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PERCEPTION OF BENEFITS OF FARMERS' LABOUR GROUP FORMATION AMONG SMALLHOLDER FARMERS IN KOGI STATE, NIGERIA

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ABSTRACT

The study was carried out in Kogi state, Nigeria. A total of 415 farmers were drawn randomly from Anyigba and Koton-Karfe agricultural zones of the state. A well-structured questionnaire was designed and administered to the selected farmers for data collection. Data collected were analyzed through the use of descriptive statistics (frequency distributions, percentages, and means) and inferential statistics (t-test). The results show that Majority (91.0%) of farmers were males with a mean age of 51.2 years. Most (69.0%) were married with a mean household size of 8 persons. The farmers' mean farm size and farming experience were 4 hectares and 37 years respectively. The results equally revealed that, promotion of deep interpersonal relationship (Mean=3.81), access to pool of labour (Mean=3.66), assistance to members in times of needs (Mean=3.33), and access to credit from financial institutions (Mean=2.69) were some of the benefits derived from the formation of farmers' labour group. While migration of youth population (Mean=2.71), scarcity and high cost of farm labour (Mean=2.56 respectively), and old age of members (Mean=2.50) were some of the constraints faced by farmers' labour groups. And the test of hypothesis which states that there is no significant difference in the perceived benefits of farmers' labour groups in Anyigba and Koton-Karfe agricultural zones indicated that, there was a slight difference in the perception of benefits derived from these agro-zones. And the difference existed only in access to pool of farm labour ($t=-2.134$; $P\leq0.05$). The study recommended that, the weak extension services should be strengthened by government and other private extension service providers to render timely services to farmers, and government should make farming lucrative to entice young people into farming as a major means of livelihood.

Keywords: Agricultural Productivity, Economies of Scale, Farmers' Labour Group, Rural-Urban Migration

1.0 INTRODUCTION

Agriculture remains the backbone of Nigeria's economy, engaging over 60% of rural households and contributing nearly 25% to the national GDP (Onyaniran, 2020). Alewa et al. (2020) opined that agriculture is the key driver of economic growth and social well-being in developing countries. According to Food and Agriculture Organization (FAO) (2019), agricultural sector contributes

over 85% of rural income, provide about 70% of rural employment, and accounts for nearly 25% of Nigeria's Gross Domestic Product (GDP). This portends that, developing the agricultural sector in developing countries like Nigeria can directly impact poverty reduction, improve livelihoods and well-being (Sambo et al., 2025). The bulk of the food consumed in most cities in Nigeria come from rural farmers who employ indigenous techniques and family labour for most of their farm operations. Rural people are mostly smallholder farmers whose farmlands are small and scattered. Smallholders make a contribution not only to agricultural productivity but also to overall economic growth, by providing labour, capital, food, foreign exchange, and a consumer good market (Biggs and Biggs, 2001).

The adoption of family labour does not really bring about the much needed economies of scale in food production. This drift of the rural population to cities for white collar jobs had begun with the resultant decline in rural farm labour force. Worthy of note too is the fact that, the Nigerian rural setting that provides the bulk of the food needs was neglected during the colonial era and has still not yet witnessed any major transformation in the post-independence era (Raphael, 2002). Nigeria's food shortage and insecurities have worsened due to declining farm productivity resulting from inefficient production methods, inadequate resources, and a shortage of farm workers (Akimbila, 2021). Labour remains a major input in crop production, accounting for a significant portion of production costs. Labour productivity has fallen, limiting farmers' ability to achieve higher yields and contributing to rural poverty and food insecurity. Labour is a critical factor in the agricultural economy because it enhances productivity through timely planting, proper farm management, and efficient harvesting. It also promotes technology adoption, mechanization, and overall efficiency in food supply chains (Pawlak, and Kolodziejezak, 2002, Folorunso et al., 2025).

It is probably due to the dearth of farm labour as a result of exodus of young learned men to the urban centres that led to the formation of farm labour groups and/organizations by smallholder farmers in Nigeria's rural sector especially in Kogi State. The decline in agricultural labour supply is linked to rural-urban migration, ageing farming populations, and social constraints such as education and gender-based labour roles (Anyiro et al., 2013, Folorunso et al., 2025). Farmers' labour group is an assemblage of two or more human beings with common identity who are bound

together in a formal relationship, and whose members interact together to satisfy complementary needs.

Farmers' labour group is the association of people who have voluntarily come together to achieve common objectives through the formation of a democratically controlled organization; making equitable contributions to the labour needs of members. The need to form farm labour groups by rural farmers to provide needed farm labour is seen as a sure way of ensuring mass food production. Apart from the ready availability of farm labour, farmers voluntarily come together with the intent of pooling their resources together for the accomplishment of farm tasks, such as farm inputs procurement, joint sales of farm produce, access to credits, among others.

Farmers' labour groups in Kogi state usually embark on other enterprising or non-farm activities for the benefit of members (Edoka, 2011). Farmers' labour groups are recently changing from their main role of supplying labour hands to their members to other non-farm activities such as organization of thrift and loans to assist needy members and non-members in cushioning their financial problems, building of houses for members, construction of rural market stalls, procurement of farm inputs for members and non-members, assisting members during marriage and burial ceremonies among others. This change in roles of farmers' labour groups is also seen among the two agro-zones of kogi state, Nigeria (Edoka, 2015).

Given the low ratio of farm labour to land combined with the rural-urban out-migration, the food economy in Nigeria and Kogi state to be specific is confronted by a generally inelastic agricultural labour demand. Studies have shown that, shortage in farm labour supply results in low farm productivity which eventually culminates in poverty among rural farming communities in Africa. Low productivity due to shortage of farm labour during planting seasons in Kogi state has greatly affected productivity and economies of scale of farmers. To cope with farm labour shortage, rural farmers tend to form organizations (farm labour groups) in order to solve their farm and off-farm problems. Farmers' labour groups are formed to enable members achieve through joint efforts what they are unable to achieve singly by themselves.

It is as a result of the aforementioned that this study assessed the perceived benefits of farmers' labour group formation in Kogi state, Nigeria. Specifically, the study; i).described the socioeconomic variables of members of farmers' labour groups in Kogi state, ii). ascertained

perceived benefits of farmers' labour groups, and iii). identified constraints faced by farmers' labour groups.

Hypothesis: Ho_1: There is no significant difference in the perception of benefits of farmers' labour groups among farmers in Anyigba and Koton-Karfe agricultural zones of Kogi state.

2.0 METHODOLOGY

2.1 The Study area

The study was conducted in Kogi State, Nigeria. The state is located between latitudes 7^0 30'' N and 6^0 42''E and longitudes 7^0 30'' N and 6^0 40''E, having a land area of 29,833sq/km, with a projected population of over 5.5 million. The state is made up of four agricultural zones namely; Zone A: Aiyeotro Gbedde, Zone B: Anyigba, Zone C: Koton-Karfe and Zone D: Alloma, and twenty one local government areas (LGAs) namely; Adavi, Ajaokuta, Ankpa, Bassa, Dekina, Ibaji, Idah, Igalamela/Odolu, Ijumu, Kabba/Bunu, Kogi, Lokoja, Mopa-Muro, Ofu, Ogori-Magongo, Okehi, Okene, Olamaboro, Omalla, Yagba East and Yagba West. For administrative purposes, the state is divided into three senatorial districts such as the eastern senatorial district which is comprised of Igala ethnic group, central senatorial district that is made up of the Ebira ethnic group and the western senatorial district which is made of the Yoruba ethnic group. The state is bounded in the west by River Niger and Niger state, to the east by Enugu state, to the south by Anambra state and to the north by Federal Capital Territory, Benue and Nasarawa states. The major languages of the people are Igala, Ebira and Yoruba. There are other minor languages like Bassa, Nupe, Kakanda, Oworo, Eggan among others. Majority of the people are farmers growing food crops such as maize, yam, cassava, millet, rice, sweet potato and beans, and cash crops such as citrus, oil palm, kolanut, cashew and cocoa, among others. Fish farming is predominantly carried out in some LGAs such as Ibaji, Idah, Koton-Karfe, Bassa, Lokoja and Ofu due to their proximity to the River Niger.

2.2 Sampling Procedure and Sample Size

The population of the study consist of all the rural farm labour groups in Kogi state. Out of the four agricultural zones of the state, two zones were purposively selected due to greater level of farm activities; these were Anyigba and Koton-Karfe agricultural zones. And from each of the zones, two local government areas each were randomly selected, making a total of four LGAs. The

LGAs were; Dekina and Ankpa from Anyigba zone, and Koton-Karfe and Ogori-Magongo from Koton-Karfe zone. There were about 105 farmers' labour groups identified in Anyigba agricultural zone, while a total of 60 farmers' groups were identified in Koton-Karfe zone, thereby making a total of 165 farmers' labour groups. From each of the LGAs, 50% of the total number of farmers' labour groups were drawn; 53 farmers' labour groups from Anyigba zone and 30 from Koton-Karfe zone making a total of 83 farmers' labour groups. And from each of the farmers' group, 5 farmers were randomly selected through balloting making a total of 415 farmers as sample size for the study.

A well-structured instrument was designed for data collection from the selected respondents. Data collected were analyzed using descriptive statistics (frequency distribution, percentages and means) and inferential statistics (t-test).

2.3 Model Specification

Weighted Mean Score

The weighted mean scores for constraints faced by farmers is calculated using the formula shown below;

$Xw = 4(F_4) + 3(F_3) + 2(F_2) + 1(F_1)$

Where:

Xw = Weighted score of farmers' labour groups

4-1= Rating scale of Very serious (VS) to Not serious (NS)

F_4- F_1 = Frequency of respondents in each scale

The values of the weighted score were used to rank the constraints to farmers' farm labour groups.

Mean score = $\frac{\textit{total score of each constraint}}{\textit{Total number of respondents}}$

The mean score of respondents based on 4-point likert-type scale =4+ 3+2+1= 10/4= 2.5 Using the interval scale of 0.05, the upper limit cut-off point was 2.5+0.05= 2.55, while the lower limit = 2.5-0.05= 2.45. Based on this limit, any mean score below 2.45 (Ms<2.45) was considered as not serious constraint, while any mean score between 2.45 and 2.55 was considered as serious

constraint, and any mean score equal to or above 2.55 (Ms ≥ 2.55) was considered as very serious constraint.

T-test Model

T-test statistic was used to measure the difference in the perceived benefits derived by both agricultural zones (Anyigba and Koton-Karfe) at 5% level of significance. The model is specified below;

$$t = \frac{m_1 - m_2}{\sqrt{\frac{sd_1}{n_1} + \frac{sd_2}{n_2}}}$$

Where;

t = Calculated t-value

M_1 = Mean benefits derived by farmers from Anyigba agricultural zone

M_2 = Mean benefits derived by farmers from Koton-Karfe agricultural zone

Sd_1 = Standard deviation of benefits derived by farmers from Anyigba agric. zone

Sd_2 = Standard deviation of benefits derived by farmers from Koton-Karfe agric. zone

n_1 = Sample size of farmers from Anyigba agricultural zone

n_2 = Sample size of farmers from Koton-Karfe agricultural zone

3.0 RESULTS AND DISCUSSION

3.1 Socioeconomic Characteristics of Respondents

Table 1: Socioeconomic Characteristics of Farmers

Characteristics	Percent.	Mean
Sex		
Male	91.0	
Female	9.0	
Age (Years)		
32-41	11.2	51.2
42-51	43.8	
52-61	31.5	
62-71	13.5	
Above 70 years	00.0	
Number of years spent in school		
0.00	14.0	7.6
1-6	32.5	

7-12	48.0	
Above 12	5.5	
Marital Status		
Single	26.2	
Married	68.0	
Divorced	5.8	
Household Size		
1-5	31.5	8.0
6-10	50.5	
11-15	18.0	
Above 15	00.0	
Farm Size (Ha.)		
1-4	60.7	4.0
5-8	34.8	
Above 8	4.5	
Farming Experience (Years)		
10-20	7.9	36.8
21-30	41.7	
31-40	29.2	
41-50	10.1	
Above 50	1.1	
Extension Visit per Year		
None	43.8	
Once	28.6	
Trice	3.4	

Source: Field Survey, 2025

According to Table 1 above, Majority (91.0%) of the farmers were males while the females constituted only 9.0%. This implies that, male farmers dominate farmers' labour groups among the two agricultural zones. Opaluwa (2014) reports that 89.5% of farmers in Kogi State were males. Table 1 also shows that a little below half (43.8%) of the members of farmers' labour groups were within the age range of 42-51 years, and the mean age of the farmers was 51.2 years. This portends that, majority of the farmers are fairly old and may not have the needed strength for mass food production individually. This could probably be the reason for the formation of labour groups to meet their farm labour needs. Age is an important factor in determining farmers' wiliness to adopt innovative technologies (Bada et al., 2023).

Nearly half (48.0%) of the farmers had 7-12 years of formal education, the mean number of years spent in formal education was 7.4 years. This implies that members of farmers' labour groups in both agricultural zones were fairly literate and can therefore read and write. Basic education

whether obtained in school or out of school makes a lot of contributions to farm productivity, as better educated farmers are easier to deal with and have greater access to external agro-information sources and are prone to adopt farm innovations as quickly as possible. Chukwu et al (2023) assert that formal education can enhance adoption of improved technology. The table equally shows that most (68.0%) of the respondents were married. Slightly over half (50.5%) of the farmers in had household sizes between the range of 7-11 people, while the mean household size was eight persons. This implies that, members of farmers' labour groups in both agricultural zones have large household sizes. According to Villano and Fleming (2004), more adult members in a household translates to the availability of more labour for carrying out farming activities thus making the production process efficient. Larger household sizes reduce labour constraints thereby leading to increase in productivity and income of the farm household. In contrast, Orebiyi et al. (2011) contend that, despite the fact that large household size could be advantageous for farm families, it may be disadvantageous as more people means high demands for food, clothing, health, and children's school fees among others. Thus, the need for labour groups in order to obviate this shortcoming.

Table 1 equally revealed that most (60.7% %) of farmers had farm sizes between 1-4 hectares and the mean farm size was 4 hectares. The implication of this finding is that members of farmers' labour groups in the two zones had fairly large farm sizes which is a pointer that they are willing to accept new farm practices for mass food production. Farmers with large farm holdings are more likely to invest in their farm enterprise than those with smaller holdings as the former have more gain if they do so. According to Table 1, a little above half (51.7%) of farmers had between 28-37 years of farming experience, while the mean year for farming experience was 38 years. This implies that, farmers in both zones have long experiences in farming. And long years of farming experience could serve as an advantage for increases in output in various farming and related activities when meaningfully deployed. Long years of farm experience is vital because farm management skills of farmers improve with long experience in farm operations.

Results presented in Table 1 shows that, a little below half (43.8%) of farmers had no extension contact at all, though 28.6% had one number of extension contact per year. While 24.2% had 2 number of extension contacts per annum. This implies that extension contact in both zones is low.

Poor extension visits could probably stem from poor funding of extension service and/or lack of qualified extension personnel.

3.2 Perceived Benefits of Farmers' Labour Groups

Findings in Table 2 showcase the various reasons for farmers' labour formation as adduced by farmers.

Table 2: Mean distribution of farmers' labour groups according to perceived benefits

Perceived Benefit	M	SD
Access to credits from financial institutions	2.69*	0.748
Promotion of deep interpersonal relationships	3.81*	0.474
Access to pool of farm labour	3.66*	0.583
Promotion of savings culture	2.36	0.727
Sufficiency in food production & security	2.10	0.880
Assisting indigent members in times of needs	3.33*	0.653
Development of leadership abilities	2.17	0.843
Increased income	3.02*	0.839
Platform for innovation adoption	2.78*	0.938
Access to agro-information	2.62*	0.746
Enhance community labour-sharing	2.26	0.776
Access to external supports	2.51*	0.868
Lending money in circle to members	2.51*	0.725

Source: Field survey, 2025 ***Major benefits**

The major reasons for forming farm labour groups are presented in Table 2. Some of the benefits span across labour needs, capital, decision-making, social interaction, and income. The results in Table 3 show that promotion of deep interpersonal relationships (M= 3.84; SD=0.433), access to pool of farm labour (M= 3.72; SD= 0.541) and assistance to indigent members in times of needs (M= 3.37; SD= O.682) were the major benefits derived from belonging to farmers' labour groups in the two ethnic nationalities. Other benefits were increased income of members (M= 2.99; SD=0.815), serves as a platform for acquisition and adoption of agricultural innovations (M= 2.76; SD=0.905), access to credits (M=2.75; SD= 0.723), access to agricultural information (M= 2.76; SD= 0.905) and lending money in circles to members (M= 2.50; SD= 0.720).

According to Agbarevo and Obinne (2010), farmers' group fosters *"we-feelings"* and the spirit of togetherness among members. This tends to eventually remove the spirit of disaffection, and conflict situations among members. Farmers help one another especially the indigent members in times of need such as sickness, burial ceremonies, and school fees requirements among others. And membership of farmers' labour groups and cooperatives and other social organizations could have positive effects on diffusion and adoption of agricultural innovations in Nigeria. This then implies that farmers' labour group formation has lots of benefits for members as it can bring about deep interpersonal relationship which can facilitate information sharing, mutual trust and assistance to members in times of need.

3.3 Test of hypothesis

Hypothesis Ho_1: There is no significant difference in the perceived benefits of farmers' labour groups in Anyigba and Koton-Karfe agricultural zones.

The test of hypothesis which states that, there is no significant difference in the perceived benefits of farmers' labour groups in Anyigba and Koton-Karfe agricultural zones was tested using t-test at 5% level of significance. According to data presented in Table 3, there was a slight difference in the perception of benefits derived from farmers' labour groups by members from Anyigba and Koton-Karfe agro zones. The difference existed only in access to pool of farm labour ($t=-2.134$; $P \leq 0.05$). This implies that members of farmers' labour groups from both zones perceived surplus farm labour as the major benefit derived from farmers' labour group formation. This could be inferred from the high mean scores of 3.66 and 3.92 respectively. Access to surplus farm labour can lead to economies of scale and income. The null hypothesis is therefore accepted in this regard.

Table 3: T-test of difference in the perception of benefits of farmers' labour groups in Anyigba and Koton-Karfe agricultural zones

	Agro Zones					
	Anyigba		Koton-Karfe			
Benefit	**M**	**SD**	**M**	**SD**	**t-value**	**Sig.**
Access to financial institutions	2.69	0.748	3.00	0.577	-1.945	0.054
Promotion of deep interpersonal relationships	3.81	0.474	3.96	0.200	-1.551	0.124
Access to pool of farm labour	3.66	0.583	3.92	0.277	-2.134	0.035*
Promotion of savings culture	2.36	0.727	2.62	0.649	-1.623	0.107
Sufficiency in food production and security	2.10	0.880	1.76	0.779	1.754	0.082
Assisting indigent members	3.33	0.653	3.52	0.770	-1.261	0.210
Development of leadership abilities	2.17	0.843	2.40	0.764	-1.238	0.218
Increased income	3.02	0.839	2.88	0.726	0.771	0.442
Platform for adoption of innovation	2.78	0.938	2.72	0.792	0.269	0.789
Access to agro-information	2.62	0.746	2.36	0.757	1.522	0.131
Enhance labour-sharing among members	2.26	0.776	2.48	0.714	-1.282	0.282
Access to external support	2.51	0.868	2.40	0.764	0.551	0.583
Lending money in circles	2.51	0.725	2.48	0.714	0,157	0.876

Source: Field survey, 2025 ***Significant @ 5% level of probability**

3.4 Constraints to farmers' labour group formation and productivity

The constraints to the effective operation of farmers' labour group is shown in Table 4 below.

Table 4: Mean distribution of constraints to operation of farmers' labour groups

Constraint	M	SD
Exclusion from national labour laws	1.34	0.583
Lack of government support	1.99	0.699
Lack of involvement in decision-making	1.87	0.548
Constant internal crisis	1.07	0.330
Low extension contact	2.57*	0.528
Old age of some members	2.50*	0.659
Corruption (embezzlement of fund)	1.08	0.310
Migration of youth population	2.71*	0.548
Imposition of taxes by local authorities	1.43	0.638
Poor state of infrastructure	2.20	0.643
Problem of land ownership	2.28	0.723
Lack of commitment of some members	1.18	0.490
Lack of access to agro-information	2.08	0.661
Poor storage facilities	2.04	0.562
Scarcity of farm labour	2.56*	0.563
High cost of farm labour	2.56*	0.583
Scarcity of farm inputs	1.34	0.499
High cost of farm inputs	2.38	0.533

Source: Field Survey, 2025 * Major Constraints

Respondents' perceived constraints to their effective formation and productivity are shown in Table 4. Migration of youth population (M= 2.71 SD=0.548), high cost of farm labour (M= 2.56 SD=0.588), old age of some members and scarcity of farm labour (M= 2.50 SD= 0.659 and M= 2.58; SD= 0.563 respectively) constituted major constraints to farmers' labour group activities in the study area. This implies that migration of able-bodied men and women to urban centers greatly have negative effects on farm labour supply as revealed by these findings, this will surely affect

farm productivity as rural farmers may not have the needed fund to hire labour. Ekong (2010) asserts that migration from rural to urban greatly deplete agriculture labour force as able-bodied people are involved. With no commensurate substitution of capital in place of the displaced labour, agricultural productivity tends to fall in the source region which is the rural area.

Another constraint as perceived by the respondents was low extension contacts (M= 2.57 SD= 0.528). The finding equally revealed that farmers' labour groups had little or no extension contact, this then shows that the farmers may not have access to some innovative practices that can better their agricultural operations.

4.0 CONCLUSION AND RECOMMENDATIONS

4.1 Conclusion

Agriculture remains the major source of livelihood in most developing countries, contributing greatly to the Gross Domestic Product (GP). It is unfortunate that this sector constantly witness farm labour shortages over the years. And to cope with this problem, rural farmers tend to organize themselves into farm labour groups to close farm labour demands. Farmers in Kogi state are not left out in this labour arrangement despite the fact that they face several challenges. The sudy revealed that members of farm labour groups in the study area were fairly old, with majority of them having primary education. These farmers have large family size which could be advantageous for farm works. The major reason adduced for forming labour groups was dearth of farm labour. And the major benefits they derived from forming farmer' labour groups were access to pool of farm labour and promotion of deep interpersonal relationships. While the major constraints they faced were migration of youth population, high cost of farm labour, old age of some members and problem of landownership.

4.2 Recommendations

Based on the findings of the study the following recommendations are made:

1. The weak extension service should be strengthened by government and other private extension outfits by way of funding, training and provision of necessary logistics. This will enable farmers' labour groups have constant access to extension services and information for the improvement in their farm operations.

2 Also, it was discovered that, most members of farmers' labour groups in the study area were aged, government should come out with policies and programmes that can make the agricultural sector enticing to the younger generations. This can be done by increasing the yearly budgetary allocation to agriculture, provision of farm inputs at subsidized rate, granting interest-free loans to farmers and organizing seminars for students and young school leavers to appreciate agriculture as a good career,

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