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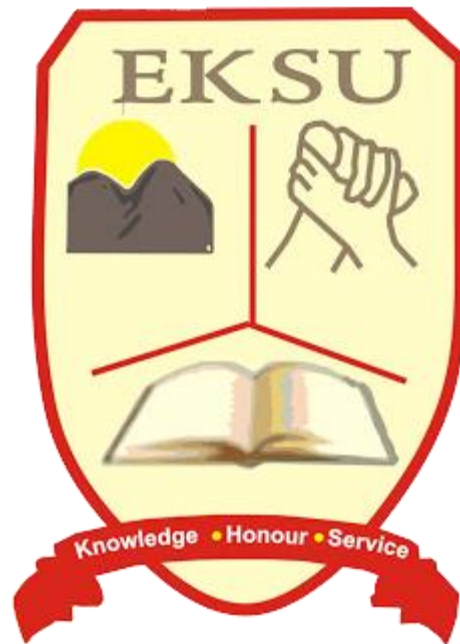
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Gender Role in Decision-making among Maize Farmers in Isaga-Orile Community of Ogun State, Nigeria

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Abstract

This study examined gender roles in decision making among maize farmers in Isaga Orile farming community of Ogun State. Data were collected through interview schedule from 60 male and 30 female farmers selected using a multistage sampling procedure. Data were analysed with the use of frequency counts, percentage, Chi-square, and Pearson's Product Moment Correlation. The result showed that 42.2% of the respondents were between the age range of 41 – 50 years, 87.8% were married, 77.8% and 22.2% were male and female respectively and 50% of the respondents had secondary school education. Considering gender role in decision making, the result showed that 87.8% of male farmers determined the utilization of returns accrued from sales of maize as against a joint decision made by 12.2% of male and female farmers. The results further showed that 84.4% of male farmers determined what to plant and when to plant. The major constraints encountered by the respondents in maize production were inadequate farm machinery to hire (98.9%), pest and disease outbreak (91.1%), and limited access to improved seeds (85.6%). There existed significant relationship ($p < 0.05$) between land preparation ($r = 0.333$), drying ($r = -0.304$), and value addition ($r = -0.319$), and maize production. It is therefore recommended that efforts should be made to improve maize farmers' accessibility to improve maize seed, pesticide, and chemical for disease control and farm machinery for hire.

Keywords: Constraints, activities, agro- service, participation, domination

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Introduction

Gender perception is a very significant part of agriculture which must be well-thought-out for any developmental contribution to be effective. It is the social variances between men and women (Oladeebo, 2012) which could manifest in the form of division of labour, roles and responsibilities, making a decision, and access and control of resources. In Nigeria, both men and women often have a balanced role in maize production, and in some regions, women have distinctly different tasks and responsibilities in maize production (Badmus et al., 2015). There are consistent gender

disparities in accessing, and benefiting from agricultural technologies, services, and inputs in developing countries (World Bank, 2009).

Education, access to learning, employment, and decision making, among other things, are a number of the areas of gender disparity (Ajala and Alonge, 2013). Socio-economic characteristics of farmers among other factors also affect the decision-making process within the household in agriculture (Ogunlela and Mukhtar, 2009).

The long-term low socioeconomic status, render women generally unable to take key decisions

overuse of such resources and benefits accruing from farm production (Oyakhilome, 2013). Farmers make choices on several pre-harvest and post-harvest activities such as what to produce, input use, harvest, and post-harvest issues (Williams, 2003), which affect production, processing, distribution, prices, and cost (Umar, 2011). Available literature reveals that men have constantly in control farm decision-making despite the important role played by women in agricultural production, processing, and marketing in Nigeria, even in areas where women are the largest providers of farm labour (Amaechina, 2002). They, therefore, have not received equitable decision-making rights (Oyakhilome, 2013).

Maize (*Zea Mays*) also called corn, is the third most important cereal crop in the world after wheat and rice (Gaya *et al.*, 2017). Maize is a significant cereal crop that is grown in various ecological zones in Nigeria which can be eaten boiled, roasted, prepared into porridges, and processed into flour and used as feed for livestock (Badmus *et al.*, 2015). It is an arable crop, cultivated on subsistence and commercial scale, with abundant economic and medicinal values. The importance of maize farming in Nigeria cannot be over-stressed as the country produced about 43% of maize grown in West Africa (Olarinde *et al.*, 2007). Maize is now a commercial crop on which many agro-based industries hinged on as raw materials (Iken and Amusa, 2004). There has been a remarkable success in the efforts to improve and sustain maize technologies as improved maize varieties are now grown across all agro-ecological zones of northern and southern Nigeria (Olaniyi and Manyong, 2007). However, considering the teeming and ever-increasing population of Nigeria, maize production has not met fully with the industrial and consumption needs of Nigerians probably due to lack of gender equity in decision making at the household level.

In a Nigerian study, it was found that the level of participation of women in farm management decision making was quite low (Shou, 2011). Similarly, there has been increasing literature on gender issues in agricultural production on the other hand but there seems to be an information gap (Oyakhilome, 2013) on gender role in decision making among maize farmers in Isaga Orile community Ogun State. On this note, the study sought to (a) ascertain the personal characteristics of maize farmers (b) determine gender role in decision making among the respondents (c) determine farmers' participation in maize production activities (d) to identify constraints faced

by the respondents in maize production. The study, therefore, hypothesized that (1) there is a significant relationship between farmers' characteristics and maize production (2) there is a significant relationship between maize farmers' farm activities and maize production.

Methodology

Study Area

This study was carried out in the Isaga Orile community of Abeokuta North Local Government Area of Ogun State, Nigeria. It has an area of 808 km² and a population of 201,329. The average monthly temperature ranges from 23 °C in February. The distribution of rainfall varies from about 1000mm in the western part to about 2000mm in the eastern part. There are two distinct seasons in the State, namely, the rainy season which lasts from March/ April to October/ November till March/ April. The climate of Ogun State follows a tropical pattern with the raining season starting about March and ending in November followed by a dry season. People of Isaga-Orile are noted for practicing agriculture as their major occupation. They engaged in crop production at commercial and subsistence scale, such crops include maize, cassava, rice, cowpea, vegetables, yam, and water-yam.

Data Collection, Measurement, and Analysis

Multi-stage sampling procedure was employed in this study to select 60 male and 30 female farmers from the study area. Data was collected on farmers' characteristics, gender roles in decision making at the household level, farmers' participation in maize production activities, and constraints faced by farmers using a structured interview schedule. Constraints encountered in maize production was measured on two-point Likert-type scale as major constraint (2) and minor constraint (1) Gender role of decision making was measured as 'yes and no' to a set of questions provided on decision making. Farmers' participation in agricultural activities was measured on a 3-point Likert scale as always participate (3), occasionally participate (2) and do not participate (1). Scores obtained from respondents were aggregated and analysed using frequency count, percentage, Chi-square, and Pearson's Product Moment Correlation.

Results

The study revealed the personal characteristics of the respondents (Table 1). The findings from this study showed that 42.2% of the respondents fall

within an age range of 41-50 years. The majority (77.8%) of the farmers were male. Ninety percent of the respondents had the highest educational

qualification of secondary school. The majority (87.85%) of the farmers were married and 65.5% were Christians.

Table 1: Personal characteristics of respondents

Variables	Frequency	Percentage (%)
Age		
21-30	4	4.4
31-40	35	38.9
41-50	38	42.2
51 and above	13	14.4
Sex		
Male	60	77.8
Female	30	22.2
Educational Qualification		
No formal	9	10
Adult education	4	4.4
Primary education	28	31.1
Secondary Education	45	50
Tertiary Education	4	4.4
Marital Status		
Single	3	3.3
Married	79	87.8
Widower	1	1.1
Separated	7	7.8
Religion		
Christianity	59	65.6
Islam	22	24.4
Traditional	9	10.0

Gender role in decision making is presented in Table 2. It was revealed that 87.8% of male farmers controlled and determined the utilization of returns accrued from sales of maize produce, 84.4% of men determined the variety of maize to

plant and when to plant, also male farmers (41.1%) controlled what is to be consumed at the household level. However, male and female farmers (66.7%) jointly had control over sales of maize and the sales of maize produce (63.3%).

Table 2: Gender role in decision making among maize farmers

Variables	Male (%)	Female (%)	Joint decision (%)
Determination of what to plant and when to plant	84.4	0.0	15.6
Control and determination of what to consume at the household level	41.1	21.1	37.8
Control of sales of maize crop	34.4	2.2	63.3
Control of selling prices for maize commodities	32.2	1.1	66.7
Determination of utilization of revenue accrued from the sales of maize	87.8	0.0	12.2

Constraints Encountered by Farmers in Maize Production

The study shows the constraints faced by maize farmers (Table 3). The findings showed that the major constraints faced by the respondents in

maize production were non-availability of farm machinery (98.9%), Outbreak of pest and diseases (91.1%) and limited access to improved maize seeds (85.6%) while their minor constraints were unfavourable weather condition (77.8%), unstable markets (74.4%) and theft (66.7%).

Table 3: Constraints encountered by farmers in maize production

Constraints	Major constraint	Minor constraint
1. Outbreak of pest and diseases	91.1	7.8
2. Inadequate funds	65.6	34.4
3. Transportation problem	36.7	63.3
4. Inadequate storage facilities	65.6	34.4
5. Inadequate farm machineries	98.9	1.1
6. Unstable markets	25.6	74.4
7. Limited access to improve seeds	85.6	14.0
8. Unfavourable weather condition	22.2	77.8
9. Problem of Weed	83.3	16.7
10. Labour shortage	61.1	34
11. Low soil fertility	76.2	23.3
12. Poor extension service	62.2	37.8
13. Theft	33.3	66.7

Participation of Farmers in Maize Production Activities

The study shows maize farmers' participation in maize production activities (Table 4). The findings showed that the majority of the respondents always participate in land preparation (85.6%),

sowing (84.4%), and harvesting (67.8%). Also, maize farmers occasionally participate in value addition (57.8%), marketing (57.8%), drying (50%), and weeding (45.6%).

Table 4: Participation of farmers in maize production activities

Farm activities	Frequently Participate (%)	Occasionally Participate (%)	Do not Participate (%)	Mean ($\bar{X}$)	Rank
1. Land preparation	85.6	13.3	1.1	51.4	1st
2. Sowing	84.4	13.3	2.2	36.2	2nd
3. Weeding	30.0	45.6	23.4	26.4	7th
4. Harvesting	67.8	30.0	2.2	34.1	3rd
5. Drying	35.6	50.0	14.4	28.4	6th
6. Value addition	41.1	57.8	1.1	30.8	4th
7. Marketing	41.1	57.8	1.1	30.8	4th

Relationship between Farmers' Characteristics and Maize Production

Table 5 shows the relationship between respondents' characteristics and maize production.

The results of the findings showed that no relationship ($P > 0.05$) existed between farmers' characteristics and maize production.

Table 6: Relationship between farmers' characteristics and maize production

Variable	χ^2	DF	p-value	Decision
Sex	3.82	3	0.282	Not Significant
Religion	6.70	6	0.349	Not Significant
Educational level	7.23	12	0.842	Not Significant
Marital status	2.60	9	0.978	Not Significant

Relationship between Maize Farming Activities and Maize Production

Table 7 shows the relationships between maize farming activities and maize production. The result

of the finding showed that significant relationships ($p < 0.05$) existed between land preparation, maize sun drying, and value addition and maize production.

Table 7: Result of Correlation Pearson Product Moment Correlation Analysis

Variables	R	P
1. Land preparation	0.333	0.001**
2. Sowing	0.088	0.407
3. Weeding	0.031	0.770
4. Harvesting	0.090	0.401
5. Drying	-0.304	0.004**
6. Value addition	0.319	0.002**
7. Marketing	-0.157	0.141

**0.05 level of significance

Discussion

The study showed that the majority of the respondents were male, suggesting male farmers' domination in the cultivation of maize in the study area. This result is higher than what (34.4%) was obtained by Badmus *et al.* (2015). The majority (90%) of the respondents acquired education in a formal setting, as against the highest secondary school education of 20.4% obtained by Adeola and Adetunbi (2015). Also, the majority of the respondents have established family, this could suggest the availability of family labour and that decision making among the respondents at the household level may be competitive. It could be inferred that female farmers had no complete control over decision making at the household level. The result of this study is similar to the assertion of Umar *et al.* (2011) who observed that men dominate decision-making process for activities like selection of enterprise, input procurement, input allocation, selling of produce and storing of produce in their study conducted gender analysis of labour contribution and decision-making role. Also, Ogunlela and Mukhtar (2009) reported that only 24% of women farmers took part in the final decision on the storage and marketing of farm produce.

Constraints encountered by maize farmers in the study area were farm machinery, the outbreak of pests and diseases, and limited access to improved maize seeds. This could imply that these constraints affect both categories of farmers. This result conforms with the report of the study conducted by Umar *et al.* (2011) Where access to farm inputs was ranked 3rd among the constraints facing respondents in a study conducted on gender analysis of labour contribution and decision-making role among maize farming households in north-central, Nigeria. Furthermore, respondents opined that unfavourable weather conditions, unstable markets, and problems associated with theft were minor constraints to maize production in the study area.

The finding further showed that the majority of the respondents always participate in land preparation, sowing, and harvesting. This could imply the significance of these activities in maize production. Also, maize farmers occasionally participate in activities like value addition, marketing, drying, and weeding. This could have resulted from the use of hired farm labour in maize production activities by the respondents.

The study hypothesized that maize production does not have a direct relationship with personal characteristics of the respondents such as sex, religion, educational level, and marital status, this means that maize production does not depend on the personal characteristics of the farmers. Also, the results showed that maize production has a direct relationship with land preparation, maize sun drying, and value addition.

Conclusion and Recommendations

The study examined the role of gender in decision making at the maize production household level. The result showed that male farmers had control over the decision made on the production of maize compared to the female counterpart. Constraints encountered by farmers were non-availability of farm machinery, pest and disease outbreak, rapid weed growth, and limited access to improved maize seed. Maize farmers always participate in land preparation, sowing, and harvesting. No relationship existed between the personal characteristics of farmers and maize production. However, a significant relationship ($p < 0.05$) existed between land preparation, maize sun drying and value addition, and maize production.

The study, therefore, recommends that researchers should design an empowerment program aimed at educating male farmers on how to respect the opinions of their female counterparts because no one is an island of knowledge. Also, to boost maize production, the government should make available farm machinery for hire, improve seeds and pesticide for sale through agro service centres

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