



## Factors Associated with Women Farmers' Level of Control in Farmer-Groups in Kwara State, Nigeria

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### Abstract

Women farmers' low level of access to productive resources has hindered the realization of their full potential in agriculture. While membership of farmer-groups has been recognised as an avenue for farmers to harness their resources, women farmers often suffer discrimination in such groups as socio-cultural values encourage male dominance in most rural communities. The specific objectives of the study were to describe the socio-economic characteristics of women farmers who were members of farmers' groups, identify the benefits derived from their membership and examine the level of control of women in the farmers- groups. A two-stage random sampling technique was used to select 142 respondents across the 315 registered crop-based farmers' group in Kwara State. Data were obtained by the use of a structured interview schedule. Descriptive statistics and the Pearson's Product Moment Correlation were used to analyse data collected. The result reveal that women farmers in the study area were middle-aged (Mean age=49.6years), poorly schooled (majority at primary level), with about 22years of farming experience on the average. The most important benefit derived from membership of farmer- groups was improved access to agricultural information (M.S=3.4). The level of control of women in farmer- groups was low (Mean score=2.21) and significantly influenced by age, annual income, level of education and farm size at  $p<0.01$ . The study concluded that the low level of control of women could be improved through awareness of the importance of gender equity in farmer-groups.

### Keywords:

Control, Farmer-groups and Women farmers

### 1. Introduction

The significant roles of agriculture in nation building all over the world cannot be overemphasised. Agriculture is the most important economic sector in Nigeria from the standpoint of rural employment, sufficiency in food and fibre, and export earnings (Mohammed & Abdulquadri, 2012). It is a significant contributor to the country's Gross Domestic Product. Although the sector is dominated by millions of small-scale farmers, the aggregation of their individual outputs significantly contributes to the nation's productivity and level of food security (Rahji & Fakayode 2009). Akangbe et al., (2012), observed that 95 percent of farmers in Nigeria operate on small-scale and that 55% of them are

women. Nwaobiala et al., (2009) also reported that women are involved in agricultural production, processing and marketing in Nigeria. They provide about 60-80 percent of the agricultural workforce and contribute to the well-being of their households through their income generating activities (Rahman et al., 2004).

Despite the level of participation of Nigerian women in agricultural development, it has been observed that they are faced with many problems which make their output fall below their potentials. This could be due to their inability to individually acquire some of the farm resources that can ease their labor and increase their output. Their failure to access farm resources are limited by socio-cultural norms

and values among others. In most communities in Nigeria, women are forbidden to inherit resources such as land. Researchers have reported that in agricultural production, women are more severely constrained than their male counterparts hence most women have less access to, and higher costs for information technology, inputs and credit (Ogunlela & Mukhtar, 2009). Women have been perceived only as housewives or farmers' wives rather than farmers, and this gender ideology is reflected in policies that affect access to the means of production. In addition, differential access to credit by women and men and ability to enhance agricultural production in Nigeria resulted from socially emanated gender-specific challenges that are built into the socio-economic, local institutions and socio-cultural practices and norms in their domains (Ololade & Olagunju, 2013). Women's role in agricultural development has been traditionally under-rated owing to the argument that they are not significant contributors to development process but rather, beneficiaries of development (Adisa & Okunade, 2005). Women constitute the larger proportion of the agricultural labour force. Their control over resources, services and benefits, however, remains small. Gender inequality in access to agricultural credit is one of the reasons adduced for the failure of agriculture to move forward as expected in Nigeria (Jeiyol et al., 2013).

As a way of solving these issues women join forces and initiate economic cooperation by becoming members of farmer-groups where they expect to have access to farming inputs and other resources. Farmer-groups are believed to improve members' access to resources (such as inputs, credit, training, transport, and information), increase bargaining power and facilitate certification and labelling (Bosc et al., 2002). However, the level of control of women in farmer-groups has been questioned. The gender inequality ideology is at the centre of Farmer-groups where women farmers seek siege to have access to agricultural inputs. Ayinde et al., (2013) opined that it is of importance to have a strategy to put men and women's challenges and experiences at the centre of research planning, implementation, monitoring and evaluation. It involves looking at the socio-economic settings of men and women to ensure that they benefit equally. This ideology is often referred to as "gender mainstreaming". Proponents of this school of thought believe that by bridging the gap in access to technology between men and women, it is possible to increase overall agricultural productivity by increasing the productivity of women farmers.

Ajah (2010) observed that, if disparities between men and women's statuses, access to resources, control of assets and decision-making

powers persists, sustainable and equitable development would be undermined. The study, therefore, assessed the level of control of women farmers in farmer-groups in Kwara State. The specific objectives of the study were to:

- describe the socio-economic characteristics of women farmers who are members of farmer-groups in the study area;

- identify the benefits women derived from their membership; and

- examine the level of control of women in the farmer-groups.

#### Hypothesis of the Study

The hypothesis of the study was stated in the null form as follows:

H01: There is no significant relationship between socio-economic characteristics of women farmers and their level of control in farmer-groups.

## 2. Materials and methods

### Study Area

The study was carried out in Kwara State, Nigeria. The total landmass of Kwara State is 32,500 square kilometres. It has a population of about 2.5 million people (National Population Commission, 2006). The State is bounded on the West by the Republic of Benin. Kwara State comprises rainforest in the southern parts of wooded savannah covering the larger part of the state. The state has an annual rainfall between the range of 1000mm to 1500mm. Average maximum temperatures vary between 30°C and 35°C. The state comprises 16 Local Government Areas and has four (4) agro-ecological zones namely; Zone A, B, C and D. Agriculture is the main source of the economy with several small-scale farmers who exist in farmer-groups. The principal cash crops are cotton, cocoa, coffee, Kolanut, tobacco, beniseed and palm produce.

### Sampling Procedure and Sample Size

The population for the study consisted of all women farmers in Kwara State who were members of farmer-groups. A two-stage random sampling technique was used in selecting the respondents for the study. The first stage involved the random selection of 50 percent of the 315 crop-based farmers' group in the state. The aim of this selection was to reduce the sampling frame to a financially manageable size as the researchers did not enjoy any grant to support the study. This was achieved without introducing bias to the procedure. The second stage was the random selection of 15 percent of the female members in each of the selected groups. The rationale for the sampling procedure was the need to ensure equitable distribution in the number of respondents selected from each of the groups because the groups

differed in membership size as well as in composition. A total sample size of 142 was used for the study.

#### Data Collection

Field survey for the study was carried out between February and July 2017 to obtain primary data for the study. Data collection was done with the aid of a structured interview schedule administered by trained enumerators. Although 172 copies of the survey instrument were administered, 142 responses were found analyzable, giving a response rate of 82.56%. The interview schedule was used to elicit information on the socio-economic characteristics of the respondents, benefits derived from being members of the farmer-groups and their level of control in their farmer-groups. The instrument was validated by extension experts in the Department of Agricultural Extension and Rural Development of the University of Ilorin, Nigeria. The Test-re Test method was used to ascertain the reliability of the survey instrument. This was achieved by administering copies of the interview schedule on 30 members of the study population who were not selected for the main study. The process was repeated after three weeks. The Pearson's Product Moment Correlation Analysis (PPMC) was conducted to ascertain the reliability of the instrument by correlating responses from the two pre-test surveys. A bench mark of correlation coefficient (r) at 0.5 was set for decision on the reliability of the instrument.

#### Data Analysis

Descriptive statistics involving the use of frequency counts, percentages, mean scores and standard deviation was used to present the findings from the study. A four – point Likert scale were used to measure level of control of women and benefits derived from membership of farmer-groups. The hypothesis of the study was tested with the Pearson's Product Moment Correlation (PPMC) Analysis.

#### The Pearson's Product Moment Correlation

The Pearson Product Moment Correlation is a measure of the strength of a linear association between two variables and is denoted by r. The coefficient which is, r, can take a range of values from +1 to -1. No association between the two variables means a value of 0 was gotten. A value greater than 0 indicates a positive association that is, as the value of one variable increases the other value also increases. A value less than 0 indicates a negative association; that is, as the value of one variable increases, the other value decreases.

Pearson's Product Moment Correlation is the covariance of the two variables divided by the

product of their standard deviations. The assumption of this model includes:

Variables must be approximately normally distributed;

There is linear relationship between the two variables; and

There is homoscedasticity of the data.

Pearson Product Moment Correlation was used in the hypothesis testing because it offers a base to test the null hypothesis that the true correlation coefficient  $\rho$  is equal to 0, based on the value of the sample correlation coefficient r. Another reason is to derive a confidence interval that, on repeated sampling, will have a given probability of containing  $\rho$ . The model is denoted by the equation:

$$\rho_{X,Y} = \frac{COV(X,Y)}{\sigma_X \sigma_Y}$$

Where:

COV is the covariance

$\sigma_X$  is the standard deviation of X

The formula for  $\rho$  can also be written as

$$\rho_{X,Y} = \frac{E[XY] - E[X]E[Y]}{\sqrt{E[X^2] - E[X]^2} \sqrt{E[Y^2] - E[Y]^2}}$$

#### Measurement of Variables

The dependent variable for the study was the level of control of women in their farmer-groups. This was measured with the use of a four-point Likert scale. Indicators of the level of control in groups were used to generate statements which when put together, adequately depicts the level of control. Respondents were then required to rate on a scale of one to four, the extent to which they agreed or disagreed with the statements. The scale was graduated as follows;

Strongly disagree (1), Disagree (2), Agree (3) and Strongly agree (4)

Respondents' scores on each of the statements were aggregated and taken as a measure of their level of control in the groups. The aggregate scores were divided by the number of items to generate a mean score for each respondent.

The independent variables for the study were selected socio-economic characteristics of the respondents. They were operationalized as follows;

Age of the respondents was measured in years.

Level of education was measured as the number of years of schooling.

Income was measured in Naira.

Farming experience was measured as number of years in farming.

Farm size was measured in acres.

Land ownership was measured as number of years since acquisition.

Household size was measured as the number of persons living under the same roof and eating from the same pot.

### 3. Results and discussion

#### 3.1 Socio-economic Characteristics of Respondents

Table 1 reveals that women farmers in the study area were middle-aged, poorly schooled, with about 22years of farming experience on the average. The mean farm size, household size and annual income of the household were 3.2 acres, seven (7) members and 198,070 respectively.

The result implies that the respondents were still in their active age categories that facilitate the energy demanding labour in agricultural (Oluwatayo, 2015). This corroborates the findings of Adereti (2005) who reported that the mean age of women farmers was 40. Rural women's low level of education can also have a major impact on their potential to access and benefit farming resources and improve their overall well-being. The annual income of most of the women was generally low, and this could have a significant impact on their ability to purchase farm inputs.

With an average of 3.2acres of land, the respondents were mostly small-scale farmers. This could be because, in Nigeria, women do not have ready access to land (Ogunlela & Mukhtar, 2009).

#### 3.2 Benefits Derived from Membership of Farmer-Groups

The result in Table 2 shows the distribution of respondents based on the benefits derived from membership of farmer-group in the study area. The result indicates that the most important benefit derived from membership of farmer-groups was improved access to agricultural information (M.S=3.4). This implies that agricultural information dissemination through farmer-groups has been very useful. This finding collaborates the report of Ofuoku & Urang (2009). Access to farming inputs (M.S=2.81) and improved access to market (Increased bargaining power for selling and buying) (M.S=2.80) were rated 2nd and 3rd respectively as benefits derived from membership of farmer -groups. This implies that extension officers, government projects and other funding agencies had been using farmer-group to reach farmers. Other benefits derived as members of farmer-groups included; improved farm gate prices (higher value on produce) (M.S=2.40), improved access to training and workshops (M.S=2.40), minimal risk level (M.S=2.40). Also, improved access to credit facility (M.S=2.30) was identified as benefits derived from membership of farmer- groups. This implies that with the help of farmer-groups, individual farmers can obtain loans from cooperatives and agricultural banks. By being members of farmer-groups, the respondents indicated that they enjoyed improved social networking, prestige with friends and fellow farmers (M.S=2.10). These were highlighted as importance of farmer-groups by Bosc et al., (2002). However, communal labor on members farmland (M.S= 2.00) was the least enjoyed benefit.

Table 1. Selected Socio-economic Characteristics of Respondents

Socio-economic Variables	Dominant Indicator	Mean
Age	Most (66.9%) of the respondents were between 40 and 50 years of age	46.9years
Marital Status	Almost all (94.4%) were married	
Household size	68.3 % had between six and ten household members	7.0
Level of education	66.2% had formal education although most at primary school level only	
Primary occupation	Farming was primary occupation to 85.2% of the respondents	
Farm size	57.8% had between one and five acres of farmland	3.2acres
Farming experience	48.6% had more than 20 years of farming experience	22years
Extension contact	59.2% had extension contact six times over the immediate past six month period	5.7times
Total Annual Income	Only 72.5% earn more than ₦100,000 per annum (₦360=\$1)	₦198,070

Source: Field Survey, 2017.

Table 2. Distribution of Respondents Based on Benefits Derived from Membership of Farmer-Groups

Benefits	SD	D	A	SA	Mean	Rank
I have improved access to farming inputs	0(0)	27(18.9)	114(80.3)	1(0.7)	2.81	2nd
I have enjoyed communal labour on my farmland	20(14.1)	103(72.5)	19(13.4)	0(0)	2.00	7 <sup>th</sup>
I have improved access to agricultural information	0(0)	43(30.3)	99(69.7)	0(0)	3.40	1 <sup>st</sup>
I have improved access to credit facility	12(8.5)	75(52.8)	55(38.27)	0(0)	2.30	5 <sup>th</sup>
I enjoyed improved access to market (Increased bargaining power for selling and buying)	0(0)	25(17.6)	117(82.4)	0(0)	2.80	3rd
I enjoyed improved farm gate prices (higher value on produce)	0(0)	91(64.1)	51(35.9)	0(0)	2.40	4 <sup>th</sup>
I have enjoyed improved access to training and workshops	0(0)	93(64.8)	50(35.2)	0(0)	2.40	4 <sup>th</sup>
I have enjoyed improved social networking, prestige with friends and fellow farmers	10(7.0)	108(76.1)	24(16.9)	0(0)	2.10	6 <sup>th</sup>
I have enjoyed minimal risk level	5(3.5)	80(56.3)	57(40.1)	0(0)	2.40	4 <sup>th</sup>

Source: Field Survey, 2017.

### 3.3 Level of Control of Women in the Farmer-groups

Table 3 shows the indicators for level of control of women in farmer-groups. On a scale of one to four, the highest mean score recorded on the eight indicators was 2.40. The results reveal a poor level of control on all the indicators. Two indicators; equal access to credit and fair treatment in conflict resolution had the highest mean score (2.40). Although these indicators had the highest scores, the scores were poor and revealed challenges in these areas. Table 3 also show that women were not given equal opportunities as men to represent the group, e.g. for negotiation with the government, input suppliers; donor agencies etc. Again the mean score of 2.3 indicates poor opportunities for women to be representatives of their groups. CRS (2012) also reported that less than half of farmer-groups effectively involved women in decision-making. The score reported for this variable is attributable to the recent insistence by extension organizations, governments and international donor agencies for gender balance in developmental projects in Nigeria. Prior to these initiatives, women were only to be seen and not heard in most African settings. Equal participation of men and women in the implementation of decisions taken was the indicator with the least score. This implies that aside from not being involved in decision-making, women also did not participate equally with men in the implementation of decisions taken.

Result from Table 4 reveals the level of control of women in farmer-group. The overall level

of control score was 4.0. The mean level of control score was 2.21. This implies that level of control of women in farmer-group was low. The Catholic Relief Services CRS (2012) also reported that only one out of 14 farmer groups sampled in Madagascar had a woman president. A possible explanation for the low level of control by women is the socio-cultural beliefs which place men over women in most parts of Africa. The level of control was categorised into three namely low, moderate and high. Result shows that majority (73.2%) of the respondents were categorised under low level of control. This implies that women farmers did not have absolute control over most of the productive resources such as land, mechanised capital equipment, chemicals of various type. This agrees with Adereti (2005); Ogunlela & Mukhtar, (2009) and Omotesho et al., (2017) who reported a low level of access of women to resources and opportunities such as land, credit, and even extension services in spite of their membership of farmer-groups.

### 3.4 Hypothesis Testing

Table 5 shows the result of correlation analysis between selected socio-economic characteristics and level of control of women in farmer-groups. Result reveals that Age ( $r=-0.185$ ,  $p<0.05$ ), annual income ( $r=0.142$ ,  $p<0.01$ ), level of education ( $r=0.208$ ,  $p<0.01$ ) and farm size ( $r=0.279$ ,  $p<0.01$ ) had significant relationship with level of control of women in farmer-group. The negative relationship between age and level of control implies that older women had less control in the groups. This implies that as women grew older, their influence in

farmer-groups dwindled and their control reduced. Younger women farmers therefore had more control in farmer-groups. It agrees with priori expectations that young and middle-aged people are the most active in agricultural production activities for increased productivity. They also have the physical strength required for active participation in group-activities. Their relevance in participation may explain their higher level of control in the groups. On the contrary, the positive relationship between the level of education and level of control indicates that women with higher educational status had more control in farmer-groups than those with lower educational status. This is possibly because higher levels of education suggest higher social status and

hence higher level of influence over resources (Ajala et al., 2003). Bushra and Wajiha (2015) also reported similar findings. In addition, women with larger farm sizes had more control than those with fewer acreage of farmland. Farm size can be directly linked to higher output and hence higher income. The bigger the farm sizes, therefore, the higher the level of income. The level of affluence can affect the level of influence and hence control. However, farming experience ( $r=0.077$ ,  $p>0.05$ ), mode of land ownership ( $r=0.034$ ,  $p>0.05$ ) and household size ( $r=-0.008$ ,  $p>0.05$ ) had no significant relationship with level of control of women in farmer- groups.

Table 3. Distribution of Respondents Based on Level of Control indicators in Farmer-Groups

Control	SD	D	A	SA	Mean	Rank
There is equal chances for women emerging as leaders in the group	11(7.7)	86(60.6)	45(31.7)	0(0)	2.20	3rd
Women have equal say with men in group decision making	4(2.8)	112(78.9)	26(18.3)	0(0)	2.20	3rd
Women participate equally with men in the implementation of decisions taken	12(11.7)	117(82.9)	13(9.2)	0(0)	2.00	5th
Women have equal access to credit facilities with men in the group	0(0)	90(63.4)	52(36.6)	0(0)	2.40	1st
Women have equal share of subsidised inputs received from the government, donor agency projects etc.	1(0.7)	126(88.7)	15(10.6)	0(0)	2.10	4th
Women are given equal opportunities as men to represent the group, e.g. for negotiation with the government, input suppliers, donor agencies etc.	9(6.3)	79(55.6)	54(38.0)	0(0)	2.30	2nd
Women are not discriminated against in conflict resolution	7(4.9)	74(52.1)	58(40.8)	3(2.1)	2.40	1st
Women are given due consideration in fixing the timing of meetings and other group activities	0(0)	127(89.4)	15(10.6)	0(0)	2.10	4th

Source: Field Survey, 2017.

D=Disagree, SD=Strongly Disagree, A=Agree, SA=Strongly Agree

Table 4: Distribution of Respondents Based on Level of Control of Women Farmers in the Group

Level of Control	Frequency	Percentage	Mean
Very Low ( $\leq 2.0$ )	33	23.2	
Low (2.01-3.0)	109	76.8	2.21
High ( $\geq 3.01$ )	0	0	

Source: Field Survey, 2017.

Table 5. Correlation Analysis Showing the Relationship between Socio-economic Characteristics and Level of Control of Women in Farmer-groups

Variables	r-value	p-value	Decision
Age	-0.185**	0.028	Significant
Level of education	0.208***	0.004	Significant
Annual Income	0.142**	0.000	Significant
Farming experience	0.077	0.363	Not Significant
Farm size	0.279***	0.001	Significant
Land Ownership	0.034	0.685	Not Significant
Household size	-0.008	0.925	Not Significant

Source: Field Survey, 2017.

\*\*\*. Correlation is significant at the 0.01level (2-tailed)

\*\*. Correlation is significant at the 0.05level (2-tailed)

#### 4. Conclusion and Recommendations

The study concluded that the level of control of women in farmer-groups in Kwara State, Nigeria was low and significantly influenced by their age, annual income, level of education and farm size. It is recommended that;

Leaders of farmer-groups should be educated on the importance of gender equity in the groups. This will increase fairness and hence women members satisfaction in the group.

Women farmers should be encouraged to take advantage of the adult literacy programme to educate themselves for better positioning in the groups.

The government, non-governmental organisations, and other international donor agencies working with farmer-groups should continue to insist on adequate female involvement on all developmental programs.

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