

## Gender Resource Accessibility and Profitability among Groundnut Producers in Hong Local Government Area of Adamawa State, Nigeria

Ojo, C. O., Ghide, A. A. and Phaniel, E.

Department of Agricultural Economics, Faculty of Agriculture University of Maiduguri, Borno State, Nigeria

### Abstract

The study aimed to examine gender resource accessibility and profitability among groundnut producers in Hong Local Government Area of Adamawa State, Nigeria. Multistage sampling technique was used to sample 54 respondents (27 male and 27 female) by the use of a structured questionnaire. The data from the survey were analysed using frequency distribution and gross margin analysis. The results showed that the men were generally older and more experienced than the women with 77.8% and 55.5% of men and women respectively being over 40 years of age and 51.9% and 37.1% of men and women respectively having farming experience of over 20 years. The perception of the respondents was that men had more access to resources and opportunities that enhance productivity (land, labour, chemicals, market and education) than women (fertilizer, seeds, and cooperatives). Gross margin per hectare of men was ₦62, 693 while that of women was ₦37, 732. It was recommended that credit provision in cash and kind to women by Government and other relevant organisations be encouraged in order to give women improved access to production resources to increase women's productivity and profitability.

**Keywords:** Profitability, accessibility, resources, gender, groundnut

### Introduction

Gender studies have often been misunderstood as being about the promotion of women only. Gender studies however focus on the relationship between men and women, their roles, access to resources. Gender affects the distribution of resources, wealth, work, decision – making, political power as well as the enjoyment of rights and entitlements within the family and in public life (Welch *et al.*, 2000). In agriculture, men are generally presumed to be the chief actors and, as such, are often the main participants and/ or recipients of programme – related supports. Women are more constrained than their male counterparts in terms of access to resources of

agricultural production (World Bank, 2001; Odame *et al.*, 2002 and Welch *et al.*, 2000).

Some crops are even classified as men's crop while others are regarded as women's crop, a division which has an effect on food production (Mohammed and Abdulquadri, 2012).

The need to focus on women farmers' productivity, which can be an effective engine for social change, has become increasingly clear in sub-Saharan Africa. Women have a significant role in farming and post-harvest activities in most countries in the region. In sub-Saharan Africa, women contribute between 60 and 80percent of the labour for food production, both for household consumption and for sale (FAO, 1994). Moreover, agriculture is becoming a predominantly female sector as a consequence of faster male out-migration (FAO, 1998).

Corresponding author's details:

Name: Ojo, C. O.

Email address: [nickatie2003@yahoo.com](mailto:nickatie2003@yahoo.com)

Women now constitute the majority of smallholder farmers, providing most of the labour and managing a large part of the farming activities on a daily basis (Saito *et al.*, 1994). Often, but not always, findings indicate that women farmers have lower productivity for reasons of poor access to resources. Although women are less productive in farming, the general consensus is that they are no less efficient than men in their use of resources (Moock, 1976; Udry *et al.*, 1995; Udry, 1996), rather, a lack of complementary inputs leads to lower labour productivity for female farmers.

Access to and control of land and other natural resources is crucial for sustainable livelihoods, resource management and overall rural development. Yet, major social, political, and institutional challenges prevent women in agriculture from gaining equal access to agricultural production resources. Unequal access to land, seeds, fertiliser, and credit constrain women's productivity (Ojo, 2011).

In addition, women are also faced with limited decision-making powers and depend on men for use rights-which are easily lost if they are widowed or divorced (Damisa and Yohannah, 2007).

Women's disadvantaged access to resources compared to men impinges on their ability to respond to new economic opportunities. Ojo *et al.* (2012) found that women farmers in Borno State, Nigeria had generally low access to productive resources, a situation which resulted in both technical and palliative inefficiency among the women. Considering that women are important contributors to household economy (Haddad, 1999; Glick, 2002; Ojo and Wurani, 2013) improving their access to resources of production will increase their productive efficiency and subsequent income generation. Such an occurrence will improve household economy and reduce poverty among rural households. There are many crops that men and women get their livelihood from among which is groundnut (*Arachis hypogaea*) also referred to as peanuts, earthnuts, Monkey-nuts or Chine nuts (Higgins, 1951).

Nigeria is the fourth largest producer of groundnut worldwide producing 1.55 million metric tonnes annually. Nigeria produces 41 percent of the total groundnut production in West Africa (Echekwu and Emeka, 2005). Groundnut contains 25% protein and more than 40% oil (Echekwu and Emeka, 2005). It is mainly grown by small scale farmers for both food and income. Groundnut is usually produced for its seed though its leaves and shells are also used as organic mulch and livestock feed. The seeds are eaten raw, boiled, or roasted. The seed paste is used for soup while its cake is used as a snack and a component of livestock feed. Groundnut is also an industrial crop mainly used as a source of cooking and industrial oil (Elegbede, 1998).

Hong L. G. A. of Adamawa State is a major groundnut producing area in Nigeria where women as well as men grow the crop. The extent to which gender resource accessibility affects productivity among male and female groundnut farmers is not well known and needs to be examined to ensure efficient production of the crop among male and female farmers. To this end, this study will analyse gender accessibility to and productivity of resources among groundnut farmers in Hong L.G.A. of Adamawa State.

## Methodology

The study was conducted in Hong Local Government Area of Adamawa State. Primary data was used for the study. The primary data were collected directly from the farmers using structured questionnaire as the instrument of data collection.

A multistage sampling technique was used to select the respondents. In the first stage, three districts were randomly selected from the six districts of Hong namely; Hildi, Gaya and Garaha. In the second stage two villages were randomly selected from each district making a total of six villages. In the third stage, 27 male and 27 female respondents were purposively selected because there was no sampling frame of groundnut farmers, giving a sample size of 54 respondents. Data collected were analysed using descriptive statistics and gross margin analysis.

## Results and Discussion

### Socio-economic characteristics of male and female groundnut farmers

The socio-economic characteristics of the respondents were examined with respect to their age, family size, farming experience, land ownership pattern and educational status. The analysis of the respondents in Table 1 indicates that majority of the respondents (77.0% male

and 75.5% female) were above the age of 40 years. This implies that most of the respondents were in their middle and old ages. According to Ogundele (2004), the older the farmer, the more inefficient they were.

The older age of the respondents was probably as a result of migration of younger people out of agriculture in the rural areas. The age of the respondents is an indication that groundnut in the study area may not have been very.

**Table 1: Socioeconomic characteristics of respondents**

Characteristics	Men		Women	
	Fequency	Percentage	Frequency	Percentage(%)
		Age		
≤30	0	0	2	7.4
31-40	6	22.2	10	37.1
41-50	5	18.5	9	33.3
51-60	11	40.8	4	14.8
61-70	2	7.4	2	7.4
>70	3	11.1	0	0
<b>Household size</b>				
5-Jan	7	25.9	14	51.9
10-Jun	14	51.9	13	48.1
15-Nov	5	18.5	0	0
16-20	1	3.7	0	0
<b>Farming experiece</b>				
10-Jan	3	11.1	6	22.2
20-Nov	10	37	11	40.7
21-30	1	3.7	5	18.5
31-40	7	25.9	3	11.1
41-50	4	14.8	2	7.4
>50	2	7.5	0	0
<b>Land ownership</b>				
Inheritance	22	81.5	15	55.6
Family	3	11.1	5	18.5
Rent	0	0	5	18.5
Gift	2	7.5	5	7.4
<b>Educational status</b>				
No formal education	6	22.2	7	18.6
Primary education	11	40.8	12	44.4
Secondary education	6	22.2	7	25.9
Higher education	4	14.8	3	11.1
<b>Farm size</b>				

2-Jan	5	18.5	6	22.2
4-Mar	18	66.7	15	55.6
6-May	2	7.4	5	18.5
8-Jul	1	3.7	1	3.7
>8	1	3.7	0	0

Source: Field survey (2012)

Efficiently produced especially among the male who were older than the female respondents. About 78% of male and 81% of the female respondents respectively were educated to various levels of schooling implying that the female respondents were more educated.

This agrees with the findings of Dimelu *et al.* (2008) who observed that female cocoyam farmers were more educated than the male cocoyam farmer. The higher the level of education, the more farmers were willing to accept innovation in relation to farming. This shows that the female groundnut farmers in the study area were likely to be more efficient than male respondents in relation to adoption of improved technologies. The result also revealed that the male respondents had higher household sizes than the female respondents. This is probably as a result of polygamy among male respondents.

The implication is that male respondents will have access to more family labour because the larger the household size, the more family labour will be available for farm operations.

Among the female groundnut farmers, majority (63%) of the respondents had one to twenty years of farming experience. However, 63% of the male respondents had farming experience above 20 years, indicating that male respondents were more experienced in groundnut production than female respondents.

This was probably because groundnut being a cash crop was more a men than women’s crop in the past until recent years. The finding was unlike the finding of Dimelu *et al.* (2008) whose result showed that female cocoyam farmers were more experienced than male cocoyam farmers probably because cocoyam is a food which made it a female crop. This finding implies that groundnut production was previously a male

dominated preoccupation. According to Iheanacho (2000), the farming experience of farmers to a large extent affects managerial know-how and decision making process. This implies that male respondents in terms of experience were likely to have more efficient groundnut producers, thus, making up for their shortfall in education.

Farm size analysis of respondents showed that majority of the female respondent (77%) had farm size of one to six hectares while more (about 85%) of the male respondents had one to six hectares of land. This implies that the production of groundnut was largely done in the small scale with more men in that category.

About 7% of the men and less than 4% of the women had farm sizes above six hectares indicating that more men committed large scale land to groundnut production than women. The result also showed that In the case of land ownership, almost 90% of the male respondents owned their farm lands (gifts and inheritance) while only about 63% of the female respondents were owners of their farm land. The implication is that male respondents being more tenure secure and experienced were likely to be more motivated towards agricultural investments and efficient utilization of resources than their female counterparts who were less tenure secure.

**Accessibility to resources among male and female in production**

The results of respondents’ opinion about male and female groundnut farmer’s accessibility to resources with regard to land, family labour, hired labour, improved seeds, fertilizer, herbicides, pesticides, extension contact, credit, membership of cooperatives, education and market among male and female groundnut farmers are discussed in this section.

**Table 2: Perception of accessibility to resources of production among male and female respondents**

Resource	Male frequency	Access percentage	Female frequency	Access percentage	Undecided frequency	Percentage
Land	35	64.8	9	16.7	10	18.5
Family labour	40	74.1	6	11.1	8	14.8
Hired labour	10	18.5	8	14.8	36	66.7
Improved seeds	10	18.5	14	25.9	30	55.6
Fertilizer	6	11.1	8	14.8	40	74.1
Herbicides	11	20.4	10	18.5	33	61.1
Pesticides	10	18.5	9	16.7	34	64.8
Market	15	27.8	10	18.5	27	50
Cooperative	10	18.5	30	55.6	14	25.9
Education	15	27.8	5	9.3	34	63

**Source:** Field survey data (2012)

The analysis on access to land showed that 64.8% of respondents opined that male farmers had more access to sufficient land for groundnut production than women while only 16.7% of respondents thought that female farmers had more access to land for production of groundnut. The remaining 18.5% of the respondents were of the opinion that both male and female farmers had equal access to land.

This result shows that most of the respondents (65%) felt that male groundnut farmers had more access to land than the female groundnut farmers while about 19% of respondents were undecided. The analysis on access to credit indicated that 27.8% of the respondents felt that male farmers had more access to credit than the female while 33.3% felt that female farmers had more access to credit than the male. Almost 40% of the respondents were undecided. This result is an indication that both sets of respondents had equally low access to credit in the study.

The results in Table 2 further indicated that the male farmers were considered to have more access than the female to family labour, hired labour, extension visits, herbicides, pesticides, and market. On the other hand, female

respondents were perceived to have more membership to cooperatives than the male. Majority of the respondents were of the opinion that male and female farmers had equal access to improved seeds and herbicides. On the whole, the perception among the respondents is that men had more access to resources than women in the production of groundnuts in the study area.

#### **The profitability of groundnut production among male and female groundnut farmers**

This section looks at the level of profit in terms of gross margin obtained by male and female respondents.

Table 3 shows the gross margin of male (₦6, 206, 580.00) and female (₦3, 471, 320.00) farmers respectively. The result shows that groundnut production is profitable in the study area.

It also shows that men had almost double the gross margin of women indicating that they earned much more than women. This is because the men had more access to production resources which enabled them to invest more than the women in groundnut production.

**Table 3: The profitability of groundnut production among male and female farmers**

Items	Male		Female	
	Amount (₦)	Percentage(%)	Amount (₦)	Percent (%)
<b>Total revenue</b>	7,354,300	100	4,320,400	100
<b>Variable cost</b>				
Mechanization	317,000	27.62	227, 000	26.73
Seed	276,850	24.12	186, 830	22.00
Herbicide	194,710	16.96	174,700	20.58
Labour (family and hired)	150,340	13.10	135,550	15.96
Transportation	208,820	18.19	125,000	14.72
Total cost	1,147,720.00		849,080.00	
Total cost/ha	11,593.13		9,229.13	
Gross margin	6,206,580.00		3,471,320.00	
Gross margin/ N invested	5.4		4.1	
Gross margin/hactare	62,692.73		37, 731.74	
Gross margin/person	229,873.33		128, 567.41	

**Source:** Field survey data (2012)

The implication of men having more production resources as well as more farming experience (see Table 1) is that men were likely to produce more efficiently than women. This probably explains why the gross margin/ha for male respondents (₦ 62,692.73) was higher than that of the female respondents (₦37, 731.74). The result of greater efficiency of production among male respondents is that the male earned more per Naira invested (5.4) than the female (4.1). This resulted in a situation where each woman on the average earned much lower gross margin (₦128, 567.41 / woman) than the men (₦229, 873.33/man).

## Conclusion

The study showed that even though women in the study were younger and more literate than men, they were less experienced in the production of groundnuts. The study further revealed that there was a perception among the respondents that women had less access to some production resources like land, chemicals and labour than their male counterparts. Markets were also more accessible to men than women. This resulted in women having less gross margin per hectare than the men implying that the men produced more efficiently than the women thus earning more per unit of land farmed than women.

The need to focus on women farmers' accessibility to resources for increased

productivity and income cannot be overemphasized considering the large number of rural women concerned and the role women could play in improving household economy and poverty alleviation. Credit provision in cash and kind to women by Government and other relevant organisations will give women improved access to production resources. Making particular efforts to extend extension services towards women farmers will improve their skills. These interventions will subsequently improve women's productivity and income.

## References

- Damisa, M. A. and Yohanna, M. (2007). Role of rural women in farm management decision making process: ordered probit analysis. *World Journal of Agricultural Sciences*, 3(4): 543 – 546.
- Dimelu, M. U. Okoye A. C., Agwu A. E., Aniedu O. C. and Akinpelu A. O. (2008). Determinants of gender efficiency of small holder of cocoyam earners in Nsukka agricultural zone of Enugu state, Nigeria. *Scientific research and Essay*, 4 (1): 28-32.
- Echekwu, C. A. and Emeka, I. (2005). Groundnut endowing. The groundnut rediscovery programme In Nigeria. Opah mission Abuja pp18. In Lawal, A. M., Animashaun, J. O. and Towoju, A. S. (2012). *Economics of small-scale agro-*

- enterprises in Nigeria. A case study of groundnut processing among rural women in Kwara State. *Journal of sustainable development in Africa*, 14(5): 54-64
- Elegbede, J. A. (1998). Legumes. In. *Nutritional quality of plant foods* Eds. (Osagie, A. U. and O. U. Eka, O. U. eds). 1<sup>st</sup> edn. Post harvest research unit, Biochem Dept. University of Benin, Benin City, Nigeria. p. 53 – 83.
- Food and Agriculture Organization (1994). *Women, agriculture and rural development, a synthesis report of the Africa region*. Rome.
- Food and Agriculture Organization (1998). *Rural women and food security: current situation and perspectives*. Rome.
- Glick. P. (2002). *Women's Employment and Its Relation to Children's Health and Schooling in Developing Countries: Conceptual Links, Empirical Evidence, and Policies*, Cornell University, September
- Haddad, L. (1999). The income earned by women: Impacts on welfare outcomes. *Agricultural Economics*, 20: 135-141.
- Higgins, B. B. (1951). *Origin and early history of peanuts. Economic importance of peanuts, effect of fertilizer application on peanuts*. Washington D. C.
- Iheanacho A. C. (2000). *Economics of millet production under different cropping system in Borno State*. Unpublished Ph.D thesis, department of agricultural economics and rural sociology, Ahmedu Bello University, Zaria, Nigeria. p. 111.
- Mohammed, B. T. and Abdulquadri, A. F. (2012). Comparative analysis of gender involvement in agricultural production in Nigeria. *Journal of Development and Agricultural Economics*, 4(8): 240-244
- Odame H., Hafkin, N., Wessler, G. and Boto, I. (2002). *Gender and agriculture in the information society. International service for national Agricultural Research Briefing paper, No. 55*. The Hague. The Netherlands.
- Ogundele, O. O. (2004). *Input use and socio-economic characteristic of rice farmers: gender dimension and implication for small-holder agriculture in Nigeria*. Institute of rice research (IRRN), 29(1): 82-83.
- Ojo, C. O. (2011). *Analysis of women's resource accessibility and use efficiency in crop production in Borno State, Nigeria*. Unpublished Ph. D. Thesis, Department of Agricultural Economics, University of Maiduguri, Borno State.
- Ojo, C. O., Bila, Y. and Iheanacho, A. C. (2012). *Women's accessibility to resources of Agricultural productivity in Borno State, Nigeria*. *Journal of Economics and Sustainable Development*, 3(9): 56 – 61.
- Ojo, C. O. and Wurani, B. A. (2013). *Analysis of the socioeconomic factors affecting women's contribution to household welfare Mubi North Local Government Area of Adamawa State*. Nigeria. *Developing Country Studies*, 3(1): 51 – 56.
- Saito, K. A. Mekonnen, H. and Spurling. D. (1994). *Raising productivity of women farmers in sub-Saharan Africa*. World Bank Discussion Paper 230. Washington, D. C.
- Udry, C., Hoddinott, J., Alderman, H. and Haddad, L. (1995). *Gender differentials in farm productivity: implications for household efficiency and agricultural policy*. *Food Policy*, 20(5): 407-423.
- Udry, C. (1996). *Gender, agricultural production, and the theory of the household*. *Journal of Political Economy*, 104(5): 1010-1046.
- Mooock, P. (1976). *The efficiency of women as farm managers: Kenya*. *American Journal of Agricultural Economics; Proceedings Issue*, 58(5): 831-835.
- Welch, C. J., Alemu, B. Msaki, T. Sengendo, M., Kigutha, H. and Wolff, A. (2000). *Improving Household for food security: institutions, gender and integrated approaches*. U.S.A. BASIC management Entity. Retrieved from [www.krepubshers.com](http://www.krepubshers.com)
- World Bank (2001). *Engendering development through gender equality in rights, resources and voice*. Policy research report. Oxford University press.