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CONSTRAINTS TO WOMEN'S PARTICIPATION IN AGRICULTURAL PRODUCTION IN KALTUNGO LOCAL GOVERNMENT AREA, GOMBE STATE

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Abstract

Agriculture is an important engine of food production and poverty reduction and women who make up the majority of the rural dwellers play a focal role in this sector. The aim of this research is to examine the extent of women participation in agricultural production in Kaltungo Local Government Area of Gombe state, Nigeria; with a view of identifying the constraints faced. Using quantitative and qualitative research methodologies, the research investigated the nature and the extent of women's participation in agricultural production in the study area. Data collection tools utilized in this study was a well-structured questionnaire, semi-structured individual interviews and observation. Analysis of data was done using descriptive (frequencies, percentages and counts) and inferential (chi-square) statistics. The results of this study showed that 76% of the women were engaged in subsistence farming. Majority (43%) cultivated 6-7 hectares of land. The chief agricultural practices include mixed cropping (49%), plantation agriculture (26%), pastoral farming (14%) and bush fallow system (11%). The socio-economic variables (age, education, marital status and occupation) considered for chi-square tests showed significant relationship with the level to which women participate in agricultural activities with the exception of education. The findings of this study revealed that the key factors constraining women's participation in agricultural activities were the threat from erosion, inadequate finance, menace of pest and diseases and shortage of fertilizers and other agricultural inputs. Hence, the study recommends among others full participation of women in agriculture by the government and development actors via addressing their agricultural needs and improving their access to agricultural productive resources. This could go a long way in bringing the much-needed transformation in rural areas.

Keywords: Agricultural Production, women, Participation, constraints, Kaltungo.

1. Introduction

Agriculture, which is the science of cultivating the land, producing crops and raising livestock, is the foundation stone of many African economies, especially sub-Saharan Africa. It offers quite a large portion of the Gross Domestic Product (GDP) in sub-Saharan Africa as well as the main source of foreign currency (Alliance for a Green Revolution in Africa (AGRA, 2013). Therefore, agriculture is both key to economic growth and the principal source of food and livelihood in the rural areas. Various studies (Food and Agriculture

Organization (FAO), 2011; Goebel, 2005; Singh and Vinay, 2013) revealed that Women, who form the majority of rural dwellers, play a significant role in Agricultural sector. Worldwide, about 70% of agricultural workers, 80% of food producers and 10% of those who processed basic foodstuff are women and they undertake 60%-90% of the rural marketing. Thus, constituting more than two - third of the work force in agricultural production (FAO, 2012). Similarly, in Africa, up to 80% of the labor force in all trade are females (Fabiya, 2017). Mijindadi (2010) estimated that women

are responsible for 70% of actual farm work and constitute up to 60% of the farming population in Nigeria. Yahya (2014) recorded that 76% of in their husband's farm. In Nigeria, women supply most of the needed labor in agricultural activities and this is the most important factor of productions to farmers, as it is needed at every stage of agricultural production. Even women seclusion (purdah) generate substantial income through food crops processing (Yahya 2014). Yet, the performance of agriculture has been dwindling in developing nations (FAO, 2011). Approximately, 21.2% of the people in Africa were projected to be malnourished between 2011 and 2013 and virtually two- their cultural and social status (Boserup, 1970; FAO, 1995; Goebel, 2005). Though, some investigations have been carried out by different researchers about the roles of women in agricultural production in other parts of the country and Gombe state (Bishop-Sambrook, 2004; Mogues et al., 2009, Yakubu and Idoma, 2018), little is known about women's participation in agricultural production in Kaltungo Local Government Area, Gombe State. Therefore, the study was carried out to examine the extent of women's participation in agricultural activities in Kaltungo Local Government Area, Gombe State. The aim of this research was to examine the role of women

women from Oyo and Bauchi state are actively involved in farming activities or are engaged

in agricultural production in Kaltungo Local Government Area of Gombe State. This was achieved through specific objectives, which include, the identification of the socio-economic status of rural women engaged in agriculture in the study area, examination of the level of women's participation in various agricultural activities in the study area and the analysis of the challenges facing women farmers in the study area.

2. Materials and Methods

2.1 Study Area

Kaltungo is one of the eleven (11) local government areas, which is in the southern part of Gombe State. It is located $90^{\circ} 46'$ and $11^{\circ} 00'$ and longitude $11^{\circ} 15'$ and $11^{\circ} 30'$. It is bounded by some neighboring local governments: Akko in the North, Shangom in the South, Balanga in the east and Billiri in the West. In terms of size, Kaltungo has an area of 881KM and population of 149,805 based on 2006 census (NPC, 2006). The study area is located within the tropical climatic zone of Nigeria. In the winter, there is much more rainfall in the study area than in summer. 2

The average rainfall is 933mm; it is characterized by two seasons: the wet season starts from the month of April and ends in October with annual rainfall of 700 1000mm (climatic data org). The lowest temperature occurs in the month of December and January. The dry season start from the month of November to march, this is mainly nfluenced by the northeast wind. The temperature is generally high during the day particularly in the month of March and April. The minimum and maximum daily range of temperature is 27 and 40 (Kleingberg, 2009). The dries month in January with 0mm; and most precipitation falls in August, with an average temperature of 30.5. In December temperature is 23.6, its lowest average temperature of the whole year (Kleingberg, 2009). The study area is situated

within savannah vegetation types, with grasses and shrubs, and with some useful economic trees such as baobab, acacia, and fig (ficus) families. Based on the national population census 2006 that was projected in 2018 by NPC, Kaltungo local government area has a total population of 234,066. In addition, the economic activities of the people are farming. The people have rich cultural activities that relate to every aspect of life, the study area has a central administration with chief and district head.

2.2. Methods

The study area is Kaltungo LGA, which is made up of ten wards. Multi-stage sampling technique was adopted for the study. Firstly, cluster sampling was used to divide Kaltungo LGA into three based on geographical zones

of North, Central and South respectively. Secondly, purposive sampling technique was used to select one ward from each zone based on physical accessibility and availability of population data. Thereafter, two communities were selected per ward using lottery method to give six communities. The study area has a total population of 234,066 (NPC projected population 2018). Using Yamane (1967) method of sample size determination based on 95% confidence level

3. Result and Discussion

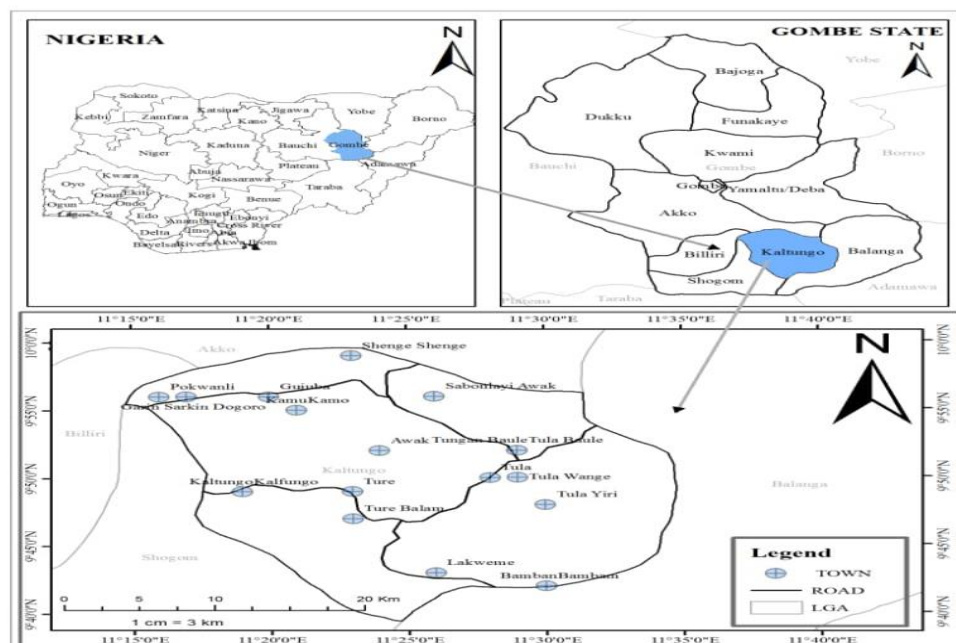
3.1 Demographic and Socio- economic Characteristics of the Respondents.

This section discusses information on the socio-economic characteristics of respondents such as sex, age, marital status, occupation, income etc. (Table 1). Regarding age, Table 1 disclosed that the age distribution of 100 respondents in this study ranged from <20 to >50. Table 1 further indicating that few young people engaged in agricultural activities. This could be attributed not only to rural-urban migration but also to the mass exodus of young Nigerians to neighbouring countries and abroad in search of

and error limit of 10%, a sample size of 100 was used for the study. Simple descriptive statistics such as frequency counts and percentages were used to analyze data acquired for the study. Chi-square test was also conducted to ascertain if there was an association between age, education level, marital status, occupation etc. and the level to which women farmers participate in agricultural activities in the study area.

indicates that majority (43%) of the respondents are within the age bracket of 20-30 years. This is followed by 24% (31-40 years), while the least is 9% (above 50 years). This reveals that the majority of the participants in this study were middle aged who could actively and productively participate in economic activities. However, only 25% were below the age of 35

that they had divorced. In terms of educational status, Figure 3.1 illustrates that of the 100 respondents in this study, 32% had primary education, while 30 % and 15% had secondary and tertiary education respectively. 23% had



greener pastures and better livelihoods. Regarding marital status, data in Table 1 indicates that the majority of the respondents (74%) were married. This is followed by single 12% and 10% who were widows. 4% indicated

adult education. This implies that women in the study area are literate to varying degrees. According to Sinyolo et al., (2014), higher levels of education “implies more opportunities of generating income and, implies better

understanding of new and improved farming technologies, whereas Ahmed et al (2012) adopt better technology and technical information, which consequently affects participation in agricultural production. With reference to occupation, information in Table 1

maintained that low education levels can hamper the ability to depicts that nearly three-quarter (74%) of the respondents were farmers.

Table 1: Socio – Economic and Demographic Characteristics of Respondents (n=100)

Category	Variable	Number	Percentage
Age	Less than 20	10	10
	20-30	43	43
	31-40	24	24
	41-50	14	14
	Above 50	9	9
Marital Status	Married	74	74
	Single	12	12
	Widow	10	10
	Divorce	4	4
Education	Primary	32	32
	Secondary	30	30
	Tertiary	15	15
	Adult Education	23	23
Occupation	Farming	74	74
	Civil Servant	11	11
	Students	8	8
	Traders	7	7
Income (₦)	Less than 50,000	43	43
	50,000- 100,000	31	31
	101,000- 150,000	19	19
	151,000- 200,000	5	5
	Above 200,000	2	2

Source: Fieldwork, 2019.

Next in percentage is 11% (civil servants), 8% (students) and 7% (Traders) respectively. This implies that women participate significantly in farming activities in the study area. In relation to income of households, Table 1 illustrated that the majority of the respondents (43%) indicated that their total monthly household income was less than ₦50, 000. This is followed by 31% whose family income was between ₦50, 000 – ₦ 100, 000. Respondents who fall in the income bracket of ₦101,000- ₦150,000, ₦151, 0000 - ₦200,000 and above ₦200,000 account for

19%, 5% and 2% respectively. This implies that a considerable number of participants in the study area were poor for they lived below 1USD poverty line. The foregoing analysis is harmony with Simango (2015).

3.2 Women's Participation in Various Agricultural Activities

This section discusses the degree to which women participate in various field operations in the study area.

3.2.1 Types of farming

From the data collected in the study area on type of farming (Fig.2), majority (76.0%) of the women farmers engaged in subsistence farming, while 24% of them were involved

in commercial agriculture. This is because their target is profit making and they have larger farmlands to cultivate. This is consistent with the findings of Mompati (2015), who concluded that subsistence production is important to attain household

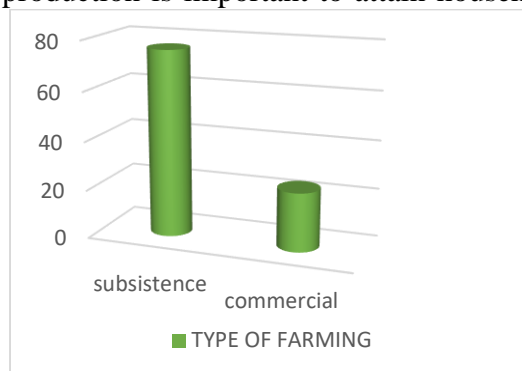


Figure 2: Types of Farming
Source: Field Survey 2019.

3.2.2 Size of farmland

From the data collected on farm size (Fig. 3), majority (43%) of the women farmers cultivate on 5-6 acres of farmlands. These categories of farmers cultivate for commercial purpose. Women farmers with farm size between 2-4 acres accounted for 31%. 13% of the respondents cultivate on farm size of 7 acres and above. While those with less than an acre, accounted for 13%. These categories cultivate majorly for home consumption. Given this scenario, we can infer that above two-fourth of the women farmers in Kaltungo are commercial. This concurs with the findings of Shen liu et al (2018) which revealed that commercial agriculture is associated with large farm size. In addition, Syype et al., (2015) found out that the degree of adoption of technology generally determines the level of efficiency with the increase of farm size, the knowledge of farmers increase due to more input to training and studying that promotes the

food security, which will reduce dependence on market purchases, especially for rural poor as they can exploit natural resources to provide food or generate income.

adaptation of higher level of technologies.

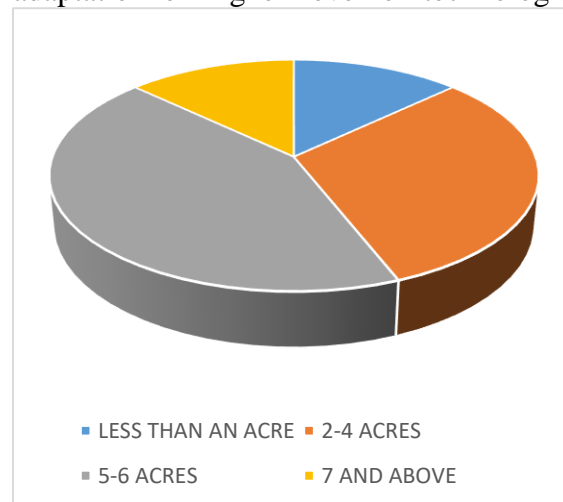


Fig. 3: Size of farmland
Source Field Survey, 2019.

3.2.3 Types of agricultural systems

From the data in figure 4, a greater percentage (49%) of the women farmers engaged in mixed cropping, 26% engaged in plantation agriculture, 14% pastoral agriculture and 11% in bush fallows system. This finding is in line with the work of Ranganathan (1993), who found out that mixed cropping (the growth of two or more crops together on the same piece of land) is a widespread practice in subsistence farming all over the tropics. This practiced is undertaken for varied reasons such as increased production with limited land resources, reduction of risk through stability of production, spreading labor demand, diversity in diet and better utilization of resources.

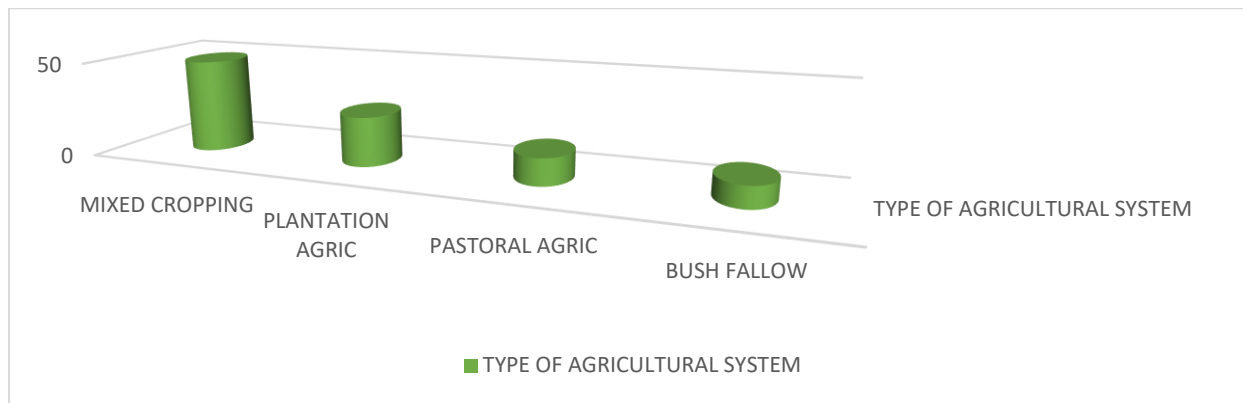


Figure 4: Types of Agricultural Systems
Source: Field Survey, 2019.

3.2.4 Types of crops cultivated

Information in Figure 5 showed that 31% of the women farmers cultivated maize, while 16% farmed millet (which is the least cultivated crop). Rice (30%) and groundnut (23%) were among the predominant crops grown probably because of the type of soil and the duration of rainfall in the area.

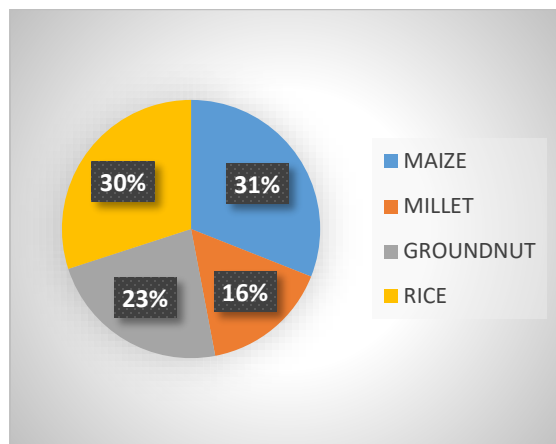


Figure 5: Types of Crops Cultivated by the Respondents
Source: Field Survey, 2019.

3.2.5 Farm Ownership

The data in figure 6 showed that more than half (59%) of the women farmers acquired land by renting. Only 3% owned farm by means of purchasing. This by implication suggests that women farmers in the study

area are highly constrained owing to the fact that rented properties that give room for long-term investment. Accordingly, Ibrahim et al, (2019) concluded that there is a strong positive relationship between farm ownership and agricultural productivity because those who own farms by the means of purchase could invest more since the land is secured. This consequently translates to improved productivity. However, Women in Nigeria generally own less land due to traditional authority or native custom. Based on the 2012 'Gender in Nigeria' report by the British council, women own 4% of land in the north east, and just over 10% in the southeast. In south south, less than 10% of Nigerian women own land. This validates the assertion that only 3% of the women own farms in Kaltungo Local Government area.

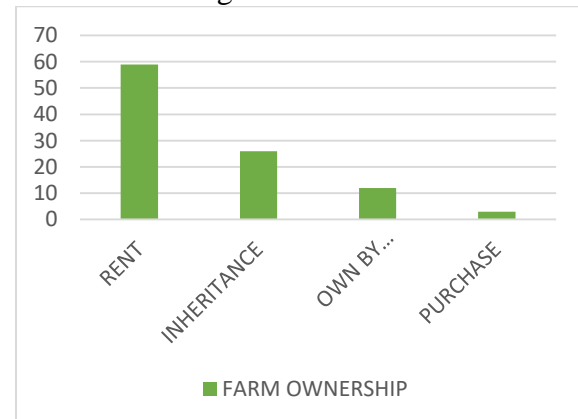


Figure 6: Farm Ownership
Source: Field Survey, 2019.

4.1 Challenges Facing Women in Agricultural Production in Kaltungo LGA.

This section addresses the major constraints to women involvement in agricultural production. The Data in figure 7 showed that the major challenge faced by women in agricultural production was infestation by insects (27%). These insects destroy the crops and reduce yields. This is followed by inadequate finance (23%), which may hamper production, as the women may not have money to buy insecticides. Other challenges identified include shortage of fertilizers (21%), menace of erosion (17%) and problem of pests (12%). This finding also concurs with a report on 'Gender in Nigeria' by the British Council which affirmed that in Nigeria, women farmers received less than 10% of the credit offer to small scale farmers. Women farmers are deterred from applying for formal loans because of the complexity of the administrative processes, unsuitable loan sizes and credit rates. Typically, women are not found in farmer clusters. According to the National Bureau of Statistics in 2007, some 20,098 men accessed loans compared to 8,550 women.

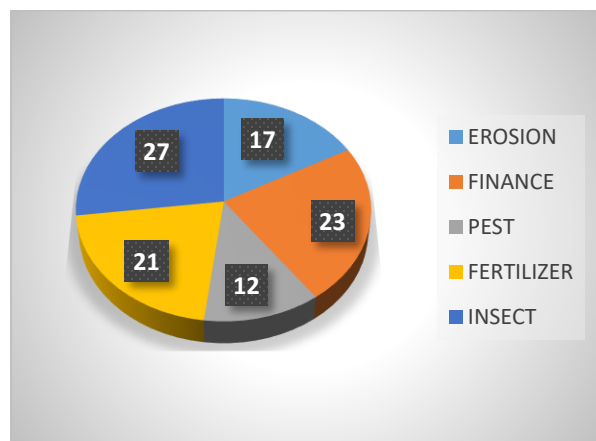


Figure 7: Major Challenges Facing Women in Agricultural Production
Source: Field Survey, 2019.

5.1 Testing of Statistical Hypothesis

To access the relationship between women farmer's socio economic and demographic characteristics and their participation in agriculture in Kaltungo Local Government

Area a chi-square analysis was conducted. Four variables (age, education, marital status and occupation) were examined. Results indicated that age, marital and occupational status of respondents had significant relationship with their participation in agriculture. With respect to age, data in Table 2 revealed a positive and significant relationship ($\chi^2 = 42.400$, $P \leq 0.05$) with women participation in agriculture. The impact of age on farming activities has been varied in the literatures where it shows age may have a negative effect on decision to adapt new farming techniques basically because older farmers may be more risk averse and therefore, less likely to be flexible than the younger farmers.

Regarding educational level or attainment, it shows negative and insignificant relationship ($\chi^2 = 7.120$ $P \leq 0.05$) with women participation in agriculture. Education helps in knowledge and information acquisition about agriculture but does not really inform the decision for participation.

With respect to marital status, the Table 2 shows a significant relationship ($\chi^2 = 125.360$ $P \leq 0.05$) with women participation in agriculture, effect of marital status on agriculture has been examined in the literature where it shows married women farmers get enough support financially from their husband's and also use their husband's farms for cultivation. Therefore, there is positive relationship between marital status and women participation in agriculture. Hence, there is a significant relationship between age, marital status and education with women participation in agricultural production.

Conclusion

In conclusion, The study revealed that about 80% of women in the study area participate in farming apart from their legitimate roles as wives and mothers. However, a no of factors

including inadequate land and finances were identified as constraints to effective participation of women in agricultural production in the area. Therefore, there is a need to encourage female farmers by making available all that is necessary to ease farming activities. The contribution of women to agriculture and rural development should be enhanced by implementing solutions to the specific problems they encounter as economic and social stakeholders.

Recommendations

In view of the findings of this study, the following recommendations are made:

- i. **Training/enlightenment:** Agricultural programs and training should be introduced in Kaltungo Local Government Area in order to educate farmers (women) on better farming and soil management practices. This would go a long way to boost their morale and in adoption of modern technologies to ease the drudgery in farming.
- ii. **Provision of inputs:** Government should encourage women farmers in Kaltungo Local Government Area by giving them loans at low interest rates; supply them with fertilizers and herbicides as well as simple modern farm equipment such as harvesters, planters, which can make work/production easy for them.
- iii. **Land tenure reformation:** Land tenure system should be reviewed and changed in order to give room for long-term investment on land as well as enabling land to be used as collateral for credit facilities.
- iv. **Erosion control measures:** Women farmers should adopt the method of controlling erosion by planting of trees and cover crops in their farms

as well as other soil management practices to check erosion.

- v. **Improvement in extension services:** Extension agents/workers should be motivated by the government to guide the female farmers in their production and help them in introducing new varieties of crops in order to increase their production.

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