



ANALYSIS OF SOCIAL DYNAMICS AMONG GROUNDNUT FARMING HOUSEHOLDS IN THE TROPICAL LEGUME PROJECT STATES IN NIGERIA

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ABSTRACT

The study examined gender differences and social dynamics in groundnut producing communities in Nigeria with a view to understanding the adoption process, enhance programme targeting and ensure equitable access to improve groundnut production technologies among male and female groundnut farmers. Using a survey approach and Focus Group Discussion tool, male and female groups were selected from 3-4 communities/villages in 3-4 local government areas from Bauchi, Jigawa, Kano, Katsina and Kebbi States in tropical legume project states in Nigeria and interviewed. The result showed that female and male members of the groundnut farming households exhibit diverse and dynamic social relations. Average age of males was 45 years and females was 40 years with farming being the main occupation for both males and females but with females having agricultural processing as a second major occupation. Access to land is by inheritance for both men and women farmers but there is differential access to other farm inputs, key decisions on household resource control and utilization of revenue from farm. Understanding the dynamism of the gender relationships in terms of who takes decisions concerning access to farm resources such as land, variety of crops and types of seed to plant, contribution of harvest for home use and to market and control of income from sale of produce as well as provision for healthcare, education and other social welfare of the household will go a long way in designing policies to close the gender gap. It was recommended that the men should facilitate access to farm inputs to boost female groundnut production, encourage them to decide on their choice of variety to cultivate and take control of the use of income from its production.

Keywords: Access, Decision, Gender, Groundnut farming, Social dynamics.

INTRODUCTION

One of the goals of tropical legume project (TL III project) is to develop strategies for mainstreaming gender into groundnut production in order to enhance smallholder productivity, improve market access, and build local capacity. The roles of men and women in agricultural production and marketing are distinct and complementary and influenced by the social dynamics within the farm producing households. Nigeria is the third largest groundnut producing country in the world accounting for 10% of total global production, 39% of total production in Africa and 51% of total production in West Africa. Between 1956 and 1967, groundnut was the country's most valuable single export crop of northern Nigeria for which the Kano groundnut pyramids was well known (Ajeigbe *et al.*, 2015).

The total output of groundnut in 1970 was 1.58 million tons, but fell to 471 thousand tons in 1980 as a result of outbreak of diseases and drought of 1972. Subsequently, production has been increasing at an estimated growth rate of 8%, due in part to area expansion of 6% and productivity increase of 2% (Ndjeunga and Ibro 2010). Available statistics indicate that



groundnut production in 2016 was 3.58 million tons from a harvested area of 2.68 million ha (FAOSTAT, 2019).

The groundnut sector is dominated by small scale farmers who cultivate an average of fewer than 2 hectares of groundnut (Ahmed, 2010) and small scale farmers constitute the majority of the over 70% of the population involved in farming in Nigeria (Abdullahi and Murtala, 2020). Groundnut production is carried out in two ecosystems namely rain-fed and irrigated systems. The rain-fed ecosystem, however, is the principal system of production and the crop is grown in almost all the 36 States including the Federal Capital Territory (FCT) in Nigeria. However, the North-East, North-West, and North-Central regions of Nigeria are the main groundnut producing areas (Vabi *et al.*, 2019).

In response to the need to revive the groundnut industry and increase groundnut production in Nigeria, a lot of efforts have been put into developing improved varieties which have been promoted among the groundnut farmers in many parts of the country. One of such interventions is the Tropical Legume (TL III) project which involves the collaborative efforts of the International Crops Research Institute for the Semi-arid Tropics (ICRISAT) and the Institute for Agricultural Research (IAR). The TL III project was carried out in several communities in Northern Nigeria and led to the release of high yielding varieties that have resistance to a lot of the biotic and abiotic stresses that hitherto hindered the growth of the crop in Nigeria. These efforts along with the efforts of extension activities at the States' Agricultural Development Projects (ADPs) in promoting the varieties led to mass adoption of the released varieties. One of the goals of TL III project is to develop strategies for mainstreaming gender into groundnut production in order to enhance smallholder productivity, improve market access, and build local capacity.

The roles of men and women in agricultural production and marketing are distinct and complementary. The ability to access resources and benefits as well as the opportunities available for men and women is influenced by the roles assigned to them (Aregu *et al.*, 2010). In particular, women are a great agricultural resource contributing over 50% of food production and about 43% of the agricultural labour force globally (FAO, 2011; and Doss, 2014). Thus, strengthening the capacity of women and increasing resources controlled by them can substantially improve agricultural productivity, household food security, economic growth and social wellbeing (Udry *et al.*, 1995; Quisumbing, 1996; Weeratunge *et al.*, 2010; Sraboni *et al.*, 2014; and Akter *et al.*, 2017). Despite the key roles played by women, they tend to have lower decision making power at the household level regarding production, inputs, income and asset ownership. In addition, women face multiple production and marketing constraints, cultural norms and values which limit their contribution to household food security and leads to the underperformance of the agricultural sector (Aregu *et al.*, 2010).

The importance of integrating gender in groundnut production in Nigeria is critical given that groundnut is one of the crops which provides means of livelihoods for men, women and youth. Evaluating gender differences and social dynamics in groundnut producing communities is crucial for understanding the adoption process and also enhance programme targeting that will ensure equitable access to improve groundnut production technologies and address the priorities of male and female groundnut farmers.

The study is situated within the theoretical framework of power relations within the groundnut farm producing households. The aim of this study is to identify gender differences in access to productive resources, knowledge, work distribution and decision-making among male and female groundnut farmers. The data may serve as a baseline for related studies in the future and could inform governments, donor agencies and the private sector in the design of



effective gender strategy that will help to maximize both programme impact and the contributions of men and women for sustainable food security.

MATERIALS AND METHODS

The Study Area

The study was conducted from 12th to 17th December 2016 in Bauchi, Jigawa, Kano and Katsina States where Tropical Legume project on groundnut has been ongoing since 2012. The four states are located in Northern Nigeria cutting across Sudan Savanna and Northern Guinea Savana and are among the top groundnut producing states in the country.

Sampling Techniques

With the support of the ADP extension staff, 2-4 Local Government Areas (LGAs) were selected in each of the States. The LGAs selected were those where groundnut varietal demonstrations, groundnut research trials and groundnut production promotional activities have been carried out (Table 1). Therefore, 2-4 communities in the chosen LGAs were selected and a FGD was held separately with male and female groundnut farmers/processors. A checklist of questions consisting of different sections was used in the discussion.

Data Collection and Analysis

The study used a series of focus group discussions (FGDs) as the tool for collecting both qualitative and quantitative data. The data solicited includes information on socio-economic characteristics of farmers at the FGD, access to factors of production, types of crops grown in relation to gender, profiles of farmer producing the improved groundnut varieties, seed production and seed marketing among household members, knowledge on the improved varieties, division of labour and social organization of agricultural activities, social and economic dynamics triggered by growing improved varieties and marketing channels for the improved groundnut varieties. The data was analyzed using descriptive statistics.



Table 1: States and Communities Used for Data Collection by Sex of Participants

State	LGA	Community	Sex of FGD group	
Bauchi	Bauchi LGA	Kundam B	Female	
		√	Male	
	Ganjuwa	Kundam A	Female	
		KundamA	Male	
		Kafin Liman	Male	
		√	Female	
Jigawa	Gagarawa	Kafin Madaki	Male	
		√	Female	
		Gagarawa gari	Male	
	Kiyawa	Gijigami	Female	
		Gijigami	Female	
		Raju	Female	
		√	Male	
	Garki	Kaya	Female	
		√	Male	
		Mele	Male	
Gumel	√	Female		
	√	Female		
Kano	Tudunwa	Gijigami	Female	
		Tudunwada Hanono	Female	
	Yakasai	Tundunwada L/hanono	Female	
		Yakasai	Female	
	Bichi	√	Male	
		Bichi T/kako	Female	
		Bichi	Male	
		Shanono	Male	
	Katsina	Safana	Yar-mazare	Male
			√	Female
		Bindawa	Baude	Female
			Baude	Male
Kuma			Male	
Kuma			Male	
Dallaje			Female	
Dallaje gari			Male	
Bakori		Dakaje Kuma	Male	
		Ganjar	Female	
		Ungwar Dogo	Male	
		Magoje/Ganjar	Female	
Musawa		Kuru	Male	
		Sabonlayi Karachi	Male	
	Kuru	Female		
	Sabonlayi	Female		

RESULTS AND DISCUSSION

Socio-economic Characteristics of the Participants

The result of the socio-economic characteristics of the participants based on gender is presented in Table 2. There were 41 FGDs held across the participating States consisting of 20 male and 21 female groups. In all, a total of 732 participants consisting of 383 males (52.32%) and 349 females (47.68%) participated in group discussions. This indicates a fair representation of both men and women in the project. This is similar to the study carried out by United States Agency for International Development (USAID) on enhancing access to and utilization of



agricultural extension services comprising of 53% female and 47% male participants (USAID, 2016).

Table 2: Socio-economic Characteristics of Participants at the FGDs

Characteristics	Male		Female	
	Frequency	Percentage	Frequency	Percentage
Sex	383	52.32	349	47.68
Marital status				
Single	16	4.26	2	0.58
Married	350	93.08	310	89.08
Divorced	1	0.27	14	4.02
Widowed	9	2.39	22	6.32
Total	376	100	348	
Age				
Mean age	44.83		39.76	
Minimum age	18		17	
Maximum age	80		70	
Std. Dev.	16.23		14.09	
Educational level				
No education	5	1.33	23	7.74
Adult education	3	0.80	24	8.08
Artisan/Vocational	3	0.80	-	-
Diploma/NCE	41	10.90	2	0.67
Arabic/Islamic	199	52.92	162	54.55
Primary	50	13.30	50	16.84
Secondary	75	19.95	36	12.12
Total	376		297	

The marital status composition of the FGD participants shows that among the male participants, 4.26 % were single, 93.08 % were married, 0.27 % was divorced while 2.39 % were widowers. Among the female participants, 0.58 % was single, 89.08 % were married, 4.02 % were divorced and 6.32 % were widows. This shows that the groups were dynamic in terms of gender and therefore their opinions adequately reflected the diverse views on the crops cultivated. Also, the findings indicate that majority of the respondents (91%) were married, reflecting the importance of family labour as most rural farmers contract marriage for the purpose of procreation and supply of cheap family labour required for farm activities. This agrees with the findings of Torimiro *et al.* (2009), Jeiyol *et al.* (2013) and Ndjeunga *et al.* (2013).

The age of participants ranged from 18 to 80 years for males and with a mean age of 45 years while that of females ranged from 17- 70 years with a mean of 40 years. The grand mean is 43 years old for the participants. This shows that the experience on groundnut production in the various states shared is rich and tells the story of the crop. This finding also indicates that most of the respondents were mostly young and therefore might be economically productive and energetic. Thus, based on the theory of human capital the productivity of groundnut in the study area is likely to improve in the future as younger farmers are more likely to adopt new agricultural technologies which enhance productivity (Adesina *et al.*, 2000; Natson, *et al.*, 2015). Furthermore, female respondents were found to be younger than their male counterparts in the study, which mirrors the predominant socio-cultural practices in most rural communities



where married young men are allowed to migrate to cities with or without their wives (Ekong, 2003). Similar findings were reported by Torimiro *et al.* (2009).

The participants attained various levels of education. Among the males 1.33 % had no form of education compared to 7.74 % of female participants who had no form of education. Islamic education was highest among the participants with 52.92 % of the males and 54.55 % of females attaining it. This was followed by secondary education (19.95 %), primary education (13.30 %) and Diploma/NCE (10.90 %) among males. Among the females, primary education was second (16.84 %), followed by secondary education (12.12 %). Some of the participants also attended adult education while some of the males attended artisan/vocational courses. Educated farmers are more likely to be innovative, embrace risk and adopt productive practices and improved technologies (Cotlear, 1990). In the study area, majority of the farmers had acquired one form of education or the other, suggesting a good prospect for adoption of improved groundnut varieties and technologies and hence a high potential for improving farmers' productivity. According to Adesina and Zinnah (1993), agricultural technological practices and adoption are positively related to education.

Main Occupation of Participants at FGDs

The main occupation of participants at the FGDs was farming in which about 76% and 61% of the males and females were respectively involved. This was followed by trading and marketing (7.07 %) in males and agricultural processing (15.72 %) in females (Table 3). Other important occupations among the male groups include farming and processing (6.06 %) and farming and trading (4.29 %) while for the female participants trading and marketing (10.07 %) and farming and trading (8.81 %) are equally important activities. This result reveals that the respondents in the study area have a diversified source of livelihood from various on-farm and off-farm activities, reflecting their livelihood strategies. This finding corroborates the study by Gautam and Andersen (2016) who reported that most rural households in Nepal are engaged in different occupations apart from farming.

Farm land is acquired through many methods in the communities. These include inheritance, purchase, gift, rent/hire and lease. Inheritance is the method through which a farmer is given a share of the deceased parents' land and this applies to both male and female farmers. This is the most common method of land acquisition in all the communities in which the project was carried out. The problem with this method of farm acquisition is that the size of land available for sharing among the siblings often gets smaller and smaller in each generation of sharing inherited lands. Oluwatayo *et al.* (2019) reported that inheritance is the major form of land ownership in Nigeria. Similar results were presented by Eze *et al.* (2011) and Alarima *et al.* (2012). Purchase is land acquisition through outright purchase from the owner. Farmers use this method to expand their total hectares, especially where there is market for land. Both male and female farmers can participate in land purchase in the project areas. This is in line with the findings of Jeiyol *et al.* (2013) and Oluwatayo *et al.* (2019).

Land gift is common as parents or other relatives may give land to children, relations or in-laws so they could own their own farm. It also applies to both male and female farmers in the entire project States. Land hire or rent is the situation where an owner may rent or hire land that he is not using in current year of production to those who want to cultivate it for that year instead of keeping it fallow. Land lease is the process where a land owner gives up the use of land and transfers its ownership temporarily to another person for a specified period and at a fee. Its use by the new owner may take a few or many years before it is returned to the initial



owner. Jeiyol *et al.* (2013) observed that leasing is common among male and female farmers in Benue State, Nigeria.

Table 3: Distribution of Participants based on their main Occupation

Main occupation	Male		Female	
	Frequency	Percentage	Frequency	Percentage
Farming	299	75.51	193	60.69
Processing	3	0.76	50	15.72
Trading/marketing	28	7.07	32	10.07
Farming and trading	17	4.29	28	8.81
Farming and processing	24	6.06	2	0.63
Farming and livestock rearing	9	2.27		
Artisan/weaving	4	1.01	1	0.31
Civil servant	4	1.01		
Driver	2	0.51		
Civil servant and farming	1	0.25	2	0.63
Mechanics	1	0.25		
No job	1	0.25	1	0.31
Farming and craftsman	1	0.25		
Brick layer	2	0.51		
Livestock rearing			5	1.57
Processing and trade			2	0.63
House wife only			2	0.63
Total	396		318	

Gender Group Response to Farm allocation Decision, Nearness of Male and Female Farm to Homestead and the Fertility of Farm Plots

According to Table 4, among the 27 focus group discussions held, 24 of the men groups and 23 of the female groups believed that the quality of lands in terms of their soil fertility was different. Thus, there was some discrimination in the quality of land that women have access to use for their cultivation.

The study showed that 20 of the men FGDs and 17 of the female FGDs agreed that women farms were closer to homestead than men farms. However, among two of the women FGDs, they said that it depends on the number of family members seeking for farm from the household head and the number of farms available.

The decision of farm allocation varies among male and female gender farmers. In all, twenty 24 FGDS (51.1%) agreed that men allocate farm land to their wives (women) while 23 (48.9%) agreed that it was wives (women) that allocates if the land belong to her. However further discussions among the males show that the land could be given mainly by the household head or husband or whoever is the owner of the farm. On the other hand, the females said that land could be given to them mainly by the household head or by their husbands or by themselves if they owned the land (Table 4).

In the case of death of land owner for men, land and other assets are inherited based on Sharia law and it is usually given to the household head, children, or the wife. In the case of women, the land and other assets could be inherited by the husband, children, or the most senior brother to the woman. Owolabi *et al.* (2015) found that 50% of rural women farmers in Kaduna



State obtained their farm lands through inheritance, 25% by lease, 11.7% by rent while 5% by gift, a situation which depict unequal access to land for male and female farmers.

In terms of who decides what crop to plant on the farm, the decision is essentially done by the owner of the farm. Thus, for men farms, the men decide on the type of crop(s) to plant while for female farms, the females decide on the type of crop to plant on them too. However, there are situations where the women said that their husband takes the decision for them, especially where they are not well learned in the crop they are intending to cultivate.

Table 4: Gender Group Response to Farm allocation Decision, Nearness of Male and Female Farm to Homestead and the Fertility of Farm Plots

Group	Who allocate farm			Whose farm is closer to homestead		Are the female and male farms of same fertility?		
	Sex	Freq.	%	Freq.	%	Response	Freq.	%
Male	Husband	24	51.1	20	42.6	Yes	24	51.1
	Wife			4	8.5	No	0	0
	Husband	23	48.9	17	36.1	Yes	23	48.9
	Wife			6	12.8	No	0	0
Total		47	100.0	47	100.0		47	100

Average Land allocated to Crops Grown

In terms of area cultivated to the major crops grown, Table 5 show that men allocate more of their land on average to millet cultivation (2.21 ha), followed by maize (2.16 ha), sorghum (2.07 ha). Among the women, more land was allocated for onion cultivation (1.98 ha), followed by garlic (1.27 ha), rice (1.26 ha), and sorghum (1.17 ha). The land allocated for groundnut cultivation among the men and women was 1.68 ha 0.99 ha, respectively. Thus, groundnut was an important crop to both men and women in the project states and communities. Groundnut cultivation by the participants was for several purposes including for income generation, for food and as a source of feed for livestock.

Table 5: Average Land allocated to Crops Grown in the Project States According Sex

Group	Area (ha)								
	Sorghu m	Millet	Groundnu t	Maize	Rice	Cowpe a	Onio n	Garli c	
Male	2.07	2.21	1.68	2.16	1.56	1.24	1.97	1.47	
Female	1.17	1.11	0.99	0.83	1.26	1.01	1.98	1.27	
Pool	1.69	1.76	1.32	1.61	1.44	1.14	1.98	1.37	

Land Allocation for Crop Cultivation by Gender

Several crops are grown in the states covered in the study. The main crops grown in order of population of farmers cultivating them are cowpea, sorghum, groundnut, millet, maize, rice, roselle (*Zobo*), sesame and soybean (Table 6). Cowpea ranked as number one crop because it is grown by 44.13 % of the participants either as mixed crop or relay crop. This is followed by groundnut which accounts for 36.75 % of the farmers in the study area, millet (33.47 %), maize (20.49 %), rice (15.57 %), *Zobo* (15.16 %), and sesame (14.48 %).



Table 6: Distribution of Farmers by Types of Crops Cultivated

Crops grown	No of participants cultivating the crop*	Percentage
Cowpea	323	44.13
Groundnut	269	36.75
Millet	245	33.47
Maize	150	20.49
Rice	114	15.57
Zobo	111	15.16
Sesame	106	14.48
Soybean	66	9.02
Garlic	20	2.73
Onion	18	2.46
Sugar cane	7	0.96
Wheat	5	0.68
Cotton	5	0.68
Sweet potatoes	4	0.55
Okro	3	0.41

* Multiple responses existed (one farmer can cultivate more than one crop)

Varieties of Groundnut Cultivated in the Study Area

The interaction with the farmers showed that several varieties of groundnut were being cultivated. The commonly cultivated groundnut varieties across the states are SAMNUT 24 (by 237 farmers), SAMNUT 25 (by 101 farmers), Ex-Dakar (by 104 farmers), Maibargo (by 99 farmers), SAMNUT 26 (by 65 farmers) and SAMNUT 23 (by 23 farmers). Maibargo is an improved variety while *Yar kwakwanso* is a local variety (Table 7). This result show that majority of the respondents were exposed to one form of improved groundnut variety or the other. Ndjeunga *et al.* (2013) stated that a high proportion of surveyed households were exposed to at least one improved variety as a whole. An earlier adoption study conducted in the project states showed that other improved and local varieties of groundnut were cultivated. SAMNUT 18, SAMNUT 10 and SAMNUT 12 (Ex- Dakar) were older improved varieties (Ahmed, 2010) which have now been virtually replaced with the more recently released improved varieties (SAMNUT 23-26).

The FGDs further revealed that there are several sources of groundnut seeds available to farmers in the study area. However, the main sources identified were through demonstrations carried out collaboratively by the ADPs, International Fund for Agricultural Development (IFAD) and ICRISAT as well as up scaling and varietal trials conducted by United States Agency for International Development (USAID). Other sources include request from household heads, Membership of cooperatives/farmer groups/associations, gifts, purchase from market/seed companies/producers. Thus, the promotional activities of the past Tropical Legume Projects of ICRISAT using the State Agricultural Development Project (ADPs) and IFAD have been the main source of improved groundnut seeds to the groundnut farmers across the project States. The current TL III Project and the USAID up scaling Projects have greatly aided this effort.



Table 7: Distribution of Men and Women Farmers by Groundnut Varieties Cultivated

Variety name	Men	Women	Total
Bagwariya	0	10	10
Ex-Dakar	54	50	104
Kyalla	3	8	11
Local (Yar Hausa)	15	15	30
Maibargo	59	40	99
Sabuwar gyada	18	12	30
SAMNUT	5	7	12
SAMNUT 22	7	2	9
SAMNUT 23	18	5	23
SAMNUT 24	130	107	237
SAMNUT 25	59	42	101
SAMNUT 26	48	18	66
<i>Yar Gwabari</i>	5	5	10
<i>Yar Jingila</i>	1	0	1
<i>Yar Kwankwaso</i>	35	27	62
<i>Yar Madikawa</i>	5	3	8
<i>Yar Makawa</i>	3	3	6
<i>Yar Malakawa</i>	3	3	6
<i>Yar Malikawa</i>	15	3	18

Note: Serial numbers 6 and 7 are improved varieties, which names are not known and they could belong to SAMNUT 22-26 series. Similarly, serial numbers 16-19 may belong to the same variety but because of differences in pronunciations, they could have been called differently. Serial number 14 cultivated by one person could possibly be wrongly called.

Division of Labour within Farm Household in Groundnut Production

Within the farm households, there was significant gender differentiation with respect to different farm and off-farm activities (Table 8). The results of Table 8 reveals that most of the farm activities such as seed production, seed storage, land preparation, use of farm inputs, rodent control, weeding, harvesting, marketing and sharing of farm produce are done by men. The next most involved household members are the children who are very active in such activities as land preparation, planting, use of farm inputs, rodents and disease control, weeding, harvesting and transportation of produce from farm to home. This is followed by the female farmers who were more involved in seed production and storage, land preparation, planting, harvesting, marketing and sharing of farm produce. Thus, even though women are involved in groundnut production, most of the production decisions are taken for them by their husbands (males). The results show that in terms of gender distribution in groundnut production, most of the activities are dominated by the men. This could be related to the prevailing culture in most communities in the study area where women are engaged in several domestic activities in the home such as cooking and caring for the children, the elderly and sick members of the family. Thus, women are kept away from farming and related activities for most part of the growing season. Similar results were reported by Natson *et al.* (2015).



Table 8: Types of Groundnut Production Activities in the Household by Gender

Activities	Male	Female	Children
Seed production	41	16	9
Seed storage	39	20	7
Land preparation	38	13	29
Planting	36	22	37
Use of farm inputs (fertilizer, herbicides and insecticides, and ox plough)	39	8	31
Rodent and diseases control	37	9	26
Weeding	39	9	42
Harvesting	39	17	38
Transportation of the harvest from farm	42	9	40
Marketing of produce	40	13	18
Sharing of farm produce	39	13	10

Benefits derived by Female and Male from Cultivating Improved Groundnut Variety

The perceived benefits of the improved groundnut production for the men includes increase in income, yield, providing soil fertility, serving as fodder for livestock feed, food, and means of acquiring household assets like motorcycle and Bicycle as well as for buying work bulls and livestock (Table 9). On the other hand, women claim that they have higher yield, higher income and were able to buy livestock for breeding and fattening.

Table 9: Sales of Produce Harvested from Joint Farmlands by Men and Women Groups

Groups	Produce Harvested from Joint Farmlands	Frequency	Percentage
Male	Husband	32	68.09
Male	Husband and wife	1	2.13
Female	Husband	18	38.30
Female	Wife	7	14.90
Female	Husband and wife	1	2.13

Apart from physical and financial benefits derived from growing groundnut, both the male (23 groups) and female (21 groups) farmers of the improved varieties have recognition from within their communities and are being consulted as contact farmers for knowledge on its cultivation. They have also provided seeds to some farmers in the communities free.

Income from groundnut sale among the males is invested in purchase of animals for fattening, repair or building of new houses, take new wife, pay children school fees, buy new farm, trade or save in the bank. The females invest their income on purchase of small ruminants, renovate their houses, and conduct marriage ceremonies for their children, pay school fees for their children, petty trading and buying of new farms.

As for who is in-charge of the revenue from produce sales, the decision on the use of income from produce sale of farms owned by male farmers was decided by the male farmer of the household head according to 23 of the FGDs. On the other hand, for women farms, the husband or household head takes the decision according to nine (9) FGDs, while four (4) groups said the decision is done by the women farmers while another two (2) groups said it is a joint decision of the husband and wife.



Table 9 further provided results on the decision on sale of produce from joint farms owned by husband and wife. The produce marketing decision in the household was most often taken by the husband. As seen in Table 9, 68% of the male FGDs said that the decision is that of men. Similarly, among the female FGDs, 38% said the decision is that of men while 15% said the decision is that of the wife. The implication of this is that the husband is responsible in most cases for decisions of the household regarding output after harvest. This finding is similar to that of Ajewole *et al.* (2015) who found that about 81% of distribution decisions on output in terms of sales, seed, donation and consumption are made by the men. Similarly, this result agrees with Ani *et al.* (2003) and Rahman (2008) who reported marginalization of women in decision-making at various levels of agricultural activities.

Who Take Produce to Market for Sale and Who Share the Proceeds of the Sale?

The FGDs show that the males or husbands (58%) are responsible not only to marketing of their farm produce but also for women group (45%). Women participation was therefore minimal among the farming communities and this was consistent with the Islamic believe of the people in the Project areas (Table 10).

Table 10: Gender Group Response to Market Decision between Husband and Wife

Groups	Who convey produce to the market	Frequency	Percentage
Male	Husband	27	57.45
Male	Husband and wife	5	10.64
Male	Wife	2	4.26
Female	Husband	21	44.68
Female	Wife	5	10.64

Who Decides the Sharing of the Revenue from the Farm Produce Sales?

When it comes to decision on sharing of proceeds of sale, there is some fair distribution of responsibilities. About 49% of the male FGD said the decision was that of husbands while 19% said it was wives. On the other hand, among the female FGDs, 23% said it was wives while 17% and 15% said it was husband and a joint decision between husbands and wives respectively (Table 11).

Table 11: Distribution of FGDs according to Who Decides the Sharing of the Revenue from the Farm Produce Sales

Groups	Who decide	Frequency	Percentage
Male	Husband	23	48.94
Male	Wife	9	19.15
Female	Wife	11	23.40
Female	Husband	8	17.02
Female	Husband and wife	7	14.90

CONCLUSION AND RECOMMENDATIONS

The groundnut farmers exhibited diverse and dynamic social structure in terms of sex composition, age, occupation and access to and control of household assets. The study provides important insights on gender relationships in terms of who takes decisions concerning access to farm resources such as land, variety of crops and types of seed to plant, contribution of



harvest for home use and to market and control of income from sale of produce as well as provision for healthcare, education and other social welfare of the household. This is critical in designing policies to close the gender gap in farm technology dissemination and adoption for higher productivity. Therefore, it was recommended that governments and development partners should initiate policies that facilitate female access to farm inputs to boost female crop production decisions, encourage freedom on use of her income from farming for family healthcare, education and other social activities.

COMPETING INTEREST STATEMENT AND AUTHOR'S CONTRIBUTION

There is no competing interest of the authors in the article. Ahmed, B. and Mohammed, I. K., participated in the design and collection of the field data and analysis; Ahmed, B. and Egwuma, H., wrote the article while Yila, J. O., provided technical support in the implementation of the objective one of TL III Project in West Africa from Mali.

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