Nigerian Journal of Rural Sociology Vol. 14, No. 1, October 2013

GENDER ANALYSIS OF RICE PRODUCTION IN OBAFEMI OWODE LOCAL GOVERNMENT AREA OF OGUN STATE, NIGERIA

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ABSTRACT

There is limited information on gender roles and responsibilities in the production of Ofada, a local rice variety in Ogun State Nigeria. Therefore, a gender assessment study was conducted onOfada rice production in OgunState. A total of 80 and 40 male and female Ofada rice farmers were selected respectively. The result showed that 32.5% of male rice farmers were aged 51-60 years while 37.5% of female were aged 31-40 years. The mean age for male and female Ofada rice farmers were 46±13 and 41±12, respectively. Men were more involved in tedious operations, which include land clearing, tree felling, stumping and weeding, as females were more involved in less tedious activities. The level of involvement in Ofada rice production activities was low among more than half of both male (61.2%) and female (51.7%) Ofada rice farmers in the study LGA.Pest attack (42.5%) and inadequate funding (38.8%) were rated verysevere constraints to production of Ofada rice.No significant difference existed between male and female Ofada rice farmers in terms of level of involvement in Ofada rice production (t = 0.471; P > 0.05). For ease of access to credit facilities, farmers should form themselves into associations and cooperative groups through which members may have access to loans. This will help them prosecute their important farming operations and thereby expand their production enterprise.

Key words: Gender, involvement, rice, production

INTRODUCTION

Rice is one of the important staple foods of the world. It is a cereal of the family *poaceae*or tufted annual grass. Common varieties include *Oryzasativa* and *Oryza glaberrima.* Other cereals of paramount importance include wheat, maize, and sorghum. Rice is the world's single most important food crop and a primary food source for more than a third of world's population. More than 90 percent of the world's rice is grown and consumed in Asia where about 60 percent of the earth's population lives. Rice is planted on about 146 million hectares annually representing 11 percent of the world's cultivated land. Rice is the only major cereal crop that is consumed almost exclusively by humans (FAO, 1999)

That rice has risen to prominence in the world trade over the years is no news. According to Jones (1995), It is widely cultivated throughout the tropics. In sub Saharan Africa, West Africa is the leading producer and consumer of rice (WARDA, 1996). West Africa accounts for 64.2 percent and 61.9 percent of total rice production and consumption respectively in sub Saharan Africa. Except for Burkina Faso and Niger, rice is a staple crop throughout West Africa, especially in Cote d'ivoire, Gambia, Guinea, Guinea Bissau, Liberia, Nigeria, Senegal and Sierra Leone. According to WARDA (1996)as cited in Akinbile (2007), Nigeria ranks number one in both rice production and consumption in West Africa sub-region. WARDA (2207) also ranked Nigeria as the leading rice producer in West Africa sub-region. Rice has been grown along the River Niger for over 3000 years (Imolehin and Wada, 2000).

A World Bank-sponsored study undertaken by Saito and Weidemann (1990) showed that women in the sub-Saharan Africa, including Nigeria, provide most of the labour and make certain key decisions, albeit randomly, for many agricultural activities, including food crop production. This is to the extent that women in general constitute up to 90% of the workforce involved in direct arable crop production and this is not easy to overlook (Maliki, 1991).

A series of studies covering African villages showed that generally, more women than men in cultivator families did agricultural work and that women were usually working more hours than the men. Furthermore, it has been noticed that female labour in production tends to be less important in societies where intensive agricultural systems are more dominant than the extensive systems.

Gender analysis also showed that in addition to the activities that women farmers carry out in the agricultural production sphere, they are at the same time heavily involved in reproductive and domestic roles (Olawoye, 1994). This was also corroborated by FAO (2011) which reported that as a result of household and child-rearing, women are not only much less likely to participate in the labour force, those who do are also much more likely to engage in self-employment activities rather thanhigher-paying wage employment.. Women spend time not only in agricultural tasks, but also in cooking and caring for children as well as fetching water and firewood, which are needed to carry on domestic tasks for the household. It was estimated that these combined responsibilities all add up as much as 14-16 hours for women's workday (International Institute of Tropical Agriculture, IITA, Undated). Apart from the above roles women also have heavy time commitment in their community roles such as visiting the sick and attending funerals. Men, on the other hand, are also often are pre-occupied with community roles as well and some other engagements which often affect their on-farm roles.

Studies have shown that there exists little or no documentation on the contribution of women farmers to food production. FAO (2011) asserted that women make important contributions to the agricultural and rural economies of all regions of the world. However, the exact contribution both in terms of magnitude and of its nature is often difficult to assess and shows a high degree of variation across countries and regions within countries. FOS (1999) and NLSS (2004) also posited that the contribution of women in agriculture is poorly documented in Nigeria. Also, the low rate of *Ofada* rice production could have gender dimensions to it. It is on this note that the study looked into the following specific objectives which are to:

a. identify the socio-economic characteristics of the male and female *Ofada* rice farmers in the study LGA;
b. determine the level of involvement of male and female *Ofada* rice farmers in rice production in the study LGA
c. identify the various gender-related constraints to *Ofada* rice production in the study LGA

It was hypothesised that there is no significant difference between men and women in their level of involvement in *Ofada rice* production

METHODOLOGY

The study was conducted in Obafemi–Owode Local Government Area of Ogun State, Southwestern Nigeria. Ogun State is situated in the tropics, covering a land mass of 16,409.26 square kilometres and an estimated population of over 3 million people (2006, NPC Estimates). The study area lies between latitudes 03^0 6' and 07^0 3', and longitudes 03^0 2' and 03^0 8' east of Greenwich Meridian. The area is particularly regarded as the “Home of *Ofada* Rice” because of the extensive cultivation of the rice variety in the

Multi-stage sampling technique was used in selecting respondents for the study. Obafemi Owode LGA is made up of two clusters, which are Obafemi and Owode. In Owode, 12 villages were purposively selected because of the large extent of cultivation of rice. In Obafemi cluster, 15 villages where rice is widely grown were also purposively selected. Of the 12 in Owode, 5 villages were selected, using a simple random sampling technique. Of the 15 in Obafemi, 7 villages were selected using the same sampling technique. This makes a total of 12 villages. Simple random sampling technique was then used to select 45 males and 27 females in Obafemi, while in Owode, 35 males and 13 females were randomly selected. This gave a total of 120 respondents (i.e. 80 males and 40 females).

Involvement of men and women in rice production: This was measured on a 4-point scale ranging from Always involved = 3 points, occasionally involved = 2 points, and rarely involved = 1 point, and not involved = 0. Involvement scores were thus calculated for respondents based on scores obtained on each of the production activities listed. A total of 17 items were included on the list.

Gender related constraints to Ofada rice production: This was measured with the use of 3-point scale of very severe = 3, severe = 2, not severe = 1, Not a constraint = 0. Each respondent’s score was obtained based on the constraints faced and the level of severity of such constraints faced.A total of 10 items were included on the list

Frequency counts, percentages and bar charts were employed in the analysis of data collected. T-test was used to test the significant difference between the level of involvement of male and female in rice production.

RESULTS AND DISCUSSION

Socio-economic characteristics

The result shows that the male farmers sampled were within the age range of 11-70 years old. Also, 32.5% of male and 37.5% of female farmers were between 51-60 and 31-40 years respectively. The age range of female rice farmers is 11-60. The disparity in age of male and female *Ofada rice* farmers may be due to the household responsibility that is placed upon the male farmers than their female counterparts, especially as it concerns vending for the household, and some other household expenses as may be expected of the male farmers, many of whom may be household heads. The study also shows that more of the rice farmers were in their economically active ages and that there were more female (34.4%) with higher educational status who attended both secondary and tertiary institutions, than their male counterparts (26%) in the same educational category. The implication is that the female rice farmers stand a higher chance than their male counterparts in terms of assessing information from a wide range of sources. The marital status of the respondents shows that majority of the farmers, male (72.5%) and female (62.5%) were married. Only a small percentage of them are single and divorced/widowed, implying that rice farmers have opportunity of supports of their spouses as far as carrying out of farming operation is concerned. The result also shows that rice farmers are predominantly Christians (50%) and Muslims

(42%). Traditionalists are also represented among rice farmers. This implies that is no religious group forbids the cultivation of *Ofada* rice. Majority (51.3%) of the Household in the study area had household size of 6-10 members. This is large percentage that will not struggle to provide reasonable amount of labour force needed for agricultural activities of the farmers in the study area. Majority of the male farmers (96.3%) are Yorubas, just like their female counterparts (92.5%). A very small percentage of the respondents were non-Yorubas. The implication is that *Ofada rice* farmers comprised less of strangers. The analysis also showed a large disparity between male (67.5%) and females (42.5%) in terms of access to credit facilities for agricultural production. This may affect the level of production of*Ofada* rice among female farmers negatively. Leadership of social organisation as shown by table 1 further established disparity between male and females, *Ofada* rice farmers. While (43.8% of male farmers were leaders, only 35.0% were in their organisations. This implies that male farmers are more active as members of social organisation than female farmers.

Respondents indicated other occupations they engaged in as shown in figure 1. The following occupations showed disparity between male and female farmers: crop farming [52.5% (males), 27.6% (females)], selling of farm produce [(13.8% (males), 25.0% (females)] trading [25.0% (males) 52.5% (females)] and hunting [18.8% (males) and 2.5% (females)]. The implication of this finding is that there are gender differences across the various occupations in the study area. This partly agrees with FAO (2011) that women are more involved in off farm activities than men, especially in the area of transporting of farm produce, firewood fetching and processing of farm produce, feeding household members and reproductive roles.

Table 1: Distribution of personal characteristics of respondents

Variables	Male		Females	
	F	%	F	%
Age:				
11-20	0	0	3	7.5
21-30	9	11.3	3	7.5
31-40	16	20.0	15	37.5
41-50	19	23.8	12	30.0
51-60	26	32.5	3	7.5
61-70	8	10.0	4	10.0
Above 70	2	2.5	0	0.0
	Mean age = 46±13		Mean age = 41±12	
Level of Education				
No formal education	18	22.5	7	17.5
Adult literacy	15	18.8	10	25.0
Primary education	26	32.5	6	15.0
Secondary education	17	21.3	15	37.5
Tertiary education	4	5.0	2	5.0
Religion				
Christianity	38	47.5	17	42.5
Islam	36	45.0	20	50.0
Traditional	6	7.5	3	7.5
Marital status				
Single	9	11.25	9	22.5
Divorced /widowed	13	16.25	6	15.0
Married	58	72.5	25	62.5
Household size:				
1-5	37	46.3	23	57.5
6-10	41	51.3	14	35.0
11-15	2	2.5	3	7.5

Ethnic background				
Yoruba	77	96.25	37	92.5
Hausa	21	2.5	2	5.0
Igbo	1	1.25	1	2.5
Other	54	67.5	17	42.5
Access to credit facilities	54	67.5	17	42.5
Leadership of Associations	35	43.8	14	35.0

Source: Field Survey, 2011

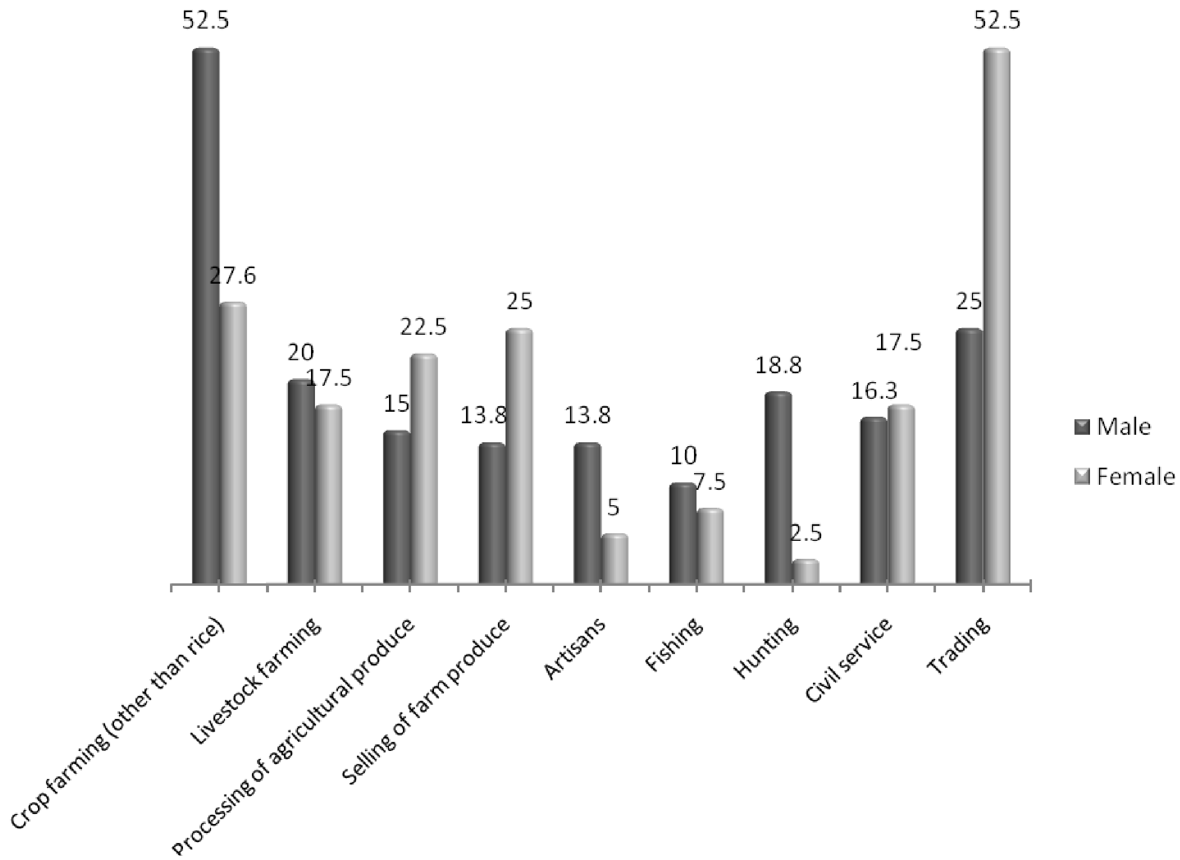

Figure 1: Gender Distribution of Respondents based on Other Occupations

Source: Field survey, 2011

Level of Involvement in *Ofada* Rice Production

Table 2 shows a frequency and mean distribution of level of involvement of male and female *Ofada rice* farmers in the various farm operations involved in rice cultivation. According to the result, majority of male farmers were always involved in more tedious operations of rice cultivation, than the minority who responded to these categories among the female farmers. These operations include weeding [(68.8% (males) 60% (females)] and land clearing [(61.3% (males), 15% (females)]. The Table further revealed the activities majority of women always engaged in as compared to the minority who always participated in the same activities among the male farmers. These activities included winnowing [(57.5 (females), 35% (males)], parboiling [(52.5% (females), 27.8% (males)]. However some of the activities were always carried out by male and female at a close range of proportion. They include control of birds and other pests [(52.5% (male) and 42.5% (female)] storage [(31.25% (males) and 32.5% (females)].

The mean distribution provides an indication of the difference in the level of involvement of male and female farmers in the various operations in rice production. Table 2 indicated that the top three activities that were carried out by men to included weeding (2.43), threshing (2.35) and application of manure (2.35). For female farmers the top three operations in which they were involved included seed planting (2.43), harvesting (2.39) and control of pests (2.29)

It also shows that there is a higher level of involvement in the more tedious operations of land clearing, tree felling, stumping and weeding with the respective means of 2.25 (males) and 1.00 (females) for tree felling; 1.58 (males), 1.00 (females) for stumping; and 2.56 (males) and 2.43 (females) for weeding.

Table 2: Gender distribution of respondents according to farming operations involved in rice cultivation

Activities	Males Always	Occasionally	Rarely	Never	Mean	Females Always	Occasionally	Rarely	Never	Mean
Land clearing	61.2	17.5	6.3	15.0	2.25	15.0	15.0	25.0	45.0	1.00
Tree felling	18.8	21.3	43.8	16.3	1.43	0.0	25.0	40.0	35.0	0.90
Stumping	17.5	40.0	25.0	17.5	1.58	10.0	22.5	25.0	42.0	1.00
Pulverization of soil	21.3	37.5	23.8	17.5)	1.63	(32.5	35.0	27.5	5.0	1.95
Seed planting	65.0	17.5	12.5	5.0	2.43	47.5	32.5	10.0	10.0	2.18
Supplying	5.0	21.3	22.5	51.3	0.80	7.5	25.0	17.5	50.0	0.90
Application of manure	56.3	26.3	13.8	3.8	2.35	50.0	35.0	12.5	2.5	2.33
Application of herbicides	32.5	38.8	23.3	5.0	1.99	20.0	55.0	22.5	2.5	1.93
Application of insecticides	36.3	37.5	22.5	3.8	2.06	35.0	40.0	22.5	2.5	2.08
Control of pests	52.5	23.8	23.8	1.3	2.29	42.5	32.5	25.0	0.0	2.18
Weeding	68.8	20.0	10.0	1.3	2.56	60.0	25.0	12.5	2.5	2.43
Harvesting	61.3	18.8	17.5	2.5	2.39	57.5	17.5	22.5	2.5	2.30
Threshing	38.8	21.3	22.5	17.5	1.81	52.5	32.5	12.5	2.5	2.35
Winnowing	35.5	21.3	21.3	22.5	1.69	57.5	17.5	22.5	2.5	2.30
Parboiling	28.8	25.0	22.5	23.8	1.59	52.5	22.5	22.5	2.5	2.25
Storage	31.3	12.5	46.3	10.0	1.65	32.5	17.5	25.0	25.0	1.58
Marketing	42.5	15.0	27.5	15.0	1.85	47.5	27.5	20.0	5.0	2.18

Source: Field survey, 2011.

Constraints to *Ofada* rice production

Table 3 below shows the various constraint faced by male and female rice farmers in the study area. According to the result, a large number of the respondents - male (42.5%) and female (32.5%)] farmer saw the attack by pest as very severe, each having a respective mean of 2.30, and 2.28. Disease attack was also considered an important constraint to *Ofada rice* cultivation. High cost of inputs is seen by male and female farmers as a major constraint to *Ofada* rice cultivation, as more than half (52.5% and 60%) respectively considered it a severe constraint. Another important constraint to rice production is disease attack, with a total of 37.5% and 42.5% of male and female respectively considering it a severe constraint. The study does not show any appreciable difference in the views of males and females *Ofada* rice farmers of their constraints to involvement in rice cultivation, except that of scarcity of land with mean 1.75 and 1.53 for male and female farmers respectively.

Table 3: Distribution of Gender according to the constraints to involvement in rice cultivation

Constraints	Males					Females				
	VS	S	NS	NC	Mean	VS	S	NS	NC	Mean
lack of adequate funding	38.8	53.8	7.5	0.0	2.31	32.5	55.0	12.5	0.0	2.20
Scarcity of farmland	10.0	60.0	25.0	5.0	1.75	17.5	20.0	60.0	2.5	1.53
Bad weather effect	31.3	43.8	22.5	2.5	2.04	22.5	70.0	7.5	0.0	2.15
High cost of inputs	28.8	52.5	18.8	0.0	2.10	27.5	60.0	12.5	0.0	2.15
Pilfering	31.3	28.8	17.5	10.0	1.94	22.5	47.5	(30.0	0	1.92
Pest attack	42.5	45.0	12.5	0.0	2.30	32.5	27.5	10.0	0.0	2.23
Lack of storage facilities	36.3	42.5	15.0	6.3	2.09	25.0	57.5	17.5	0.0	2.07
Lack of Processing facilities	28.8	48.8	17.5	45.0	2.01	25.0	52.5	22.5	0.0	2.03
Socio-cultural constraints	25.0	17.5	22.5	35.0	1.33	15.0	40.0	10.0	35.0	1.35
Disease attack	38.8	37.5	15.0	8.75	2.06	30.0	42.5	2.5	15.0	1.88

VS = Very severe; S = Severe; NS = Not severe; NC = Not a constraint

Source: Field survey, 2011

Gender Difference in level of involvement in production of *Ofada* rice

The result of the analysis shows that there is no significant difference between male (Mean = 32.32) and female (Mean = 31.80) rice farmers in their overall level of involvement in the various farm and off farm activities of *Ofada* rice production. This implies that even though male farmers were more involved than their female counterparts, the mean difference of 0.525 is of no significant effects. Therefore, the null hypothesis for this study is accepted. The study therefore implies that although there were few differentials in the roles of male and female rice farmers in farming and off-farm related activities of rice production, on the overall, both males and females are important actors in the production of *Ofada* rice.

CONCLUSION AND RECOMMENDATIONS

The study established that male *Ofada rice* farmers are distributed within an age range, with a large proportion in the age of 51 to 60 years of age, while female *Ofada rice* farmers were predominantly (37.5%) adult youths, in the age range of 31-40 years of age. Both Christians and Muslims were involved in production of *Ofada* rice. . Female farmers were more educated than their male counterparts, but were less represented in leadership of associations. There are variations in the activities male and females carry out in rice cultivation, as males are involved in tedious operations, while female farmers are involved in less tedious and off-field activities. Land scarcity is an important constraint among female *Ofada* rice female farmers. The study also concludes that male and female rice farmers are not significantly different in their involvement in the activities of *Ofada rice* cultivation.

In the light of these conclusions, the following recommendations are hereby made:

1. In order to attain the goal of improving both rural men and women involvement in rice

Table 4: t-Test for level of involvement of male and female *Ofada rice* farmers

Variables	No. Of case	Mean	Sd	Standard error	Mean difference	T-test	P	Decision
Male	80	32.32	5.87	0.66	0.525	0.471	0.638	Not Significant
Female	40	31.80	5.52	0.87				

Source: Field survey, 2011

cultivation, women involved in arable crop production require more attention from the necessary agencies, especially in the reallocation of available productive resources such as credit faculties, access to and control over land, availability of inputs (such as fertilizer and the chemicals) to control pest and diseases.. This is because pest and diseases are the common diseases of *Ofada* rice cultivation as identified by male and female *Ofada* rice farmers in the study area,.

2. There should be a greater cooperation between the extension agencies especially the Agricultural Development Project (ADP) and the research institutes in the campaign and provision of information on improved production of *Ofada* rice with great consideration for gender implication.
3. Policies to make loans available to farmers of both genders should be well implemented, as the importance of capital cannot be over emphasized in rice production.
4. Storage facilities and processing equipment should be provided for the farmers, as this will go a long way in helping farmers to store their farmers for a long period of time, as well as improve the quality of rice available for the consumers in the study area.
5. There should be provision of hiring service of farm equipment for female and male rice farmers by the governments. This will ease their operations in the process of producing *Ofada* rice for consumption of the people.
6. Research and extension service should focus on how to solve many of the constraints facing the farmers, such as pest attack and disease attack. This can be done by developing disease resistant varieties of rice. Strategies that help farmers get rid of bird pests from their rice farms should also be developed and transferred to farmers.

REFERENCES

Africa Rice Centre (WARDA). (2007). Africa Rice Trends: Overview of recent developments in the sub-Saharan Africa rice sector. Africa Rice Centre Brief. Cotonou, Benin: Africa Rice Centre (WARDA). 10 p.

Africa Rice Centre (WARDA). (1996). *Rice trends in sub- Saharan Africa: a synthesis of statistics on rice production, trade and consumption.* UK, SaycePublishing

Akinbile, L. A. (2007). Determinants of productivity level among rice farmers in Ogun state. African Crop Science Proceedings.Vol. 8. Pp. 1339-1344

Federal Office of Statistics (FOS). 1996. *Socioeconomic Profile of Nigeria*. Nigeria: FOS.1999. *Poverty Profile for Nigeria 1980 – 1996.* Nigeria: FOS.

Food and Agriculture Organisation (1999).The State of Food Insecurity in the World.Food and Nutrition Policy and Planning in English Speaking African Countries. Report on the FAO/DANIDA Seminar, Lusaka, Zambia, 1975. p10.

Food and Agriculture Organisation of the United Nations (2011). www.fao.org/economic/esa. Accessed on 2nd September, 2014

Imolehin, E.D. and A.C Wada.(2000). Meeting the Rice Production and Consumption Demand of Nigeria with Improved Technologies.*International Rice CommissionNewsletter* 53: 2000 IRRI. (1991). *World Rice Statistics*, International Rice Research Institute, Los Banos, Philippines p. 34-42.

International Institute of Tropical Agriculture, IITA, (Undated).http://old.iita.org/cms/details/trn_mat/irg58/irg583.html. Accessed on 2nd September, 2014

Jones, M.P. (1995). The Rice Plant and its Environment. West African Rice Development Association, Cote d'Ivoire.

Maigida, D.N., (1992). Women-in-agriculture and unified extension agricultural system. Proceedings of the National Agricultural Orientation Course for Women-in-Agriculture Agents, Zaria, Nigeria.

Maliki, D., (1991). Implementation of women-in-agriculture programme, FAO/UNDP/FMANR Workshop on Extension Strategies for Rural Women, 3-7 September 1990

National Living Standard Survey (NLSS).(2004): Report on the NLSS, 2004 survey. www.nigeriastat.org.ng

National Population Commission.(2006). Estimated population figures. Abuja: National Population Commission of Nigeria.

Olawoye, J.E., 1994. Gender priorities and issues in agricultural extension service. A paper presented at the National Conference of the Agriculture Extension Society of Nigeria ARMT, Ilorin, pp: 3-6.

Olawoye, J. E. (1993). Gender analysis in agriculture. An invited discussion paper presented at the WORDOC workshop Institute of African Studies University of Ibadan on 17-18 February, pp: 4-10.

Saito, K.A. and C.J. Weidemann, (1990).Agricultural extension for women farmers in Africa. World Bank Discussion Paper. The World Bank, Washington, D.C.