Appraisal of the Involvement of Rural Women in Selected Food Crop Production in Umuahia North Local Government Area, Abia State, Nigeria

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ABSTRACT

This paper examines the involvement of rural women in selected food-crops production in Umuahia North Local Government area, Abia State, Nigeria. Data were raised with pre-tested questionnaire administered to 150 women farmers using multistage random sampling technique. Data generated were analyzed with descriptive (frequency count, percentages and means) and inferential (regression) statistical tools. The study revealed that 50.0% of the women farmers were within the age range of 41-50 years old; majority (68.0%) were married, 46.7% had basic education while 42.7% had household size of between 10-14 persons. Majority (60.0%) had over 10 years farming experience and over 90% had less than 3 hectares of farm-land. Specifically, they were small-scale farmers. The result also showed that majority of the women farmers cultivated selected food-crops (Cassava 98.7%; maize, 96.7% and cocoyam 80%). The farming activities the women were mostly involved in were processing, harvesting, weeding, storage, stumping, and planning. The women farmers were constrained with inadequate capital (98%); access to land (92.0%); inadequate extension services (88.)%); poor road network (72.0%); lack of storage facilities (66.0%) and incidence of pest and disease (60.0%). The result of the regression analysis shows household size, farm size and level of education were significantly related with the level of women involvement in food-crop production activities. It was recommended that provision of adequate capital, good road network, and farm land will increase women involvement in food-crop production.

Keywords: *Involvement, Rural women, Food-crop, Production*

INTRODUCTION

Over the years, international agencies have made efforts to internalize gender concerns in all development issues. The issue of women and food which has also received similar attention failed to bring expected results. The realization that the root of the problem lies in the gender discrimination prevalent in most developing countries is only now gaining credence (Ramachandran, 2008).

In Africa, women occupy two-third of the agricultural labour force and are actively involved in food-crop production (Spore, 2007). They bear near total responsibility for food processing and distribution, family health, nutrition and sanitation (Anaeto *et al,* 2008). They undertake the supervision of other economic activities such as vegetable gardening, raising chickens which are designed to increase their families' income and food resources (Ozo-Eson, 2002). Yet women are not given adequate support that will increase their agricultural productivity (Gladwin, 2000).

Notwithstanding their significant contributions in agriculture, women remained the least to benefit from agricultural extension services, credit, fertilizers, seeds and other input supplies while men control land, cash and decision-making remain their birth-right (IFPRI, 2000). Equally, rural women are wrongly classified as economically "inactive" in agricultural operations hence agricultural extension services do not attach much importance in reaching women farmers and are thus rejected. This neglect of women could be viewed from the fact that most extension agents are men and lack basic understanding of women's position in the rural area (Edoka, 2008).

Furthermore, increasing migration by men from rural to urban areas has left a growing number of de-facto women household heads who are struggling to eke out a living and ensure food

security for their families without access to credit, farm technology and extension services (FAO, 2002). In general, African Conventional wisdom believes that men make key farm production decision not women; hence women's neglect (Ezike *et al,* 2008). Moreover, women's limited access to production resources and insufficient credit are products of inter-related social economic and cultural factor that forced them into a subordinate role, to the detriment of their own development and that of the society (Ramachandran, 2008).

Efforts have been made by successive administration to revitalize agriculture in Nigeria. Such efforts include the National Accelerated Food Production Programme launched in 1975; Operation Feed the Nation of 1976 and the Green Revolution of 1979 to mention but a few. It is worthy of mentioning that these efforts were designed such that only the male farmers were at advantage in terms of resource allocation and contact with extension agents.

The study therefore was designed to determine the socio-economic factors that affected women involvement in food-crop farming, the specific food crops grown by women farmers and the constraints encountered by women farmers in food-crop production.

Objectives of the study

The general objectives of the study was to appraise the involvement of rural women in selected food crops production in Umuahia north L.G.A. in Abia State.

Specifically, the study was designed to:

i. describe the socio-economic characteristics of women involved in selected food-crop production in the study area.
ii. determine specific food crops cultivated by women in the area
iii. ascertain the level of women involvement in some selected food-crops (cassava, cocoyam and maize) production activities
iv. ascertain constraints facing rural women in food-crop farming.

METHODOLOGY

The study was carried out in Umuahia North Local Government Area, Abia State. It lies between latitude 5^0 30^1 and 5^0 40^1 north of the equator and latitude 7^0 25^1 and 7^0 32^1 East of Greenwich Meridian. The LGA has a total land area of about 432,290 sq km with a land mass of about 220,660 people (National Population Census, 2006).

It has a total annual rainfall range of between 2000-2500 mm, an average annual temperature of 27^0Cand Relative humidity range from between 80-90% in the wet season (National Root Crop Research Institute, 2002).

The choice of Umuahia north L.G.A. was because of its intensive agricultural activities clearly noticeable within the communities. This is induced by the rich soil which span through the LGA. The agricultural activities carried out are mostly in semi-subsistence level. The farmers cultivate both food crops and cash crops. They also keep livestock such as poultry, goat and sheep.

The major food crops grown are cassava; maize, cocoyam; yam; three-leafed yam; groundnut and vegetables. Cash crops cultivated include oil palm, cocoa and rubber. Fruit-trees include citrus; breadfruit and so on. There exists network of tarred and untarred roads that link the communities with the Local Government Headquarters and so make accessibility very easy.

Multistage random sampling technique was employed in the selection of the respondents (women) for this study. Firstly, the population was divided into two zones, namely Ohuhu Clan, zone (A) and Ibeku Clan, zone (B). In each clan, five (5) blocks representing five communities were randomly selected, giving a total of ten blocks (10 blocks) which represents ten communities. The second stage involved random selection of fifteen (15) women farmers from each block. This gave a sample size of one hundred and fifty (150) respondents used for the study. Data for the study were collected from the respondents through the use of pre-tested structured interview schedule. Data were analyzed using frequency counts, percentages, means and multiple regressions.

RESULTS AND DISCUSSION

Demographic characteristics of women farmers

Table 1 reveals that 50% of the women farmers were within the age range 41 -50 years old while 26.7% of them were between 31 – 40 years of age. Those that fell within 51 and above years, and 21 – 30 years accounted for 16.7% and 6.7% respectively. Thus the farmers are old and should be able to make rational decision with respect to food crop production. This finding corroborates the expression of Onumadu (2009) that an average woman farmer in Umuahia north L.G.A is old. Also, 68.0% were married, 20.0% were widowed while 6.7% and 5.4% were single

and divorced respectively. This implies that married women are more involved in food crop production and this could be as a result of more responsibilities they are saddled with as married women who have responsibility for the provision of household needs for their families. About 46.7% of the respondents were literate with secondary education while 20.0% had no formal education. Since many have basic education it might help the farmers to understand the need to adopt improved agronomic practices. According to Ebii (2000) with education, the age-long conservative attitudes of farmers are easily broken. Table 1 further shows that 42.7% of the respondents had household size of between 10 to 14 persons, while 2.7% had between 15 members and above. Household composition constitutes an important variable in agricultural activities. This is because the available labour force is directly obtained from it. The household members might be ready source of labour for farm work (Chinaka, 2004). This may be explained by the simple reason that larger households sizes have readily available labour for agricultural activities than smaller household. The women that have larger household size, however, need to increase their agricultural productivity to meet up with the consumption need of the family.

Majority (60.0%) of the women had farming experience of 10 years and above while 3.3% had farming experience of between 1 to 3 years. Farmers who have stayed long in the system are better equipped to adopt changes and can process information better than beginners. Such farmers are cautious in trying out innovations especially when it has not been demonstrated convincingly. Anijah-Obi (2001) corroborated this in her study that longer year of farming experience helps the women farmers to make rational choices and decisions. Again, majority (94.0%) of the respondents had farm size less than 3 hectares. This is an indication that the women are small-scale land holders and consequently subsistent and resource-poor-farmers. This could be attributed to the fact that Nigerian cultures do not permit women free access to and control over land (Edoka, 2008). More so, Nigerian farmers generally have small holdings. The result merely confirmed the observation of Onumadu (2009) that farmers generally have small-holdings.

TABLE 1
Distribution of respondents according to demographic characteristics N=150

Characteristics	Frequency	Percentage
Age (Years)		
21-30	10	6.67
31-40	40	26.67
41-50	75	50.00
51 and above	25	16.67
Marital Status		
Single	10	6.67
Married	102	68.00
Divorced	8	5.38
Widowed	30	20.00
Education		
No formal education	30	20.00
Primary education	40	26.67
Secondary education	70	46.67
Tertiary education	10	6.67
Household Size		
1-4	30	20.00
5-9	52	34.67
10-14	64	42.67
15 and above	4	2.67
Farming Experience		
1-3	5	3.33
4-6	15	10.00
15 and above	90	60.0
Farm Size (hectares)		
Below 3	141	94.00
3-5	7	4.67
6-9	2	1.33
10 and above	0	0.00

Source: Field survey, 2009.

Food crops cultivated by women farmers

Table 2 shows that majority was involved in cassava (98.7%) and maize (96.75) production respectively. Also, majority were involved in Cocoyam (80.0%) and Vegetable (80.0%) farming while plantain, three-leafed yam and African beans were 73.3%, 65.3% and 53.3% respectively. The result conforms with the findings of Okafor *et al* (2006) that tagged some crops as "women crops" because of the level and preference exhibited in the cultivation of such crops by women. FAO (2002) attributed preferences of such crops by women to such factors as low-labour requirement and early maturity. This implies too that those food crops might have advantages over other crops. A common denominator is that each has added values. For example, cassava is processed into garri, tapioca, cakes, fufu and flour; maize is eaten by men in various forms (pap, flakes, boiled and eaten) and also fed to livestock. While cocoyam is used for food by man and livestock,

ornamental, commercial, export and industrial purposes (Onumadu, 2009).

TABLE 2
Percentage distribution of women farmers based on food crops cultivated

Food crops	Frequency	Percentage
Cassava	148	98.7
Cocoyam	120	80.0
Three-leafed yam	98	65.3
African beans	80	53.3
Sweet Potato	60	40.0
Yam	60	40.0
Maize	145	96.7
Plantain	110	75.3
Rice	54	36.0
Vegetables	120	80.0

Source: Field Survey, 2009.
** Multiple choice responses

Table 3 shows high level involvement of women in food-crop production activities. The farming activities the women were mostly involved were processing, 2.89 mean score; harvesting, 2.87 mean score; weeding, 2.83 mean score; storage, 2.62 mean score; stumping, 2.53 mean score and planting, 2.33 mean score. While farming activities the women are not too involved in ridging with mean score of 1.87; fertilizer application, 1.80 mean score and land clearing, 1.67 mean score. This agrees with Banji, *et al*, (2005) findings that African women are responsible for 100% of the work in food processing and 60% in marketing. In a related study, Edoka (2008) reported 94.4% women are involved in processing/marketing, while 55.6 are involved in harvesting. This study also observed very low scores for women involvement in such farm activities as land clearing, ridging and fertilizer application.

TABLE 3
Distribution of respondents based on level of involvement in crops production activities.

Activity	Always practiced	Occasionally practiced	Do not practice	RTRS	Mean (x)
Land clearing	90(20)	80(26.67)	80(53.33)	250	1.67
Stumping	270(60)	100(33.33)	10(6.67)	380	2.53
Ridging	120(26.67)	100(33.33)	60940.00)	280	1.87
Weeding	390(86.67)	30(10.00)	05(3.33)	425	2.83
Fertilizer application	114(25.330	90(30.00)	76(44.67)	271	1.80
Harvesting	405(90.00)	20(6.67)	05(3.33)	430	2.87
Processing	411(91.33)	20(6.67)	03(2.00)	434	2.89
Storage	327(72.67)	50(16.67)	16(10.67)	293	2.62
Marketing	330(73.330	60(20.00)	10(6.67)	400	2.67

Source: Field survey, 2009. Figures in parenthesis are percentages

RTRS – Respondents Total Raw Score

Information in table 4 highlights the constraints encountered by women farmers in food-crop production in the study area. Over (98%) complained of inadequate capital while 92.0%, 88.0% and 72.0% were constrained by free access to land, inadequate extension services and poor road network respectively. Other constraints prompted by women farmers include lack of storage facilities (66.0%) and incidence of pest and disease (60%). Chale (2001) reported that lack of access to credit, land and inadequate contact with extension agents constituted major constraints to agricultural production by women in Nigeria. While Adebayo (2003) implicated inadequate capital which made it difficult for women to engage extra-labour, purchase necessary farm inputs and tools for increased production. By and large, the above-mentioned constraints have been the bane of agricultural production in Nigeria.

TABLE 4
Constraints encountered by women in food-crop production

Constraints	Frequency	Percentage
No free access to land	138	92.0
Lack of storage/ preservation facilities	99	66.0
Inadequate capital	147	98.7
Poor social amenities like roads	108	72.0
Incidence of pest and disease	90	60.0
Inadequate extension services	132	88.0

Source: field Survey, 2009.
*Multiple Choice Responses Recorded

Data available in table 5 indicates that four functional forms were linear, semi-log, double-log and exponential function was chosen as the lead equation on the basis of having the highest values of coefficient of multiple determinations (R_2), highest F-ration and highest number of significant variables. The exponential result is therefore used for discussion.

The multiple determination (R_2) value as produced by the exponential function was 0.6300. this implies that about 63% of variation in the women's involvement in food-crop production activities is accounted for by joint actions of other variables not included. The F-ratio (4.48) was significant at p=0.01 indicating that the model gave a good fit to the data.

The coefficient of household size (X_2) was negative but significant at p=0.01. This implies an inverse relationship of household size to women involvement in food-crop production activities. This indicates that the more the household size, the less the involvement of women in food-crop activities. This may be attributed to the fact that as the household size increases, resources that would otherwise be used for farming activities are channeled to the upkeep and training of the young members of the family who may be in school or undergoing artisan training. The result is in disagreement with the expectation that larger household size have more readily available labor and hence positively relates to farming activities. This validated the work of Jiriko (2008) in which household size was found to be negative and significantly related to women and food crop production.

The coefficient of the farm size (X_3) was positive and significant at p=0.01. This showed a direct relationship with involvement of women in food-crop production. This means that the level of women involvement in food-crop activities increase too. Therefore, any adverse effect on farm size will also adversely affect the women's food production activities.

Coefficient of the level of education (X_3) was significant at p=0.01 and positively related to women involvement in food crop production. This implies that as level of education increased, the involvement of women in food-crop production activities increased. This could be attributed to the fact that education increases the level of human development and capacity (Ekumankama and Izuogu, 2008). The result agrees with the findings that higher literacy level increased the chances of adoption which enhances involvement in food-crop production (Abdulwahab, 2008).

The coefficient of age and farming experience were found to be non-significant at p=0.01 in the study. The implication is that the variables of age and farming experience have no influence or contributions towards the level of involvement of women in food-crop production activities.

In sum, the regression results showed that the variables: household size and level of education have significant relationship with the level of women involvement in food-crop production activities.

TABLE 5
Ordinary Least Square (OLS) regression analysis of the influences of socio-economic variables and women involvement in food-crop production activities

Variables	Linear	Exponential	Double log	Semi-log
Constant	27.468(23.56)***	3.326(64.11)***	3.5059(25.39)***	31.142(10.04)***
X_1 (Age)	0.0018(0.17)	.0000(0.09)	-.0263-(0.83)	-.5015(-1.189)
X_3 (Farm size)	0019(0019)	.3825(2.97)**	-.0006(-0.0.03)	.03940(0.09)
X_4 (Farming experience)	-.1010(-1.20)	-.0048(-1.31)	-.0256(-1.12)	-.5151(-1.00)
X_5 (Level of Education)	-.1541(2.76)***	.0069(2.80)***	-.0002(-.05)	-.8565(-2.95)***
R_2	0.4093	0.6300	0.2063	0.5344
Adj R_2	0.3377	0.5784	0.1749	0.4829
F – ratio	3.46***	4.48***	3.38***	3.31***

Source: Field Survey, 2009 The numbers in parenthesis are the t-ratios
***= significant at 1% level, ***=significant at 5% level

CONCLUSION

From the results of this study, it was concluded that the women farmers are old, majority are married, under half basic education, and household size of 10 to 14 persons. The study also found that majority of the women farmers have over 10 years farming experience and farm lands less than three hectares respectively.

Majority cultivated cassava, maize, cocoyam and vegetables. Farming activities the women were mostly involved in are processing, harvesting, weeding, marketing, storage, stumping and

planting. The women however, were not much involved in ridging, fertilizer application and land clearing.

Major constraints faced by the women in food-crop production include lack of access to land, lack of storage facilities, inadequate capital, poor social amenities, incidence of pest and disease and inadequate extension services.

The regression results showed that the variables: household and farm size as well as level of education correlated significantly with the level of women involvement in food-crop production activities. It was recommended that the removal of these constraints will drastically increase women involvement in food-crops production beyond the selected food-crops they cultivate presently.

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