

Gender Involvement in Arable Crop Cultivation and its Contributions to Household Food Security in Ogun State, Nigeria

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Abstract: This study examined gender involvement in arable crop cultivation and its contributions to household food security in Obafemi Owode Local Government area of Ogun State. Interview guide was used to elicit information from 120 arable crop farmers. The sample comprised 84 male and 36 female arable crop farmers. Some of the findings showed that most of the respondents were within the ages of 30-49 years with mean age of 44 years. A large proportion of the sample male farmers (64%) were between 39-48 years of age while 24 percent of the female farmers were between 35-44 years. Seventy three percent of sample male farmers had between 2-3 wives, family size range between 4-15 persons. About 75 percent of the sample farmers had completed one form of formal education. Both male and female farmers produced arable crops such as maize, rice, cassava and yam. Male respondents were more active in rice farm operations such as land preparation (64%) and nursery (59%) while women were more involved in activities such as processing (81%) and post storage (75%) activities. However, the level of contribution of male and female to arable crop farming for household food security was average. Lack of adequate fund (59%), pest and disease attack (56%), high cost of input (56%) were some of the highest constraints to arable crop production. T-test analysis revealed that, there was no significant difference between men and women in cultivation of arable crops to household food security ($t = 4.61$ $p < 0.13$). The study concluded that there should be a greater cooperation between extension agencies especially ADP and the research institutes in providing information on improved production of arable crops with great consideration for gender implication.

Key words: Gender, involvement, arable crops, cultivation, food security, household

INTRODUCTION

Gender is a concept used in social science analysis to look at roles and differences between men and women but rather on their experiences as members of society^[3]. In most societies men and women have distinct roles within the farming system. Gender differences in rural farming households vary widely across cultures but certain features are common. Women tend to concentrate their agricultural activities around the homestead primarily because of their domestic and reproductive roles. They play a critical role in food production, post harvest activities, livestock care^[1]. Opined that certain task activities are regarded as “male” or “female” in some setting a rigid division of labour exists between men and women, household members have separate income and expenditure while in

another area, division of labour and specialization of tasks is less rigid and not skewed^[9].

^[5]Observed that the roles of men and women could be quite different in most societies^[5]. In India, women are labourers in the construction industry, and Ghana men have traditionally been involved in cloth weaving. It can also be noted that carrying heavy loads of firewood and water, uses women’s physical strength, while working on complicated electronic problems can involve much patience and attention to detail on the part of men. Such observations suggest that biological difference do not necessarily determine what men and women should do rather these roles are often socially defined and shaped by the tradition and beliefs of a particular culture.

There is a marked distinction in the role of gender in traditional African agriculture. Cultivation of cash

crops and other heavy work such as ploughing are carried out by men while food crops and light works such as weeding are often women's responsibility. However, the vital role for both women and men in cultivation of arable crops cannot be over-emphasized. Men clear the land at the onset of a cultivation cycle, but women frequently do the planting, weeding, harvesting and processing of food crops^[6].

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^[7]. Women spend numbers of hours 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. Apart from the above roles women also have heavy time commitment in their community roles such as visiting the sick and attending funerals. Although men have community roles as well, however, it is the overall commitment of daily time and energy for women farmers that is an important consideration for those who are preoccupied with agricultural development^[6] opined that food security existed when all people at all times had physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life. The findings of studies examining the role of women in household food security have been mixed studies by^[2,8] indicated superior results with contribution women in agriculture while studies by^[4,10] indicated little significant effects against this background this study was designed to examine the role of men and women in household for security.

The objectives of the study were to:

- Identify various arable crops cultivated by men and women.
- Identify various farm operations engaged in by both men and women.
- Determine the level of contributions of arable cultivation to household food security.
- Ascertain constraints to gender involvement in the cultivation of arable crops in study area.

It was hypothesized that there was no significant difference between men and women and their involvement in arable crop cultivation.

MATERIALS AND METHODS

The study was carried out in Obafemi Owode Local Government area of Ogun State. The local government

has a land area of about 194,737.07m² and a population of 207,998 projected from 1991 census figure. The climate favours the cultivation of a wide range of food crops such as rice, maize, cassava, yam, coco yam, oil palm, vegetables and fruits.

Sampling procedure and sample size: Multi stage sampling technique was used to select the sample size. The first stage was the selection of two districts out of six. Second stage involved selection of three villages from each district. The third stage involved random selection of twenty households from each of the selected villages. A total of 120 respondents (84 male and 36 female) were selected and the sample was stratified randomly to ensure gender representative sample of the arable farmers. An interview guide was designed to obtain information on the farmers about demographic and non-demographic characteristics.

Measurement of variables: The important variables measured were:

- Involvement of men and women in arable crop cultivation: This was measured on the basis of 3 point scale ranging from Always Involved = 3 points, occasionally involved = 2 points, and not involved = 1 point. Involvement scores were thus calculated for respondents.
- Contribution of both men and women to household food security. This was measured by using 3 point scale ranging from Always contribute = 3 points, occasionally contribute = 2 points, do not contribute = 1 point. The total scores of respondents for the number of items indicated were expressed with maximum of 48 points and minimum of 16 points.
- Constraints to gender involvement in arable crop cultivation. The respondents were asked to indicate as many constraints as they experienced in cultivation of arable crop and rank them as (1 = most serious constraint, 2 = second serious constraint and 3 = third serious constraint).

Frequencies and percentages were employed in data analysis. (T-test was used to test the significant difference between men and women in arable crop cultivation).

RESULTS AND DISCUSSION

Socio economic characteristics of the respondents: The farmers were within the ages of 30-40 years with a mean age of 44 years. A large proportion of samples male farmers, (64%) are between 39-47 years of age while (24%) of sampled female farmers are between 35-44 years. The farmers were all married except 4 females

Table 1: Gender distribution of respondents by identified arable crops cultivated

Arable crops	Male		Female		Total	
	Freq.	Percent	Freq.	Percent	Freq.	Percent
Rice	66	78.56	25	69.42	91	75.58
Maize	73	86.90	28	77.78	101	84.17
Yam	43	51.19	19	52.78	61	51.67
Cassava	75	89.33	31	86.11	106	88.34

Table 2: Gender distribution of respondents by most two arable crops farm operations

Arable crops	Male		Female		Total	
	Freq.	Percent	Freq.	Percent	Freq.	Percent
Land preparation	54	64.28	12	33.33	66	55.00
Nursery raising	50	59.52	17	47.22	67	55.83
Transplanting	49	58.33	11	30.56	60	50.00
Application of Manure	53	63.11	20	30.56	73	60.00
Weeding	44	52.76	18	50.00	62	51.67
Harvesting	46	54.76	21	58.33	67	55.83
Threshing	27	32.14	18	50.00	45	37.50
Winnowing	31	36.90	20	55.56	51	42.50
Parboiling	17	20.23	19	52.78	36	30.00
Storage	10	11.90	21	58.33		
Cassavas						
Land preparation	56	66.67	16	44.44	72	60.00
Planting	59	70.21	21	58.33	80	66.67
Manure application	55	65.54	22	61.10	77	64.17
Weeding	56	66.67	21	58.33	77	64.17
Harvesting	58	69.04	24	66.57	82	68.3
Processing	38	45.20	29	80.50	67	55.83
Storage	19	22.56	27	75.00	46	38.33

who were widowed. However, further information obtained shows that sample male farmers (73%) had between 2 and 3 wives, family size ranged between 4-15 persons. Of the total respondents, educated farmers constituted 74.8 percent with 58.33 percent of male respondents have the farm size range between 3-9 hectare while 31.67 percent female respondents had farm size between 1.4 hectares.

Identified arable crops cultivated by the respondent:

The data presented in Table 1 revealed that both male and female respondents produced maize while rice and cassava were also identified as one of those arable crops grown. However, yam was the least crop grown/cultivated by both men and women. The adduced reason for this was simply the drudgery involved in cultivation of yam. Furthermore cassava and maize were the two staple foods in the study area. Food can be produced from both cassava as gari, fofoo, lafun and maize as (ogi) pap. However, rice has been the most cultivated crop among the arable crops. Thus, people come from all neighbouring towns and villages to buy this local rice “ofada” from the study area.

Gender distribution of respondents by most two arable crops farm operations:

In rice farm operation,

Table 3: Contributions of both men and women to arable crop cultivation to household food security

Arable crops	Male		Female		Total	
	Freq.	Percent	Freq.	Percent	Freq.	Percent
Household expenditure	66	78.33	11	30.50	77	64.16
Payment of household rent	59	70.50	13	36.11	72	60.00
Buying clothing	50	59.67	17	47.22	67	55.83
Buying children uniform	50	59.67	17	47.22	67	55.83
Payment of school fees	73	86.90	15	41.6	88	73.33
Buy children’s books	66	78.56	16	44.44	82	68.33
Buy food stuff	75	89.28	23	63.90	76	63.33
Transportation expenses	40	47.56	14	47.22	54	45.00
Pay electricity bill	49	58.44	10	27.81	59	49.17
Pay water bill	31	36.90	8	22.22	39	32.50
Pay for farm input	34	40.50	17	47.22	51	42.50
Hospital bill payment	49	58.44	22	61.11	71	59.17

Table 4: Gender distribution of constraints to arable crop production

Arable crops	Male		Female		Total	
	Freq.	Percent	Freq.	Percent	Freq.	Percent
Lack of adequate fund	59	70.50	29	80.50	88	73.33
Scarcity of farmland	41	48.81	23	63.55	64	53.33
Bad weather effect	38	45.22	20	55.55	58	48.33
High cost of input	54	64.28	21	58.33	75	62.50
Pilfering	44	52.38	17	47.22	61	50.83
Pest and disease attack	56	66.67	13	36.10	69	57.50
Lack of storage facilities	38	45.21	18	50.00	56	46.67
Lack of processing facilities			50	59.67	24	67.00
	61.67					
Socio cultural constraints	36	42.90	13	36.10	49	40.83

Table 5: Chi-square value for independent variable and gender involvement in arable crop production

Variables	X ² cal	Df	P	Cc	Decision
Marital status	2.28	6	0.13	0.14	NS
Educational level	5.96	8	0.01	0.35	S
Age	2.30	4	0.02	0.47	S
Farm size	4.55	4	0.014	0.39	S
Sources of land	1.37	6	0.17	0.14	NS
Purpose of cultivation	4.11	3	0.19	0.21	NS

Tested at 0.05 level of significance

Table 2 revealed that male respondents were more active in farm operations such as land preparation and nursery raising. However, all other activities such as weeding, harvesting, threshing, winnowing and storage were carried out by female. In cassava, most of the other tasks involved processing and storage which were performed by female while land preparation planting weeding and harvesting are performed to varying degree by men. Most other farm operations such as application of manure and harvesting were performed by both male and female farmers.

Contributions of both men and women in arable crop cultivation to household food security:

Investigation revealed that male were responsible for contribution of arable cultivation to household food security in buying foodstuff, payment of children school fees and payment of household rent. While female contributed in most activities that concerned her and her children such as hospital bill payment, buying of foodstuff, and buying children uniform.

Table 6: T-test for the contribution of arable crops to household food security

Variables	No. of cases	Mean	Sd	Standard error	Mean difference	T-test	P	Decision
Male	84	31.11	5.95	0.476	0.66	4.61	0.13	NS
Female	36	30.45	6.10	0.51	4.0			

Constraints to arable crops production: Insufficient money in form of credit facilities, pest and disease attack, high cost of inputs and lack of processing facilities ranked highest as constraints to arable crops production in Table 4. However, scarcity of farmland constraints were faced by female respondents more than male respondents as a result of their access to land and control over land.

Other constraints identified were bad weather effect, pilfering and lack of storage facilities.

Relationship between independent variable and gender involvement in arable crop production: The chi-square value revealed that educational level, age and farm size have gender relationship in the involvement in arable crop production. On the other hand chi-square value not significant at 0.05 level implies that no gender relationship in marital status, sources land and purpose cultivation and their involvement in arable crop production.

T-test for the contribution of arable crops to household food security: There was no significant difference between male and female in their contribution of arable crops to household food security. T-test is 4.61 and $P < 0.13$ which is greater than 0.05. The male farmers had a mean of 31.11 and standard deviation of 5.95 while female had mean of 30.45 and standard deviation of 0.60. This implies that male were more involved in contributions to household food security than female but the mean difference is 0.66 which is of no significant effect. Therefore this cannot account for the significant differences.

Conclusions: The study has revealed clearly the division of labour between men and women in cultivation of arable crops such as yam, cassava and rice. Men engaged in farming activities such as clearing, planting, application of fertilizer and women engaged in activities such as weeding, post harvest handling (processing and storage). In order to attain the goal of improving both rural men and women involvement in arable crops cultivation and its contribution to household food security, 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.

Finally, 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 arable crops with great consideration for gender implication.

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