **Total** | **126** | **100.0** | **609.6** |
| **Farming Experience (in years)** | | | |
| **< 10** | 47 | 37.3 | |
| **10-15** | 42 | 33.3 | |
| **16-21** | 15 | 11.9 | |
| **22-27** | 4 | 3.2 | |
| **≥ 28** | 18 | 14.3 | |
| **Total** | **126** | **100.0** | **13.5** |
| **Membership in cooperatives/farmers' organizations** | | | |
| **Yes** | 53 | 42.06 | |
| **No** | 73 | 57.93 | |
| **Total** | **126** | **100.0** | |
| **Income level (₦/Month)** | | | |
| **<₦20,000** | 4 | 3.2 | |
| **₦20,000 – ₦40,000** | 58 | 46.0 | |
| **₦41,000 – ₦60,000** | 37 | 29.4 | |
| **≥ ₦61,000** | 27 | 21.4 | |
| **Total** | **126** | **100.0** | **₦48,404.76** |

*Source: Field survey data, 2019*

The result indicated that the majority (65.1%) were males. The dominance of male farmers in poultry production indicates the tasking and energy-consuming nature of the enterprise. **Marital Status.** Result shows that the majority (82.5%) of the respondents were married, while 17.5% were either single, separated, or widowed. **Age.** Over 70% of the respondents were below the age of 51 years, and the mean age of 45.1 years.

**Level of education.** About 68.3% of the respondents attended tertiary/post-secondary education, while the least population of 6.3% acquired the first school leaving certificate education level.

**Flock size of Poultry Farmers**

Table 1 also revealed that the majority (50.0%) of the respondents had a flock/farm size of less than 500 birds. This showed that a higher percentage of the respondents were within the small-scale poultry producers. Sandeep *et al.* (2022) revealed that the majority of the farmers belonged to a small category of flock holdings; the use of social media is perceived to grant them more opportunity to access relevant information for profitable farming enterprises and increased productivity.

**Years of experience.** The majority (62.7%) of the sampled farmers had above 10 years of farming experience. It was expected that a longer period of experience would give rise to high use of innovations such as social media that would increase productivity.

**Membership of cooperatives.** A greater proportion of the respondents (57.93%) were not members of any cooperatives or farmers' organizations. The result disagrees with the findings of Edeoghon and Esene (2018), which showed that the majority (66.7%) of the poultry farmers were registered with the Poultry Association of Nigeria. **Monthly earnings of Poultry Farmers.**

The result showed that most (46%) of the respondents had a monthly income level of about ₦20,000 to ₦40,000, and the lowest percentage (3.2%) of the respondents earned a monthly income below ₦20,000. This implied that the majority of the farmers could afford the gadgets suitable for accessing social media tools.

**Determination of Level of Access to Social Media for Agricultural Information among Poultry Farmers in Abia State.**

The result of data analysis on the level of access to social media for agricultural information among poultry farmers in Abia State is presented in Table 2.

**Table 2: Distribution of respondents based on level of access to social media platforms**

| S/N. | Social Media | N = 126 | ∑FX | $\bar{x}$ | Rating |
|---|---|---|---|---|---|
| **1.** | Facebook | | 436 | 3.46 | High |
| **2.** | Twitter | | 198 | 1.57 | Low |
| **3.** | WhatsApp | | 429 | 3.40 | High |
| **4** | LinkedIn | | 175 | 1.39 | Low |
| **5.** | Youtube | | 251 | 1.99 | Low |
| **6.** | Skype | | 145 | 1.15 | Low |
| **7.** | Instagram | | 202 | 1.60 | Low |

*Source: Field survey, 2019.*

The result in Table 2 showed that the majority of the respondents frequently accessed their Facebook ($\bar{x}$ = 3.46) and WhatsApp ($\bar{x} = 3.40$) accounts. However, Skype ($\bar{x} = 1.15$), LinkedIn ($\bar{x} = 1.39$), Twitter ($\bar{x} = 1.57$), Instagram ($\bar{x} = 1.60$) and others ($\bar{x} = 1.39$), recorded low access among farmers in the study area. Thus, this implied that Facebook and WhatsApp were the most common social media platforms used by poultry farmers in the study area. Also, the more a user accessed certain platforms, the more they tended to utilize them.

**Determination of the Extent of Utilization of Social Media for Agricultural Information among Poultry Farmers in Abia State.**

The result of data analysis on the extent of use of social media for agricultural information among poultry farmers in Abia State is presented in Table 3.

**Table 3: Distribution of respondents based on the extent of utilization of social media for agricultural information**

| S/N. | Social Media | N = 126 | ∑FX | $\bar{x}$ | Rating |
|---|---|---|---|---|---|
| **1.** | Facebook | | 414 | 3.29 | High |
| **2.** | Twitter | | 199 | 1.58 | Low |
| **3.** | WhatsApp | | 454 | 3.60 | High |
| **4** | LinkedIn | | 173 | 1.37 | Low |
| **5.** | Youtube | | 238 | 1.89 | Low |
| **6.** | Skype | | 141 | 1.12 | Low |
| **7.** | Instagram | | 173 | 1.37 | Low |

*Source: Field survey data, 2019.*

In terms of utilization of social media for dissemination of agricultural information, Table 3 showed that WhatsApp ($\bar{x} = 3.60$) and Facebook ($\bar{x} = 3.29$) were highly used among poultry farmers in the study area. This confirmed that WhatsApp and Facebook were the commonly used social media platforms among poultry farmers in the study area. It also showed that as farmers accessed (downloaded) their social media applications, they also utilized the above tools for the dissemination of agricultural information. The high extent of use of WhatsApp and Facebook correlates with the high level of awareness of these two social media among the poultry farmers. The low extent of use of other social media platforms could be due to a low level of awareness, poor access, and could also be attributed to low connectedness, publicness, trendiness, and lack of training/knowledge of their relevance in agriculture, among other factors. Generally, one could deduce from the findings that out of the seven social media platforms sampled, only two were highly used by the farmers. The results corresponded relatively with the findings of Wangu (2014), who studied the frequency of social media use for agricultural information. The result showed that the majority of farmers used social media to access agricultural information. Similarly, a report by Dowling *et al*. (2015) revealed that the majority of the respondents utilized Facebook (94.64%) for the marketing of their livestock products, followed by Instagram (67.68%), Pinterest (53.57%), and Twitter (50.00%). The report further stated that in today's technologically dependent society, information can be shared almost instantaneously with other people through social media. Thus, it emphasized the considerable impact that farmers can have influencing their customers through social media.

**Relationship Between selected socio-economic characteristics of respondents and use of social media for agricultural information**

The results of the multiple regression analysis used to test the hypothesis that selected socio-economic characteristics do not significantly influence the use of social media platforms for agricultural information in the study area, as presented in Table 4.

**Table 4: Regression analysis on the selected socio-economic characteristics influencing the use of social media for agricultural information**

| Variables | Linear | Exponential+ | Double | Semi-log |
|---|---|---|---|---|
| Constant | 3.036<br>(5.973) *** | 1.139<br>(4.064) *** | 2.496<br>(2.398) ** | 5.953<br>(3.142) *** |
| Age ($X_1$) | -0.034<br>(-5.110) *** | -0.019<br>(-4.998) *** | -0.624<br>(-3.831) *** | -1.206<br>(-4.069) *** |
| Gender($X_2$) | -0.150<br>(-1.384) | -0.066<br>(-1.112) | -0.081<br>(-0.929) | -0.192<br>(-1.204) |
| Marital Status($X_3$) | 0.029<br>(0.194) | 0.020<br>(0.247) | 0.035<br>(0.277) | 0.045<br>(0.197) |
| Farming Experience ($X_4$) | 0.012<br>(1.896) | 0.007<br>(1.924) * | 0.021<br>(0.505) | 0.049<br>(0.659) |
| Flock size ($X_5$) | 9.521<br>(0.438) | 5.101<br>(0.425) | 0.035<br>(0.478) | 0.070<br>(0.531) |
| Educational level ($X_6$) | 0.021<br>(2.153) ** | 0.013<br>(2.399) ** | 0.267<br>(3.180)*** | 0.428<br>(2.799) *** |
| Membership in the cooperative ($X_7$) | 0.087<br>(2.124) ** | 0.047<br>(2.083) ** | 0.125<br>(2.674) *** | 0.228<br>(2.670) *** |
| Income($X_8$) | -8.909<br>(-0.021) | 1.349<br>(0.057) | -0.047<br>(-0.419) | -0.105<br>(-0.516) |
| $R^2$ | 0.338 | 0.346 | 0.335 | 0.334 |
| Adj.$R^2$ | 0.293 | 0.301 | 0.290 | 0.289 |
| F. ratio | 7.466*** | 7.375*** | 7.377*** | 7.343*** |

Significant at 1%, **= Significant at 5%, *= Significant at 10%
+ = Lead equation. Figures in parentheses are t-ratios.
Decision: Null hypothesis rejected at 1% level of significance.
*Source: Field Survey, 2019.*
Where: *** =

The result revealed that the coefficient of determination, $R^{2,}$ was 0.346, which implied that about 35% of the variation in the use of social media by poultry farmers for agricultural information was explained by the independent variables in the model.

The results revealed that there was a negative and significant relationship between the age of the respondents and the use of social media. This implied that as the age of the farmers advanced, the use of social media decreased. The coefficient of farming experience (0.007) of the farmers positively influenced the use of social media for agricultural information at the 10% level of significance. This indicated that an increase in the farming experience of the poultry farmers by one year leads to an increase in the use of social media. Educational level had a positive and significant coefficient (0.013) at the 5% level of significance. Also, membership in farmers' cooperatives had a significant positive relationship with the use of social media ($P < 0.05$). This underscores the importance of cooperative membership in the use of social media by farmers for agricultural information. The result implied that the more farmers belonged to a cooperative organization, the more likely they were to use social media for agricultural information.

## CONCLUSION AND RECOMMENDATIONS

The study concluded that access and use of Facebook and WhatsApp for agricultural information were very high in the study area. This affirmed the popularity of these social media tools. The socioeconomic characteristics of farmers, such as age, farming experience, educational level, and membership in cooperatives, contributed positively to the use of social media to access agricultural information in the study area.

The study recommended as follows:

i. Agricultural extension agencies and other policy makers should fully adopt social media as one of the platforms to communicate innovations, research updates, and other relevant information to farmers.
ii. Encourage formal and informal educational training programmes on how to use social media platforms for agricultural information. This would improve extension service delivery and advance poultry farmers' farm productivity, which in turn will improve their living standard.
iii. Cooperatives can serve as effective channels for promoting social media usage. Encourage more farmers to join and participate in cooperative activities, and support cooperatives in adopting and promoting social media tools.

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