

<https://doi.org/10.33003/jaat.2026.1201.05>

ASSESSMENT OF FARMERS' KNOWLEDGE ON CONTRACT FARMING IN KWARA STATE, NIGERIA.
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ABSTRACT

This study analyzed the level of farmers' knowledge on contract farming in Kwara State, Nigeria. It described their socioeconomic characteristics, examined the knowledge of the respondents about contract farming, investigated their sources of information, examined attitudes toward contract farming and assessed participation levels. A two-stage sampling procedure was used to select 152 farmers. Data were collected through a structured interview divided into five sections. The analysis employed descriptive statistics (frequency, percentage, mean, and ranking) and inferential statistics (ordinal logistic regression). The majority of respondents were male (94.7%) and married (96.1%), with 75.0% having completed tertiary education. Over half (90.8%) of the farmers demonstrated knowledge of contract farming, with an average of 4.2 years of experience in the field. Findings showed that farmers relied heavily on extension agents for agricultural information (73.2%). The result of the ordinal logistic regression indicated that Knowledge of contract farming among respondents is significantly influenced by marital status, income, association membership, and farm size. Therefore, it is recommended that extension organizations continue to support farmers' development in this sector, provide detailed information on contract terms, and improve various information channels. Farmers' attitudes during the contract should always be addressed and aligned with the contract agreement.

Key words: attitude, level of participation, knowledge, information, and contract.

INTRODUCTION

Agriculture involves the cultivation of soil, growing crops, and raising livestock, and other products. It plays a vital role in food security, economic development, and environmental management. Contract farming is a system where farmers enter agreements with buyers, typically processing companies, to produce specific crops or livestock under defined terms. According to Ncube, (2020) contract farming can be explained as a company giving/lending agricultural "inputs such as planting seed, fertilizer, pesticides, credit or extension services to a farmer in trade for exclusive buying rights over the specified agricultural produce. It ensures farmers have a stable market, which helps reduce uncertainty from market fluctuations. Contract farming has the attributes to bridge the gap created when government liberalized without warranting access to basic farming requirements including technologies, credit, and inputs along with other essential services. Ncube, (2020). It can also promote innovation and sustainable practices linking smallholder farmers to markets and enhancing their livelihoods, thereby contributing to food security Bellemare, (2020). Contract farming is typically viewed as a useful mechanism for helping smallholders overcome market access constraints. However, despite the economic benefits, high smallholder dropout rates from contract schemes are commonplace. This has led to the lack of proper

markets, credit, technology, unstable prices and food insecurity. Access to reliable information from extension services and peer networks can play a significant role in shaping farmers' attitudes and decisions about contract farming Ncube, (2020). Thus, the study assessed the knowledge of farmers on contract farming.

Objectives of the study.

The broad objective was to assess farmers' knowledge on contract farming in Kwara State, Nigeria, while the specific objectives are;

- i. Describe the socioeconomic characteristics of the farmer
- ii. Examine the knowledge of the respondents about contract farming
- iii. investigated their sources of information on contract farming,
- iv. examined attitudes toward contract farming .

MATERIALS AND METHODS.

The study was carried out in Kwara State, which is located in the North Central geopolitical zone of Nigeria and is known for its significant agricultural

activities. The study specifically focused on farmers involved in contract farming within various agricultural value chains across different local government areas (LGAs) within Kwara State. 152 respondents were used for the study sample; random sampling was used to select them for the study. Primary data was use for the study with a set of detailed, structured questionnaires. For the purpose of the study, the interview schedule went through a test and retest using some selected farmers in the study area. Descriptive (frequency, percentage, mean, and ranking) statistics were used to analysis the data collected. One null hypothesis was tested; Socioeconomic characteristics do not influence the knowledge of respondents on contract farming. Using Ordinal Logistic Regression

$$\text{Logit [P(Y} \leq \text{j)}] = \alpha_j - [\beta_1(\text{Age}) + \beta_2(\text{Gender}) + \beta_3(\text{Education}) + \beta_4(\text{Income}) + \beta_5(\text{Farm Size}) + \beta_6(\text{Experience}) + \beta_7(\text{Household Size}) + \beta_8(\text{Membership of Association} + \beta_9(\text{Year of experience in contract farming}))]$$

Where:

- Y = Knowledge level, coded as 0=No knowledge, 1=Low, 2=Moderate, 3=High
- j = 0, 1, 2 for the 3 cut-off points
- α_j = threshold/intercept for each cut-off
- β_1 to β_9 = coefficients for socioeconomic variables

Regression Model:

RESULTS AND DISCUSSIONS.

Table 1: Socioeconomic characteristics of the farmers

Variables	Frequency	Percentage (%)	Mean ± SD
Gender			
Male	144	94.7	
Female	8	5.3	
Age (years)			
≤40	11	7.2	
41 – 50	88	57.9	48.8±4.9
51 – 60	51	33.6	
≥61	2	1.3	
Marital Status			
Married	146	96.1	
Separated	6	3.9	
Religion			
Christianity	38	25.0	
Islam	114	75.0	
Level of education			
No formal education	2	1.3	
Primary education	12	7.9	
Secondary education	24	15.8	
Tertiary education	114	75.0	
Income (Naira)			
≤500,000	52	34.2	
500,001 – 600,000	50	32.9	
600,001 – 700,000	41	27.0	571,315±107,078
≥700,001	9	5.9	
Household size (people)			
1 – 3	3	2.0	
4 – 6	126	82.9	5±1.2
7 and above	23	15.1	

Membership of association			
Yes	144	94.7	
No	8	5.3	
Farm size(ha)			
1.1-2.0	89	58.6	
2.1 – 4.0	61	40.1	2.5±0.6
4.1 and above	2	1.3	
Land ownership type			
Inherited	58	38.2	
Rent	43	28.3	
Purchase	51	33.6	
Sources of credit			
Bank	2	1.3	
Buyer	118	77.6	
Cooperative	2	1.3	
Personal saving	30	19.7	
Years of experience			
1 – 3	47	30.9	
4 – 6	103	67.8	4.2±1.3
≥ 7	2	1.3	

Source: Field survey, 2024

Table 1 shows that the majority (94.7%) of the respondents were male, with the highest percentage of respondents, 57.9%, falling within the 41-50 years age bracket. 96.1% of the respondents are married. They showed a high proportion of respondents with tertiary education at 75%, suggesting that these farmers are well-educated and potentially more adopt at managing modern farming techniques and contractual agreements. Their membership in associations was high, with 94.7% of respondents being members. Their primary source of credit for 77.6% of the respondents is from buyers, underscoring the buyers' influence over the farmers. Only 1.3% obtain credit from banks or cooperatives.

Table 2: Distribution of the respondent according to their knowledge level of contract farming

Contract farming	High knowledge	Moderate knowledge	Low knowledge	No knowledge	Mean	Rank
Contract agreement plan and document	138(90.8%)	12(7.9%)	0	2(1.3%)	3.88±.43	1 st
Farming contract agreement conditions for parties involved	136(89.5%)	12(7.9%)	4(2.6%)	0	3.87±.41	2 nd
Contract agreement for crop production plan	110(72.4%)	40(26.3%)	2(1.3%)	0	3.71±.48	3 rd
Contract for supply agreement	95(62.5%)	51(33.6%)	4(2.6%)	2(1.3%)	3.57±.62	7 th
Agreement for delivery schedule	109(71.7%)	41(27.0%)	2(1.3%)	0	3.70±.49	4 th
Contract agreement for risk-sharing mechanism	71(46.7%)	77(50.7%)	2(1.3%)	2(1.3%)	3.43±.59	9 th
Contract for inputs agreement	103(67.8%)	47(30.9%)	0	2(1.3%)	3.65±.56	6 th
Agreement for price adjustment mechanism	110(72.4%)	38(25.0%)	4(2.6%)	0	3.70±.52	5 th
Conflict management in contract agreement	71(46.7%)	75(49.3%)	6(3.9%)	0	3.43±.57	8 th
Conflict resolution in contract agreement	64(42.1%)	80(52.6%)	8(5.3%)	0	3.37±.58	10 th

Source: Field survey, 2024

Results from table 2 show that the highest level of knowledge among respondents is related to the contract agreement plan and document, with 138 respondents (90.8%) indicating high knowledge. Following closely, 136 respondents (89.5%) demonstrated high knowledge of farming contract agreement conditions for parties involved, with a mean score of 3.87. On the other hand, the lowest knowledge was observed in the area of conflict resolution in contract agreements, where 64 respondents (42.1%) had high knowledge, and 8 respondents (5.3%) had low knowledge. These findings align with previous studies by Vicol et al., (2021), who highlighted the importance of detailed contract agreements in farming, particularly in ensuring that all parties understand their obligations and the conditions of the contract. High knowledge levels in contract agreement plans and documents are crucial for farmers to effectively engage in contract farming, as emphasized by Adesina and Olagunju (2019), who underscored the need for farmers to be well-informed about their contracts to avoid disputes and ensure smooth operations.

Distribution of respondent based on their knowledge level

To identify the level of knowledge about contract farming, a list of 10 statements on contract farming were presented and measured on a fourpoint likert type scale as High knowledge, moderate knowledge, low knowledge and no knowledge. The scale was assigned 3, 2, 1 and 0 respectively. Knowledge level was assessed based on the number of statement each respondent indicated to have accessed and the frequency of each was used to compute a score for level of knowledge. With 10 questions multiplied by the highest score scale (3) and the lowest score scale (0), the minimum to maximum possible score ranges from 0 to 30 points. 30 points was divided by 2 = 15. Thus, obtained score of the respondents were grouped into two categories as follows:

Low usage = 0 – 15 points

High usage = 15 – 30 points

Table 3: Distribution of respondent According to their level of knowledge in contract farming

Obtained score range	Level	Frequency	Percentage
0 – 15	Low	34	22.4
15 – 30	High	118	77.6
Total		152	100.0

Minimum - Maximum possible score = 0 – 30 points
 Source: Field survey, 2024

As shown in the table 3 above, the majority of the respondents (77.6%) had high scores within the range of 31–50, indicating a strong level of performance or achievement in the assessed area. On the other hand, a smaller portion of the respondents (22.4%) fell within the low score range of 10–30. These findings reflect the competency levels of the respondents, consistent with the work of Adebayo (2021), who emphasized that a higher score range often correlates with better **Sources of information on contract farming**

understanding and execution of tasks, especially in specialized fields. Similarly, Olawale (2019) noted that the concentration of respondents in the higher score range indicates a generally good grasp of the subject matter or skills being evaluated. This distribution is typical in scenarios where training or experience significantly influences outcomes, as seen in the current study's context.

Table 4: Distribution of respondents based on their sources of information

Sources	Always	Sometimes	Rarely	Never	Mean	Rank
Extension agents	112(73.7)	40(26.3)	0	0	3.74±.44	1 st
Agric show	7(4.6)	112(73.7)	27(17.8)	6(3.9)	2.79±.58	3 rd
Mass media/internet	0	30(19.7)	82(53.9)	40(26.3)	1.93±.68	7 th
Neighbor/family/friends	2(1.3)	8(5.3)	105(69.1)	37(24.3)	1.84±.57	8 th
Farmers	16(10.5)	21(13.8)	103(67.8)	12(7.9)	2.25±.73	6 th
Network/Association						
Government Agencies	4(2.6)	107(70.4)	25(16.4)	16(10.5)	2.65±.70	4 th
Local Leaders	6(3.9)	84(55.3)	60(39.5)	2(1.3)	2.62±.59	5 th
NGO	0	125(82.2)	27(17.8)	0	2.82±.39	2 nd

Source: Field survey, 2024

As shown in the table 4 above, the primary source of information for the respondents was extension agents, with a mean score of (3.74) always relying on them, making it the highest ranked as the most significant source of information on contract farming. On the other hand, neighbors, family and friend were rarely used as information source, with only mean score of (1.84) relying on them making them ranked 8th which is the lowest. This reliance on extension agents aligns with Adebayo (2021), who highlighted the crucial role of extension services in disseminating agricultural

information, particularly in rural settings. Furthermore, the limited use of neighbors, family, and friends as information sources suggests that more formal channels, such as extension agents and NGOs, are preferred for reliable and up-to-date agricultural knowledge, as noted by Vicol et al., (2021). The findings underscore the importance of structured agricultural information systems in enhancing farmers' access to essential knowledge and support.

Attitude of respondents on contract farming

Table 5: Distribution of respondents based on their attitude towards contract farming

Attitudinal statements	SD	A	U	Disagree	SD	Mean	Rank
I engage in contract farming because it is beneficial	113(74.3)	37(24.3)	2(1.3)	0	0	4.73±.47	1 st
Contract farming improves livelihood of farmers	27(17.8)	114(75.0)	8(5.3)	3(2.0)	0	4.09±.55	8 th

Contract farming improves livelihood of farmers	0	7(4.6)	20(13.2)	106(69.7)	19(12.5)	2.10±.66	15 th
Only those that cannot afford inputs go into contract farming	0	108(71.1)	31(20.4)	8(5.3)	5(3.3)	3.59±.74	10 th
I sign in for contract farming due to inadequate capital	0	13(8.5)	39(25.7)	68(44.7)	32(21.1)	2.17±.84	14 th
Contract farming is risky because the contractor can disagree to the contract at anytime	2(1.3)	98(64.5)	43(28.3)	5(3.3)	4(2.6)	3.59±.70	11 th
I am very confident in contract farming	0	19(12.5)	8(5.3)	66(43.4)	59(38.8)	1.91±.97	16 th
Contract farming is just a way to exploit farmers	2(1.3)	109(71.7)	22(14.5)	14(9.2)	5(3.3)	3.59±.81	12 th
My experience in contract farming over the years is satisfactory	4(2.6)	21(13.8)	28(18.4)	64(42.1)	35(23.0)	2.31±1.06	13 th
Contract farming is only meant for those that cannot afford land	2(1.3)	56(36.8)	74(48.7)	12(7.9)	8(5.3)	4.19±.80	6 th
Contract farming is meant to assist farmers	71(46.7)	67(44.1)	10(6.6)	4(2.6)	0	4.35±.72	4 th
<i>I will always engage in contract farming if I have the opportunity</i>	46(30.3)	98(64.5)	8(5.3)	0	0	4.25±.54	5 th
<i>It is a source of reliable income</i>	71(46.7)	77(50.7)	4(2.6)	0	0	4.44±.55	2 nd
<i>Contract farming improves my socio-economic status</i>	34(22.4)	105(69.1)	13(8.6)	0	0	4.14±.54	7 th
<i>Some companies cannot be trusted on contract farming</i>	20(13.2)	99(65.1)	33(21.7)	0	0	3.91±.59	9 th
<i>Contract farming is profitable</i>	68(44.7)	80(52.6)	4(2.6)	0	0	4.42±.55	3 rd

Source: Field survey, 2024

As shown in Table 5 above, most of the respondents strongly agree that contract farming is beneficial, with a mean score of (4.73) ranked 1st, indicating that farmers highly value the benefits of contract farming. Respondents who engaged in contract farming as a source of reliable income has a mean score of (4.44) ranked 2nd which implies contract farming also serves some farmer as a means of reliable income. Contract farming is profitable has a mean score of (4.42) ranked 3rd indicating respondents rely on contract farmers due to its profitability, emphasizing on the perceived economic advantages. On the other hand, contract farming as a source of livelihood came out as one of the lowest level of agreement with a mean score of (2.10) ranked 15th which implies that contract farmers play no role

in improving farmers livelihood, the lowest level of agreement is found in the statement "I am very confident in contract farming," with a mean score of (1.91) ranked 16th, this suggest that despite recognizing the benefits, some farmers still lack confidence in contract farming. However, concerns about the reliability of companies involved in contract farming are also evident, as (3.91) mean score of respondents agree that some companies cannot be trusted, this indicates a level of caution among farmers when entering contracts. The results indicate that while contract farming is generally viewed positively for its benefits and profitability, there are concerns about trust and confidence, as highlighted by Khalili, et al., (2024).

Null hypothesis: Socioeconomic characteristics do not influence the knowledge of respondents on contract farming.

Ordinal Logistic regression

Table 6: Socioeconomic characteristics do not influence the knowledge of respondents on contract farming.

Variables	B	S.E.	Wald	Sig.	Exp(B)
	Ref				
Age	0.098	0.076	1.67	0.196	1.103
MS	2.611*	1.034	6.371	0.012	13.608
Religion(Christianity)	Ref				
Religion(Islam)	1.358	0.839	2.62	0.106	3.888
No formal education	Ref				
Primary education	-15.559	28420.7	0.000	1.000	0
Secondary education	0.124	1.03	0.015	0.904	1.132
Tertiary education	0.544	0.751	0.525	0.469	1.723
Income	1.100*	0	11.905	0.001	1
Household size	-0.593	0.313	3.595	0.058	0.553
Membership of Association	2.717*	1.374	3.908	0.048	15.135
Farm size	-1.812*	0.574	9.961	0.002	0.163
Year of farming experience	-1.221	0.746	2.676	0.102	0.295
Years of experience in contract farming	0.906	0.717	1.597	0.206	2.475
Constant	-7.041	4.415	2.544	0.111	0.001

Model summary: -2 Log likelihood=101.428; Cox & Snell R Square = 0.327; Nagelkerke R Square = 0.499.

*Significant at $p < 0.05$ level

The hypothesis tested whether there is a significant relationship between socio-economic characteristics and the knowledge of respondents on contract farming. The results indicated, that Knowledge of contract farming among respondents is significantly influenced by marital status, income, association membership, and farm size. Being married, wealthier, and part of an association increases knowledge, while having a larger farm size surprisingly reduces knowledge. In fact married respondents are about 14 times more likely to have knowledge of contract farming compared to single respondents. Other factors like gender, age, education, and religion do not significantly matter in this research. Extension services should prioritize married farmers, members of associations, and those with smaller farms, as they are more open to contract farming knowledge.

The majority of the participants were male and married, and had completed tertiary education. More than half of the farmers knew about contract farming, with an average of 4.2 years of experience in this area. The respondents demonstrated a strong understanding of various contract terms and agreements, which was reflected in their participation in knowledge dissemination. Farmers in contract farming should continue to receive detailed information on contract terms before entering an agreement, and the various information channels should be improved. Knowledge of farmers involved in contract farming in the study should be examined or assessed often. The attitude of farmers during the contract should always be addressed and must always align with the contract agreement.

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CONCLUSION AND RECOMMENDATION.

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