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ASSESSMENT OF SOCIAL MEDIA USAGE IN ACCESSING AGRICULTURAL INFORMATION AMONG CASSAVA FARMERS IN GWER-EAST LOCAL GOVERNMENT AREA OF BENUE STATE, NIGERIA

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Abstract
This study assessed social media usage in accessing agricultural information among cassava farmers in Gwer-East Local Government Area, Benue State, Nigeria. With the increasing relevance of digital tools in agriculture, the research assesses the socio-economic characteristics, social media usage patterns, and challenges faced by farmers in utilizing social platforms for agricultural knowledge. A structured questionnaire was used to collect data from 150 respondents, and the data were analyzed using descriptive and inferential statistics. Results indicated that platforms like Facebook(96.7%) and WhatsApp(73.3%) were widely used, while high costs, limited digital literacy, and poor internet access were key barriers. Additionally, annual income significantly affects social media engagement, with higher-income farmers demonstrating greater usage frequency. The study recommends policy interventions to improve internet access, digital literacy programs, and economic support for rural farmers to maximize the benefits of social media in agricultural practices. Further research is suggested to explore the impact of digital literacy programs and region-specific digital challenges in agricultural information dissemination.
Keywords: Assessment, Access, Agricultural Information, Social Media usage

1.0 Introduction

Agriculture remains the backbone of Nigeria's economy, contributing significantly to employment, food security, and economic growth. Among the various agricultural crops, cassava (Manihot esculenta) holds a unique position due to its adaptability, high yield potential, and multifaceted uses. Cassava serves as a staple food for millions of Nigerians and as a raw material for industries producing starch, ethanol, and animal feed (Nwosu *et al*., 2019). Smallholder farmers dominate cassava cultivation, yet they face numerous challenges, notably in accessing timely and relevant agricultural information essential for optimizing production and addressing pest, disease, and market-related issues (Ogwumike *et al*., 2018).

Cassava farming in Nigeria, particularly in regions like Gwer-East Local Government Area (LGA) of Benue State, is predominantly practiced by smallholder farmers who face numerous challenges. David, (2024). These challenges include limited access to timely and relevant agricultural information, which is crucial for making informed decisions on crop management, pest control, and market opportunities (Ogwumike, Ozughalu *et al*. 2018). Traditionally, agricultural information dissemination has relied heavily on extension services. However, these services often fall short in terms of reach, frequency, and adaptability to the specific needs of individual farmers (Aker *et al*. 2016).

In recent years, the advent and widespread adoption of social media have revolutionized information dissemination in many sectors, including agriculture. Social media platforms such as Facebook, WhatsApp, Twitter, and YouTube have become essential tools for knowledge sharing, innovation dissemination, and fostering community engagement among farmers (Aker *et al*., 2016). These platforms enable farmers to access real-time information on weather forecasts, pest and disease management, improved farming techniques, market prices, and agricultural policies, thus potentially enhancing their productivity and income (Mtega & Msungu, 2013).

Despite the critical role of information in enhancing agricultural productivity, cassava farmers in Gwer-East LGA continue to face significant challenges in accessing reliable and timely agricultural information. Mapiye, (2023), Traditional methods of information dissemination, such as extension services face numerous limitations. These includes; limited reach, inadequate frequency of visits by extension officers, and sometimes the irrelevance of the information provided to the specific needs of farmers (Adejo *et al*. 2018)

The rapid growth and widespread adoption of social media present an alternative and complementary channel for agricultural information dissemination. However, the extent to which cassava farmers in Gwer-East LGA utilize social media for agricultural information, the types of information accessed, and the effectiveness of this medium in addressing their informational needs remain largely unexplored (Aina, 2017). Without a clear understanding of these dynamics, it is challenging to develop strategies that can leverage social media to enhance agricultural productivity effectively.

2.0 Objectives of the Study

The broad objective of this study was to assess the use of social media in accessing agricultural information among cassava farmers in Gwer-East LGA of Benue State. The specific objectives of the study were to:

i. describe the socio-economic characteristics of the respondents in the study area.
ii. identify the social media tools used by the respondents.
iii. ascertain the level of usage of the social media tools among the respondents in the study area.
iv. determine factors affecting the use of social media among the respondents.
v. identify the challenges in using social media tools in accessing agricultural information among the respondents.

3.0 Methodology

The study was conducted in Gwer-East Local Government Area of Benue State, Nigeria. Gwer-East is predominantly a rural area, with 3 (three) districts namely Yonov, Njiriv and Ngyohov. It has 14 council wards which are; Mbasombo, Ikwe, Mbalom, Gbemacha, Shough, Aliede/Mbalav, Mbabur, Ikyonov, Gee, Mbayom, Akpachayi, Ugee, Ikyorgbajir, and Mbakyaan. The total population size is about 163,647 (census 2006) and agriculture as the mainstay of the economy. The area is known for cassava production, which is a staple food and an important source of income for the local population. The farmers in this area typically use traditional farming methods, but there is an increasing interest in leveraging modern technology, including social media, to access agricultural information. The area's socio-economic characteristics, such as education level, income, and technological access, make it a relevant location for studying the impact of social media on agricultural practices.

The target population of the research is farmer in the Gwer-east Local Government area whose major activity is farming (cassava production). There are three (3) districts in gwer-east local government area namely; Yonov, Injiriv and Ngyohov comprising of 14 council wards which includes; Mbasombo, Mbalom, Ikwe, Gbemacha, Shough, Aliede/Mbalav, Mbabur, Ikyonov, Mbayom, Gee, Akpachanyi, Ugee, Ikyorgbajir and Mbakyaan.

A multi-stage sampling technique was employed to select the sample size for this study. In stage one,out of the 14 wards in Gwer-East LGA, 7 wards were randomly selected using simple random sampling to ensure that all wards had an equal chance of being included in the study. In the second stage, from each selected ward, a list of cassava farmers was obtained with the assistance of local agricultural extension officers representing the population size for the particular ward, the Taro Yamane formula for sample size determination which is appropriate for large population was employed with the confidence level of 95% and a margin error of 5% typically (0.05) as presented in Table 1 below.

Table 1: Sample Size Selection Plan

S/N.	Selected Council Wards.	Sampling frame.	Sample size (0.05).
1	**Mbsombo**	600	30
2	**Ikwe**	400	20
3	**Shough**	440	22
4	**Ikyonov**	300	15
5	**Mbabur**	380	19
6	**Mbakyaan**	400	20
7	**Ikyorgbajir**	480	24
Total.	**7**	**3000**	**150**

4.0 Results and Discussion

4.1 Socio-Economic Characteristics of Cassava farmers.

The socio-economic characteristics of Cassava farmers, as presented in Table 2, offer insight into the demographic and economic factors that may shape their behavior, decision-making, and quality of life. Notably, the respondents' gender distribution reveals a significant male majority, with 115 males (76.7%) compared to 35 females (23.3%). This male predominance could point to cultural, social, or economic factors that favor male involvement in particular occupations or activities, as observed by Eze and Onyekachi (2023), who noted similar trends in male-dominated fields due to access and structural norms.

Age-wise, respondents are diverse, with a concentration in the 31-50-year range (38.7%), indicating that the majority are in their active working years, which might enhance productivity and experience. The majority (66.6%) operate small farms (three hectares or less), possibly due to limitations in access to resources, consistent with findings by Obinna and Nwosu (2023) that land constraints and traditional practices often limit farm sizes.

Income levels are generally low, with 80.0% earning ₦500,000 or less annually, suggesting economic challenges linked to reliance on subsistence farming and low-profit sectors, as highlighted by Musa and Adamu (2022), who discuss income limitations in rural economies. Most households are relatively small, with fewer than 10 members for 70.0% of respondents, reflecting socio-economic shifts and family planning trends noted by Akpan and Ebong (2023), who found that economic pressures increasingly influence household size.

The respondents' experience is moderate, with 61.3% having 10 years or less in farming, indicating newer engagement in agriculture, a trend supported by Ojo and Adeola (2021), who observed increased youth interest in farming. Education levels are relatively high, with 52.7% having tertiary education, which can improve productivity and adoption of modern practices. Finally, 54.7% of respondents are married, a factor that often stabilizes household structure and social support, enhancing productivity, as shown by Oladipo and Adewale (2023). These socio-economic dynamics collectively shape the respondents' roles and economic engagement within their communities.

Table 2: Socio-Economic Characteristics of Respondents (n=150)

Variables	Frequency	Percent (%)
Sex		
Female	35	23.3
Male	115	76.7
Age (Years)		
<= 30.00	50	33.3
31.00 - 50.00	58	38.7
51.00 - 70.00	40	26.7
71.00+	2	1.3
Farm Size (Hectares)		
<= 3.00	100	66.6
4.00 - 6.00	25	16.6
7.00 - 9.00	10	6.6
10.00+	15	10.0
Annual Income (₦)		
≤500,000	120	80.0
5,000,001-25,000,000	29	19.3
185,000,001+	1	0.7
Household Size		
<10	105	70.0
11-20	25	16.6
21>	24	16.0
F**arm Experience (Years)**		
≤ 10.00	92	61.3
11.00 - 20.00	42	28.0
21.00 - 30.00	15	10.0
41.00+	1	.7
Educational Level		
Non-formal	15	10.0
Primary	4	2.7
Secondary	52	34.7
Tertiary	79	52.7
Marital Status		
Single	45	30.0
Married	82	54.7
Divorced	22	14.7
Widows	1	0.7

4.2 Social Media Tools Used by Cassava farmers.

The distribution of social media tools used by Cassava farmers, as detailed in Table 3, reveals patterns in digital communication preferences and trends in content consumption. With 73.3% of respondents using WhatsApp, this platform's popularity likely results from its user-friendly design, low data consumption, and high mobile compatibility, facilitating both personal and group interactions. In regions where SMS may be costly, WhatsApp offers an affordable alternative for staying connected with family, friends, and professional circles. Facebook, used by 96.7% of respondents, stands as the most popular platform due to its versatile functionality—users can connect with friends, share media, join groups, and access news updates. Its inclusive appeal across various age groups supports its continued high engagement (Eze & Onyekachi, 2023).

Instagram, used by 31.3% of respondents, primarily attracts a younger demographic focused on visual storytelling. While it requires higher data for media sharing, it remains a top choice for users interested in aesthetic content and lifestyle narratives. YouTube, utilized by 51.3%, is favored for its broad video content library, from tutorials and entertainment to educational videos, making

it suitable for both passive viewing and active learning. Twitter's moderate usage (40.0%) stems from its real-time updates on news and trending topics, appealing to those interested in current affairs and public discourse (Ojo & Adeola, 2023).

Lastly, TikTok, with 31.3% of respondents using it, has rapidly gained popularity through short-form, engaging video content that resonates particularly with younger users. Its algorithm-driven content and creative format foster high engagement and viral trends, despite its recent introduction compared to other platforms (Obinna & Nwosu, 2023). Together, these social media platforms reflect varied user motivations, from connectivity and information to creative expression and entertainment.

Table 3: Social Media Tools Used by Cassava farmers (n=150)

Social Media Tool	Frequency	Percentage (%)
WhatsApp	110	73.3
Facebook	145	96.7
Instagram	47	31.3
YouTube	77	51.3
Twitter	60	40.0
TikTok	47	31.3

4.3 The Level of Usage of Social Media Tools on Cassava farmers

The mean scores and standard deviations in Table 4 offer valuable insights into the level and consistency of social media usage among respondents, highlighting platforms that are both frequently accessed and widely appealing. With a mean score of 2.29 and a standard deviation of 0.77, WhatsApp demonstrates high and relatively consistent use. This frequent engagement likely reflects WhatsApp's role as a primary tool for both personal and professional communication, which aligns with findings by Adeoye and Olufemi (2023) that emphasize WhatsApp's integration into daily routines.

Facebook, showing the highest mean score at 2.65 with a low standard deviation of 0.57, indicates both frequent and uniform usage across respondents. The low variability suggests that users consistently turn to Facebook for diverse functions networking, sharing information, and community engagement. According to Ojo and Ibekwe (2023), this consistency is attributed to Facebook's broad utility and strong user retention, especially in social networking and information sharing.

Instagram, with a mean score of 1.60 and a standard deviation of 0.75, indicates moderate but variable usage. Some users access Instagram regularly, drawn by its visual content, while others engage less frequently, possibly due to differences in media preferences. The relatively higher standard deviation shows diverse engagement levels, consistent with findings by Osagie and Ekanem (2023), who noted Instagram's appeal to specific demographics rather than universal use.

YouTube's mean score of 1.84 and a standard deviation of 0.84 point to moderate but varied usage. This platform's engagement fluctuates, as users may prefer it for content-rich, data-heavy resources like tutorials or entertainment but may not access it as frequently as other platforms. Akpan and Essien (2023) noted similar patterns, observing that YouTube is often used for targeted, content-specific interactions rather than daily social interactions.

Similarly, Twitter's mean score of 1.60 and a standard deviation of 0.75 show moderate engagement with some variability. The platform appeals to users seeking real-time updates and news, but others may only access it occasionally, often for trending topics or specific events, as observed by Udo and Chika (2023). This usage pattern indicates that while Twitter serves as a key source for quick information, it remains a supplementary social media tool for many.

Table 4: Level of Usage of Social Media Tools (n=150)

Social Media Tool	Mean Score	Standard Deviation
WhatsApp	2.29	0.77
Facebook	2.65	0.57
Instagram	1.60	0.75
YouTube	1.84	0.84
Twitter	1.60	0.75
TikTok	1.59	0.75

4.4 Factors Affecting the Use of Social Media

Table 5 illustrates various factors shaping respondents' social media use, covering personal and external elements that influence access, interest, and engagement. Each of these factors is detailed below to shed light on its relevance.

A notable 29.3% of respondents report that family and friends influence their social media habits, underscoring the role of social circles in motivating individuals to join or remain active on specific platforms. Given that social media's primary function is to facilitate connections, many users gravitate towards platforms where they can interact with familiar faces. This influence often extends to preferences for particular social media tools popular within one's close network, as Adeyemi (2023) notes, highlighting the social dynamics of platform engagement.

Availability, identified by 81.3% of respondents as the most significant factor, includes access to devices, affordable data plans, or relevant apps. In areas with limited access to affordable internet and technology, availability is a major determinant of social media use. High availability rates suggest that most respondents have adequate access to these resources, enabling regular and widespread use. According to Omole (2022), the accessibility of devices and internet directly correlates with increased engagement on digital platforms.

Internet connectivity, cited by 51.3% of respondents, emphasizes the critical role of reliable internet access for using social media. Inconsistent or costly connectivity can restrict users' ability to engage regularly, affecting both the frequency of access and platform choice. This challenge is more pronounced in regions with limited network coverage or high data costs, which impact user experience. Adebayo and Musa (2023) also emphasize that connectivity quality is integral to consistent social media usage.

Literacy level impacts social media use for 28.7% of respondents, indicating that reading, writing, and digital skills are necessary for effective online interaction. Basic literacy skills enable users to navigate, understand content, and communicate, while those with higher literacy levels may feel more at ease exploring diverse platforms. As Nwankwo (2023) notes, literacy is crucial for engaging in digital spaces, impacting both platform choice and confidence in online interactions.

Age, influencing 26.0% of respondents, reveals that generational preferences and comfort levels with technology play a part in social media choices. Younger users may favor visually-oriented platforms like Instagram or TikTok, while older respondents often prefer communication-focused platforms like Facebook or WhatsApp. This generational trend aligns with Eze and Okeke (2022) findings that age often influences the type of content users find relevant, thus shaping platform preferences.

Income, highlighted by 57.3% of respondents, affects social media access by determining users' ability to afford devices, data plans, and premium services. Higher income generally allows for more consistent internet access and possibly advanced devices, enhancing the overall user experience. For lower-income respondents, financial constraints may limit social media engagement to budget-friendly platforms, as Adekunle and Ibrahim (2023) point out, linking economic status with digital participation frequency and platform variety.

Gender, which influences 20.0% of respondents, can shape social media engagement due to cultural norms, safety concerns, or interest differences. In some cultures, gender expectations may impact how and when individuals engage on social platforms. For instance, women might prefer

platforms with greater privacy features or may limit engagement if social media use is viewed negatively within their community. Okon (2023) emphasizes that gendered expectations and content preferences often result in distinctive usage patterns between male and female users.

Table 5: Factors Affecting the Use of Social Media (n=150)

Variables	Frequency	Percentage of Cases
Family and Friends	44	29.3%
Availability	122	81.3%
Internet Connectivity	77	51.3%
Literacy Level	43	28.7%
Age	39	26.0%
Income	86	57.3%
Gender	30	20.0%

4.5 Challenges in Using Social Media Tools by Cassava Farmers

Table 6 outlines the challenges respondents encounter while using social media tools, with the mean scores representing the severity of each challenge, and the standard deviations indicating the variability of experiences among respondents. Below, each challenge is analyzed to provide a deeper understanding of its impact on social media usage.

The most significant challenge, with a mean score of 2.57 and a low standard deviation of 0.58, is limited resources. This issue likely includes insufficient access to devices, software, and other essential tools needed to use social media effectively. The low variability suggests that limited resources are a consistent barrier for many respondents, indicating widespread difficulties in accessing the necessary resources for effective social media engagement. According to Alabi (2023), inadequate resources remain one of the most persistent challenges faced by social media users, hindering their ability to fully participate in digital spaces.

The high cost of internet access, scoring a mean of 2.38 with a standard deviation of 0.69, presents another substantial challenge. This financial barrier can discourage frequent or prolonged social media use, especially in regions with high data costs. The moderate variability indicates that, while internet cost is a significant concern for many respondents, some individuals may have better access due to their income levels or the availability of subsidized plans. As noted by Olayemi (2022), the cost of internet access directly impacts social media engagement, particularly in developing regions where internet affordability is a key determinant.

Inadequate infrastructure, with a mean of 2.30 and a standard deviation of 0.72, highlights challenges such as unreliable network coverage, inconsistent electricity supply, and poor infrastructure. These limitations particularly affect users in rural or underserved areas, reducing the overall ability to access and engage with social media platforms. The moderate variability suggests that the impact of infrastructure issues varies depending on respondents' locations and the quality of local networks. Adeyemo (2023) discusses how inadequate infrastructure remains a critical barrier to social media use, especially in rural communities.

The lack of digital skills and management capabilities, with a mean score of 2.03 and a standard deviation of 0.80, reflects the difficulties some users face in navigating social media platforms or managing their online content. This challenge is more pronounced among individuals with limited digital experience, and the higher variability in responses suggests that digital literacy levels among users can vary significantly. Oyeniran (2023) underscores that digital illiteracy remains a significant obstacle, limiting users' ability to fully benefit from social media.

Language barriers, with a mean score of 2.02 and a standard deviation of 0.82, indicate that linguistic challenges can hinder effective social media engagement. Users who are not proficient in the dominant languages of the platforms may struggle to interact with content or communicate effectively. The higher standard deviation suggests that language proficiency varies widely among respondents, affecting their engagement with social media. According to Okafor (2022), language

barriers continue to affect users' ability to participate in global digital communities, limiting content accessibility and interaction.

Internet connectivity, with a mean of 2.26 and a standard deviation of 0.74, highlights the issues related to unreliable or slow connections that can disrupt social media usage. This is particularly relevant in areas where network stability is inconsistent, leading to interruptions in access. The moderate standard deviation indicates that while connectivity issues are common, their severity may vary depending on geographic and network-related factors. As Eze (2023) points out, unreliable internet connections can significantly impact the user experience, discouraging consistent engagement with social media platforms.

Finally, privacy concerns, with a mean score of 2.20 and a standard deviation of 0.78, reflect users' anxieties about data security, confidentiality, and the potential risks of online exposure. These concerns can discourage active social media participation or limit the types of content shared by users. The variability in responses suggests that privacy concerns are felt differently by individuals, with some users being more cautious about their online presence than others. According to Nwachukwu (2023), privacy remains a key concern for social media users, influencing how individuals navigate digital spaces and what they share online.

Table 6: Challenges in Using Social Media Tools by cassava farmers (n=150)

Variables	Mean	Standard Deviation
Limited Resources (LRI)	2.57	0.58
High Cost of Internet Access (HCIA)	2.38	0.69
Inadequate Infrastructure (II)	2.30	0.72
Digital Skills and Management (DNSM)	2.03	0.80
Language Barriers (LB)	2.02	0.82
Internet Connectivity (IC)	2.26	0.74
Privacy Concerns in Social Media (PCIS)	2.20	0.78

5.0 Conclusion and Recommendations

5.1 Conclusion

The study concludes that while social media tools are widely used, various challenges hinder their optimal use, particularly among individuals with limited income. Availability of resources, internet connectivity, and infrastructure significantly affect the extent to which individuals can access and utilize these platforms. Despite high interest and need for social connectivity, socio-economic factors and technical barriers remain key obstacles. Annual income was found to play a crucial role in social media usage, underscoring the importance of economic empowerment to increase digital inclusivity.

5.2 Recommendations

Based on the findings, it is recommended that government and private sectors should improve internet accessibility by providing affordable data plans and expanding network coverage, especially in underserved areas. Educational programes aimed at improving digital literacy and skills should be implemented to help individuals navigate social media more effectively. Additionally, policies that lower internet costs and increase the availability of digital devices could foster greater social media engagement across various socio-economic groups. Financial support programs or subsidies for internet access could also help reduce the disparities associated with income limitations.

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