



Rural Women's Involvement in Agriculture in Okpo District, Kogi State, Nigeria

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Keywords: rural women, involvement, agriculture, okpo district, Nigeria.

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Rural Women's Involvement in Agriculture in Okpo District, Kogi State, Nigeria

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Abstract- The study assessed rural women's involvement in agriculture in Okpo District, Kogi State, Nigeria. Data were collected from 120 randomly selected rural women farmers using a structured questionnaire. Data were analyzed using frequencies, percentages and mean scores. Results of the study showed that cassava (80%), groundnut (75%), vegetables (62.5%), cowpea (60%), maize (57.5%) and bambaranut (56.7%) constituted predominant crops grown by the respondents while poultry (63.3%), goats (70.8%) and sheep (41.7%) were the major livestock reared. Findings also indicated high involvement of farmers in land clearing (91.6%), weeding (90.9%), sowing/planting (88.4%), harvesting (87.5%), transportation of produce/products (85.8%), processing (77.3%), marketing (79.2%) and storage (67.5%). Major constraints to participation in agriculture included limited access to land (M = 2.26), lack of access to credit (M = 2.15), limited time for agricultural activities (M = 2.07), lack of access to inputs (improved seeds, fertilizers, agro-chemicals) (M = 2.05), lack of modern storage facilities (M = 2.03) and lack of access to appropriate agricultural technologies (M = 2.00). The study concluded that rural women farmers in the study area were small-scale producers who grew subsistence food crops, kept poultry and small ruminants and contributed about 68-92% of their labour in all agricultural operations. However, they were constrained by lack/limited access to agricultural productive resources, hence low production and productivity. In the light of the foregoing, it is recommended that rural women farmers be provided with improved varieties of crops they cultivate while efforts are made to introduce to them more valued crops that would enhance their production. Also, access to relevant agricultural productive resources and timely information as well as gender-sensitive technologies that would reduce drudgery in farming operations, processing and storage activities could free them time to participate in other income generating activities which could in turn improve their income and standard of living.

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1. INTRODUCTION

Hunger remains unacceptably widespread in the world while many systems of food production in use are unsuitable. The world's population is set to reach a billion by 2050; therefore, agricultural production will need to increase by 60% in order to meet demand (GIZ, 2013). Rural women farmers are

important for increasing agricultural production and productivity. Women produce 60 to 80% of food in most developing countries and half of the world's food supply (Momsen, 1991; Mehra & Rojas, 2008). They produce food and cash crops and manage mixed agricultural operations, involving crops, livestock and fish farming and are considered as part of the agricultural labour force (FAO, 2011). Rural women are also known to be fully involved in all farming operations such as planting, tinning, weeding, fertilizer application, harvesting, storing, processing and marketing (Mybada, 2000).

The role of women in Nigeria economic sector cannot be over emphasized. Women are the real driving force of the nation's economy and are therefore crucial to the sustainable development of the country. Majority of Nigerian rural poor are involved in agriculture, with rural women producing major food crops comprising cereals (sorghum, maize, rice); tubers (yams, cassava), legumes (groundnut, cowpea, bambara nut) as well as vegetables such as okra, leafy vegetables, etc., (Odurukwe, Matthew, Njoku & Ejiogu, 2006; Satyavathi, Bharadwaj & Brahmanand, 2010; Osho & Dashiell, 1997). World Bank (2003) and Mahmood (2001) reported that about 60% of food produced comes from rural women farmers who make up to 60 -80 % of the agricultural labour force in the country depending on the region. Rural women in Nigeria worked side by side with men in agricultural production with some marked division of labour among them. The men perform the tedious tasks of felling trees, gathering and burning of bush and making ridges, while women are involved in planting of seeds particularly food crops, harvesting, transportation, processing and selling of farm produce and products (Lawanson, 2008). The role that women play and their position in meeting the challenges of agricultural production and development are quite dominant and prominent. According to Bill and Melinda Gates Foundation (2012), women in sub-Saharan Africa do about 80% of the farm labour. Banji & Okuade (2005) attributed 60% of the farm labour force to women who produce 80% of food and earn 10% of the monetary income but own just 1% of the farm assets.

The Nigeria economy is predominantly agrarian and women are key players in this business of agriculture in the country, especially within rural communities. Damisa, Samndi & Yohanna, (2007)

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pointed out that various researches conducted on the contribution of women to agricultural development in the country suggest that women's contribution to farm work is as high as between 60-90% of the total farm tasks performed. The contribution of women ranges from such tasks as land clearing, land-tilling, planting, weeding, fertilizer/manure application to harvesting, food processing, threshing, winnowing, milling, transportation and marketing as well as the management of livestock. Obasi (2005) also noted that rural women farmers in Nigeria performed about 70% or more of all agricultural food processing and utilization activities and over 60% of storage and marketing operations.

The agricultural activities of women go beyond crop production to other agricultural aspects like fisheries, poultry and as well as sheep and goat rearing. In Nigeria, over 60% of families kept poultry with women being the major managers and owners controlling the limited cash income from sales (Dessie & Ogle, 2001). Also in Nigeria, 77, 73 and 25% of women were involved in chicken, goat, and sheep production respectively and their main activities were pen cleaning (89%) and feeding (83%) (Oji and Ekumankama, 2002). Ironkwe and Ekwe (2005) also noted that rural women farmers in Abia State were involved in fisheries, rabbitary, poultry as well as sheep and goat rearing. Furthermore, FAO (2007) reported that women were responsible for rearing poultry and small livestock and growing food crops and were responsible for some 60 to 80% of food production in developing countries.

Despite the important roles women play in agriculture in the country, they are hardly given any attention in the area of training and /or visitation by extension agents with improved technologies. Banks hardly grant women loans and are hardly reached with improved seeds, fertilizer and other farm inputs (Damisa *et al.*, 2007). Ogunlela & Mukhtar (2009) also reported that the critical factors that affect productivity at the farm level include but are not limited to the factors of production such as land and capital, agricultural research, technology, infrastructure and access to support services such as extension services and credit.

In order to reduce the problems facing poor rural women farmers, various studies have been conducted on possible solutions. For instance, Ani (2004) carried out a study on women in agriculture and rural development. Fabiyi (2007) studied the role of women in agricultural production. Lawanson (2008) conducted a study on female labour force participation in Nigeria: Determinants and trends, while Damisa & Yohanna (2007) focused on roles of rural women in farm management decision making process. However, none of these studies was conducted in Okpo Local Government Area of Kogi State. In view of the changing socioeconomic, political and environmental situations and the fact that these conditions vary from place to place, this study becomes imperative.

The objectives of this study were: (i) describe the socio-economic characteristics of women farmers in the study area; (ii) identify the crops produced by rural women farmers in the study area; (iii) determine the livestock reared by rural women farmers in the study area; (iv) ascertain respondents' participation in agricultural production activities; and (v) identify the major constraints militating against respondents' participation in agriculture.

II. METHODOLOGY

The study was carried out in Okpo District, Olamaboro Local Government Area of Kogi State, Nigeria. Okpo is situated in south-eastern part of Kogi State. It has a land area of about 1,132 km² and a population of 160,152 inhabitants consisting 80,076 men, 60,046 women and 40,030 children (National Population Commission, 2006). The climate of the area is variably hot, having November-April as dry season, March-April as hottest months, while May-October is the rainy season with August recording the highest amount of rainfall. The inhabitants of Okpo are predominantly small scale farmers cultivating such crops as groundnut, vegetables, maize, yam, cowpea, citrus, etc. The livestock raised include goats, poultry, sheep and pigs.

The population for the study comprised all rural women farmers in Okpo District. Okpo District has five council wards, namely; Ade, Etutekpe, Okpo, Igah and Inele. Simple random sampling technique was employed to select three council wards (Okpo, Igah and Etutekpe), two villages per council ward, giving a total of six (6) villages that were selected for the study. The villages included Ofawna and Alagalani from Okpo, Ojuwo-Igah and Igah-Ocheba from Igah, and Akpakpa and Alagalani from Etutekpe council wards respectively. Furthermore, twenty (20) rural women farmers were selected from each of the six (6) villages, giving the total sample size of 120 respondents for the study. Data were collected from primary sources using a well structured questionnaire. Data were analyzed using descriptive statistics such as frequencies, percentages, mean scores.

III. RESULTS AND DISCUSSION

a) Socio-economic Characteristics of Respondents

Age (years): Results in Table 1 show that about 36.7% of the respondents were within to the age bracket of 15-30 years, 30.8% were within the age bracket of 46-60 years, 19.2% belonged to the age bracket of 31-45 years while 13.3% were above 61years old with a mean age of 41.3%. The result suggests that majority (55%) of the respondents were in their active and productive years and would be able to participate actively in farming activities, thereby enhancing production and productivity.

Marital status: The study revealed that a little above thirty percent (31.7%) of the respondents were married, 30.0% were widowed, 17.5% were divorced, 10.8% were single while 10% were separated (Table 1). Marriage makes labour supply stable for farmers, but a reasonable number (69.3%) of the women were unmarried. As such, they may have to hire labour which can result to an increase in the cost of production, hence the smallness of land under cultivation in the study area.

Education: Entries in Table 1 show that 31.7% of the respondents had no formal education, 27.0%; 27.0% had primary and secondary education respectively while 13.3% had post secondary education. This implies that majority (68.3%) of the respondents were literate and this can help in the adoption of certain agricultural innovations that could assist them in their production and processing activities. The result corroborates that of Okwu, Kuku & Aba (2007) who reported that a farmer's level of education affect his level of access, comprehension and adoption of modern agricultural practices. Also, Okunade (2007) in a study on accessibility of agricultural credit and inputs to women farmers in Osun State reported that the multiple regression analysis in the study showed a positive and significant relationship between level of education and accessibility to credit and other inputs.

Farm size (ha): Majority (55.0%) of the respondents had farm sizes of between 1-3 hectares, 32.5% had between 3-5 hectares while 12.5% had less than 1 hectare. The results revealed that majority of the respondents were small-scale and subsistence farmers, a situation that may not allow them to engage in large production, have access to credit facilities or procure farm inputs for increased agricultural production and productivity. The finding is corroborated by the Africa Fertilizer Summit (2006) which reported that smallholder farmers cultivate from 0.8 -4.5 hectares of farm land.

Access to extension services: Results on access to extension services by the respondents (Table 1) indicate that majority (91.7%) of farmers were visited by extension agents once a year, about 5.8% were visited monthly while 2.5% reported weekly visits. The implication of this finding is that the female farmers lack extension contact, making it difficult for them to access and use new technologies that are appropriate and timely for improved agricultural production and productivity. This could be due to limited number of female extension agents to cover the study area. The challenge for the agricultural extension organizations, therefore, is to design the most appropriate strategies for women. Similar finding was reported by FAO (2003) which noted that in spite of their role in food production, women in sub-Saharan Africa receive little from the agricultural extension services due to traditional prejudiced attitude towards women, lack of time on the part of women to attend meetings due to their

productive and reproductive roles and their limited decision making powers. Several studies have alluded to the need to develop suitable extension activities that target women farmers (Odurukwe *et al.*, 2006; Satyavathi *et al.*, 2010).

Access of farm credit: Access to credit could increase total output. Credit can also affect expenditure on the use of mechanical equipment, working capital as well as improved seed. Most of the respondents interviewed reported they could not secure loan from formal financial institutions. The source of farm credit for majority (50.8%) of the respondents was borrowing from traditional lenders and cooperative societies while personal savings constituted about 49.2% (Table 1). Generally, women have less access to credit markets than men partly because they command fewer resources and have no collateral security as well as the direct discrimination against them in such markets. The implication of this finding is that majority of the respondents accessed farm credit from informal sources, making it difficult for them to venture into long term production practices that could increase their income and improve their livelihoods. As noted by Ajani (2008), access to formal credit services is often an insurmountable barrier for women as lending is directed by male-dominated larger enterprises that make the minimum loan larger than what is needed by women. Women's inability to provide acceptable assets as collateral reduces the possibility of obtaining credit facilities for their primary activities. Without credit, it is impossible for women farmers to purchase vital inputs such as fertilizer, seeds, improved technology and hire labour for improved agricultural production and productivity.

Membership of social organizations: Rural organizations are channels for providing training, credit and agricultural inputs to farmers. Results in Table 1 show that a little above half (50.8%) of the respondents were members of a social organization while 49.2% did not belong to any social organization. However, Odurukwe *et al.* (2006) found that women's membership of groups enhanced their access to decision making powers and farm inputs. The implication of this finding is that many farmers would be unable to access credit facilities since lending agencies would prefer to give credit to cooperatives rather than individuals.

Annual farm income (₦): Table 2 shows farmers' annual farm income. The results indicate that about 30.8% of the respondents earned an annual farm income of about ₦51,000-₦80,000, a little below 30% (29.2%) earned between ₦21,000-₦50,000 while 20.8% earned less than ₦20,000 and 19.2% earned above ₦80,000. This implies that the income level of all the farmers is very low, about ₦6.67 per month. This is way below the national minimum wage of ₦18, 000 only for Nigeria. The low financial status has made it difficult for farmers to

expand their area of cultivation since they may not be able to invest in capital projects like modern farm technology and inputs as this normally attracts huge financial obligation.

Table 1: Respondents' Socio-Economic Characteristics (n=120)

Characteristics	Frequency	Percentage
Age (years)		
15-30	44	36.7
31 – 45	23	19.2
46 – 60	37	30.8
61 – 75	16	13.3
Marital status		
Married	38	31.7
Single	13	10.8
Widowed	36	30.0
Divorced	21	17.5
Separated	12	10.0
Educational status		
Non formal Education	38	31.7
Primary	33	27.5
Secondary	33	27.5
Post secondary	16	13.3
Farm size (ha)		
<1	15	12.5
1 – 3	66	55.0
4 – 6	39	32.5
Extension contact		
Weekly	3	2.5
Monthly	7	5.8
Yearly	110	91.7
Sources of farm credit		
Informal Borrowing	61	50.8
Personal savings	59	49.2
Membership of social organization		
Yes	61	50.8
No	59	49.2
Annual farm income(₦)		
<20,000	25	20.8
21,000-50,000	35	29.2
51,000-80,000	37	30.8
Above 80,000	23	19.2

Source: Field survey, 2015

b) Crop Production of Respondents

Crop production of respondents is depicted in Table 2. The results revealed that the crops produced by majority of farmers were cassava (80%), groundnut (75.0%), vegetables (okra and spinach) (62.5%), cowpea (60.0%), maize (57.5%) and bambaranut (56.7%). Other crops grown by women included rice (42.5%), yam (41.7%), water yam (33.3%), pigeon pea (27.5%), cocoyam (26.7%), soybean (25.8%) and sorghum (22.5%). The finding of this study showed that rural women in the study area mainly grew subsistence food crops. The finding agrees with the report of Sahel Capital Field Research (SCFR) (2014) that women were

more involved in the production of food crops such as maize, cowpea, melon, pepper, cassava and vegetables. It is also corroborated by the works of Odurukwe, *et al.* (2006), Satyavathi, *et al.* (2010), and Osho & Dashiell (1997) who reported that rural women produced food crops comprising mainly cereals (sorghum, maize, rice), tubers (yam, cassava) and vegetables (okra, leafy vegetables). The production of low valued crops coupled with poor access to agricultural productive resources by women farmers could decrease their production and productivity, thereby diminishing their income and standard of living.

Table 2: Crop Production of Respondents (n=120)

Crops	Frequency*	Percentage
Cassava	96	80.0
Groundnut	90	75.0
Soybean	31	25.8
Rice	51	42.5
Maize	69	57.5
Sorghum	27	22.5
Vegetables	75	62.5
Yam	50	41.7
Cowpea	72	60.0
Cocoyam	32	26.7
Water yam	40	33.3
Pigeon pea	33	27.5
Bambara nut	68	56.7

* Multiple responses recorded
Source: Field survey, 2015

c) Livestock Production of Respondents

The livestock kept by the respondents in the study area are shown in Table 3. Majority of the rural women farmers reared goats (70.8%), poultry (63.3%) and sheep (41.7%) while a few (32.5%) kept pigs. This implies that goats, poultry and sheep are the major livestock produced by women farmers in the study area. The finding of this study is in agreement with the report of FAO (2007) that in developing countries, women are responsible for rearing poultry and small livestock, in addition to growing food crops. It also corroborates the

finding of Dessie & Ogle (2001) that in Nigeria, over 60% of families kept poultry with women being the major managers and owners controlling the limited cash income from sale. Although the finding on rural women's participation in goat rearing is similar to that of Oji & Ekumankama (2002) who reported 73% involvement, that of the sheep is lower (25%). Rural women in the study area keep poultry and small ruminants which they use as a buffer for generating funds to finance important and urgent needs such as children's school fees and health care.

Table 3: Livestock Production of Respondents (n=120)

Livestock	Frequency*	Percentage
Pigs	39	32.5
Goats	85	70.8
Sheep	50	41.7
Poultry	76	63.3

* Multiple responses recorded
Source: Field survey, 2015

d) Participation in Agricultural Activities by Respondents

Majority of the respondents reported high involvement in all the agricultural production activities (Table 4). These included land clearing (91.6%), weeding (90.9%), sowing/planting (88.4%), harvesting (87.5%), transportation of produce/products (85.8%). Involvement of women in processing, storage and marketing activities were 77.3%, 67.5% and 79.2% respectively. The results revealed that the labour contribution of rural women farmers in farm operations

in the study area was about 68-92% which is actually very high. This is higher than the findings of the World Bank (2003) and Mahmood (2001) that rural women farmers make up about 60-80% of agricultural labour force in Nigeria while Damisa *et al.* (2007) reported between 60 and 90% participation of women in farm tasks performed. The findings on processing, storage and marketing are higher than that of Obasi (2005) who reported that in Nigeria, rural women farmers do perform about 70% or more of all agricultural food processing

and utilization activities and 60% of storage and marketing operations. Rural women in the study area participated in all agricultural activities, therefore, gender

sensitive production, processing and storage facilities should be developed and disseminated to them in order to enhance their activities in the agricultural value chain.

Table 4: Respondents' Participation in Agricultural Activities

Activities	Frequency*	Percentage
Land clearing	110	91.6
Sowing/planting	106	88.4
Weeding	109	90.9
Harvesting	105	87.5
Transporting of produce/products	103	85.8
Processing	93	77.3
Marketing	95	79.2
Storage	81	67.5

* Multiple responses recorded

Source: field survey, 2015

e) *Perceived Constraints to Participation of Rural Women in Agricultural Activities*

The constraints militating against the respondents' participation in agriculture in the study area are presented in Table 5. Findings revealed that rural women farmers are faced with the problems of limited access to land ($M = 2.26$), lack of access to credit ($M = 2.15$), lack of time for agricultural production activities ($M = 2.07$), lack of access to inputs (improved seeds, fertilizers, agro-chemicals) ($M = 2.05$), lack of storage facilities ($M = 2.03$) and lack of appropriate agricultural technologies ($M = 2.00$).

The finding on limited access to land and land ownership by women farmers corroborates the report of FAO (2003) that access to land remains a major constraint for women farmers in Africa, Nigeria inclusive and land reform programmes have led almost exclusively to the transfer of land rights to male heads of households. According to Paarveen (2008), lack of access to land remains a major constraint for women in developing countries such as Nigeria.

One of the important support services for increased agricultural productivity is credit. Credit is important for securing fertilizer, improved varieties of seeds and other technologies on farms. However, lack of production credit has been reported as a major constraint to increased agricultural production among women farmers in the study area. This could be attributed to the fact that rural women farmers produce food crops and not crops for the market. They also do not have assets which could be used as collateral in case of default; as such formal lending organizations do not want to take risks.

Limited access to time by rural women farmers is a serious constraint in view of the fact that they are engaged in one activity or another throughout the day. When a rural woman is not on the farm, she is either

involved in crop processing, attending to livestock or carrying out reproductive and community activities.

The findings of this study showed that rural women farmers in the study area were constrained by poor access to farm equipment and farm inputs, implying that farmers would only be able to cultivate a small portion of land since agriculture is labour intensive and requires use of inputs for enhanced productivity. Doss (2002) noted that besides tools, inputs such as improved seeds, fertilizers and agro-chemicals are quite useful in increasing productivity. However, fertilizer use depends on availability and farmer's resources to purchase, but women farmers generally have less access to cash and credit, therefore, they are less likely to purchase and use fertilizers and other inputs that would increase productivity.

Farmers in the study area reported lack of access to modern storage facilities. Although, Obasi (2005) reported that over 60% of agricultural storage operations are performed by women in Nigeria, they do not have access to modern storage facilities. Rural women store their farm produce/products in traditional storage facilities such as cribs, baskets, earthen pots, among others.

The respondents identified lack of appropriate agricultural technologies as a major constraint to agricultural production in the study area. Therefore, for consistent growth in agricultural production, it is important to equip rural women farmers with relevant and timely information and technology to improve their production techniques and increase their income (Salilaja & Reddy, 2003; Goldey *et al.*, 2001).

Table 5: Respondents' Constraints to Participation in Agricultural Activities (n=120)

Constraints	Mean	Standard Deviation
Limited access to land	2.26*	.794
Lack of access to credit	2.15*	.589
Poor access to agricultural extension services	1.78	.739
Limited time for agricultural activities	2.07*	.786
Lack of access to agricultural inputs (improved seeds, fertilizers, agro-chemicals)	2.05*	.776
Lack of appropriate agricultural technologies	2.00*	.789
Lack of education and skills	1.80	.705
Women producers not taken serious as men	1.86	.744
Lack of modern storage facilities	2.03*	.796
Lack of access to ready market	1.87	.766
Poor knowledge of improved production techniques	1.97	.721
Shortage of farm labour	1.95	.684
Weak or non existence women farmers' group	1.88	.795
Lack of access to labour-saving equipment for production and processing	1.98	.761

*Mean ≥ 2.0

Source: Field survey, 2015

IV. CONCLUSION AND RECOMMENDATIONS

The study concluded that rural women farmers in the study area were small-scale producers who grew subsistence food crops, kept poultry and small ruminants and contributed about 68-92% of their labour in farming operations, and 77%, 68% and 79% in storage, processing and marketing activities respectively. However, they were constrained by lack/limited access to agricultural productive resources, poor processing and storage facilities as well as limited access to ready markets, hence low income and standard of living.

Based on the findings of the study, the following recommendations were made:

1. For consistent growth in agricultural production, it is important to equip rural women farmers with relevant and timely information and technology to improve their production techniques and increase their income and standard of living.
2. In view of the fact that rural women farmers contribute about 68-92% labour in all agricultural operations in the study area, gender-sensitive technologies should be developed by researchers and given to women at subsidized rates to minimize the drudgery in agricultural tasks and enable them have time for other income generation activities.
3. Extension agents should prioritize the dissemination of appropriate and timely information of women crops and livestock to enhance production which could in turn improve their household food security, income and standard of living.

4. Research institutions in Nigeria should consider working on women crops and come up with improved varieties for adoption which could enhance the production and productivity of such crops.

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