



ASSESSMENT OF WOMEN INVOLVEMENT IN ARABLE CROP PRODUCTION IN EPE LOCAL GOVERNMENT AREA, LAGOS STATE, NIGERIA

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ABSTRACT

The study investigated women's involvement in arable crop production in Epe Local Government, Lagos State. Using a simple random sampling technique, 120 respondents were sampled and interviewed for the study. Data were analyzed using frequency counts, percentages, mean, standard deviation, chi-square and Pearson Product Moment Correlation Coefficient (PPMC). Majority of the women were involved in production of vegetables ($\bar{x}=1.80\pm0.54$), maize production ($\bar{x}=1.71\pm0.50$), Pepper production ($\bar{x}=1.68\pm0.51$), Okra production ($\bar{x}=1.58\pm0.63$), and tomato production ($\bar{x}=1.31\pm0.68$). Personal sourcing ($\bar{x}=1.58\pm0.75$), family ($\bar{x}=1.30\pm0.70$) and friends ($\bar{x}=1.00\pm0.87$) were the major sources of inputs available to respondents, The sources of information most accessible to the respondents were radio $\bar{x}= 1.77\pm0.60$, television $\bar{x}= 1.68\pm0.65$ and internet $\bar{x}= 1.56\pm0.77$. Inadequate credit ($\bar{x}=1.59\pm0.57$), lack of training opportunity ($\bar{x}=1.27\pm0.84$), lack of market ($\bar{x}=1.27\pm0.73$) and inadequate labour ($\bar{x}=1.19\pm0.80$) were the major constraints faced by respondents. There was a significant relationship between Sourcing of planting materials ($\chi^2 = 14.112$; $p = 0.008$), fertilizer application ($\chi^2 = 13.703$; $p = 0.003$) and marital status of respondents. Significant ($\chi^2 = 0.145$; $p = 0.004$) association existed between respondents' age and bush clearing. The study concluded that respondents were actively involved in the production of vegetables, maize, pepper, okra and tomatoes. It is recommended that programmes providing better access to credit, agricultural training and pest management should be developed and tailored to meet the needs of female farmers.

Keyword: Arable, Agriculture, Crop, Farming and Women

INTRODUCTION

Agriculture constitutes a significant sector of Nigeria's economy, employing approximately 35% of the population as of 2020. Despite the country's oil resources, agriculture remains the foundation of its economy, serving as the primary source of income for the majority of Nigerians (FAO, 2020). Globally, agriculture is a highly diversified enterprise, particularly in crop production, which has evolved in response to challenges such as increasing global hunger, rising food demand, low grain reserves and climate change (Renard and Tilman, 2019). This diversity translates into a higher demand for work, activities and manpower, especially in Africa, where farming practices are predominantly subsistence-based and rely on rudimentary tools.

In Nigeria, the variation in crop production activities stems from differences in soil and climatic conditions across regions, as well as the broad array of crops cultivated to meet nutritional and economic needs. Crops include cereals, root crops, fruits, vegetables, cash crops and oil crops, which serve as both food for local consumption and export commodities (Oni, 2022). These crops are cultivated, managed and processed through various tasks and activities that reflect the diverse nature of arable farming.

Arable farming, which encompasses the yearly crop production activities undertaken by peasant farmers, involves distinct processes tailored to specific crops. For instance, arable crops such as maize, millet, sorghum, soybeans, cowpeas, cassava, rice and groundnuts require unique production processes and tasks (Ahmad, 2022; Oluwaseun, 2019). These activities include land



preparation; such as clearing and tillage, planting, fertilizer application, weeding, irrigation, pest control, harvesting, processing and storage (Udemezue and Odia, 2021).

All across the world, women are essential to the agricultural sector. Their involvement in agricultural activities raises their standard of living in addition to their everyday routine activities. Farm labour performed by women is frequently unpaid or devalued (Hatton, 2017). The success of the new agriculture-led growth strategies of women development is largely dependent on investment in agricultural research and extension institution (Diriba, 2020). In agriculture, women have significant roles in variety of tasks related to food production and marketing (Patil and Babus, 2018). As a result, women are involved in all aspects of agricultural production, including planting, weeding, harvesting, processing and marketing as well as caring for animals (Soubh and Holt, 2021). This calls for their incorporation into planning policies and programmes for the efficient and long-term growth of a country (FAO, 2021).

According to Njoku *et al.* (2018), the general belief is that the role of women starts and ends with running the home and nothing more. Rural women in most developing countries, especially in Sub-Saharan Africa, rely on agriculture for their income-generating activities (Chalchisa and Sani 2016). Every four women are employed in agriculture globally for every 10 men, for the global opportunities for all agricultural producers, land for agricultural purposes (Sasa *et al.*, 2022). The fact that women are not permitted to own resources in their community is one of the main issues they face in agrarian communities (Agarwal, 2018). This is a significant issue that prevents women from contributing to agricultural output. Due to patriarchy, although being significant producers of agricultural products, they do not have full access to agricultural resources. Another issue that women face in agriculture is that their contributions are undervalued in traditional agriculture and economic assessment. Despite their significant contribution to agricultural productivity, women do not always have same opportunities as men.

Women's participation in agricultural production was significantly impacted by the degree of disposable income, perception, tenure rights and level of contribution to agriculture. Hence, women tend to concentrate their agricultural activities around the homestead primarily because of their domestic and reproductive roles. It is against this backdrop that this study was undertaken to provide insights on determinants of women involvement in arable crop production in Epe local government area, Lagos state. Specifically, the study was guided by the following objectives;

- i. describe the socioeconomic characteristics of the respondents;
- ii. identify the various arable crops grown in the study area;
- iii. describe the sources of inputs available to respondents for arable crop production;
- iv. assess the level of involvement of respondents in arable crop production in the study area.
- v. identify the constraints to respondents' involvement in arable crop production.

METERIALS AND METHODS

The study Area

The study was carried out in Epe Local Government Area, located in Lagos State, Nigeria. It lies approximately at latitude 6.5846°N and longitude 3.9771°E. It is predominantly a rural region with urban influences and is home to a diverse population, primarily of Yoruba ethnicity. Traditional occupations such as fishing, farming and trading dominate the area, with fishing being particularly significant due to Epe's location along the Lagos Lagoon and its network of waterways. Farming activities include the cultivation of crops like cassava, maize and vegetables, which thrive in the fertile soils of the area. Population of the study consisted of all women farmers involved in



arable crop production in Epe Local Government Area, Lagos state. The list of registered women crop farmers in the study area was obtained from Women – In – Agriculture (WIA) unit of Agricultural Development Projects (ADPs) zonal office in Epe. From the list, simple random sampling technique was used to select one hundred and twenty (120) respondents for this study. The dependent variable is level of women involvement in arable crop production. A list of arable crop production operations was assessed on a 3-point scale of High (3), Moderate (2) and Low (1) and summarized into level of involvement as high or low. Descriptive statistics such as frequency counts, percentage and mean were used to present and summarize the results. Inferential statistics such as Chi-square and Pearson's Product Moment Correlation (PPMC) were used to test the relationship that exist between the variables in the stated hypotheses.

RESULTS AND DISCUSSION

Socioeconomic Characteristics of Respondents

Table 1 indicated that the mean age of respondents in the study area was 44 years. A significant proportion of the respondents (55.8%) were married, reflecting a cultural expectation that individuals with the financial capacity to support a family are typically married in the region. Regarding religious affiliation, 60.8% of respondents identified as Christians, aligning with the religious demographics of western Nigeria. In terms of ethnicity, the majority (67.5%) were Yoruba, while smaller proportions were from other ethnic groups, including Igbo (17.5%), Hausa (2.5%), Delta (5.8%), and Awori (5.7%). This finding is in tandem with Taiwo (2024), who reported dominance of Yoruba ethnic group among farmers in Southwestern Nigeria.

Table 1: Distribution of Respondents Based on Socioeconomic Characteristics

Variables (n=120)	Frequency	Percentage	Mean	S.D
Age (years)			44	12
<25-36	17	14.2		
37-48	38	31.7		
49-60	35	29.2		
61-72	22	18.3		
>73	8	6.6		
Marital				
Single	24	20.0		
Married	67	55.8		
Divorced	13	10.8		
Widowed	16	13.3		
Religion				
Christianity	73	60.8		
Islam	46	38.3		
Traditional	1	0.8		
Ethnic group				
Igbo	21	17.5		
Yoruba	81	67.5		
Hausa	3	2.5		
Awori	8	6.7		
Delta	7	5.8		
Number of persons in Household			5	2
3-4	2	1.7		
5-6	73	60.8		
7-8	13	10.8		
9-10	32	26.7		

Source: Field survey 2023

These groups were actively involved in arable crop production, demonstrating the area's ethnically diverse engagement in agriculture.

Household size averaged five members per family. The mean years of formal education among respondents was relatively low at 10 years, underscoring limited educational attainment in the region. The predominance of married individuals reflects stable family structures, which can contribute to collective labour availability for farming. This finding is consistent with Taiwo *et al.* (2022) who reported majority of vegetable farmers were married and thus enhancing labour availability. However, the low level of formal education poses a significant challenge to the adoption of innovative agricultural practices. Efforts to enhance access to education, especially for rural women, could significantly improve agricultural productivity and economic outcomes. Furthermore, the ethnic and cultural diversity in arable crop production underscores the need for inclusive policies that address the specific needs of various groups to promote equitable agricultural development in the study area.

Arable Crops Grown by the Respondents

Table 2 shows the crops grown by the respondents in the study area. Vegetables ($\bar{x}=1.80\pm0.54$), maize ($\bar{x}=1.71\pm0.50$), pepper ($\bar{x}=1.68\pm0.51$) and okra ($\bar{x}=1.58\pm0.63$) were the leading crops grown by the respondents in the study area. The research findings highlight that women play a crucial role in arable crop production, particularly in vegetable farming, with significant involvement in crops such as maize, pepper, and okra. Their high participation in vegetable production suggests a focus on crops that contribute to household nutrition and potentially generate income. This pattern suggests the need for targeted interventions to support women in the crops they are actively engaged in, while also addressing barriers in areas where their participation is lower. Policies that enhance access to resources such as inputs, credit, and extension services can improve their productivity and involvement across all crops. The findings also emphasize the need to address structural gender disparities, such as land ownership and decision-making power, which might limit women's agricultural activities. This finding is consistent with Effiong *et al.* (2021) who reported that majority of farmers grew okra and pepper among leading crops in Rivers State, Nigeria.

Table 2: Distribution of Respondents based on Arable Crops Grown

Arable crop grown by the respondents	Always (2)	Occasionally (1)	Never (0)	Mean	S.D
Vegetables	101(84.2)	11(9.2)	7(5.8)	1.80	0.54
Maize	87(72.5)	31(25.8)	2(1.7)	1.71	0.50
Pepper	15(29.4)	32(26.7)	3(2.5)	1.68	0.51
Okra	8(7.4)	78(65.9)	9(7.5)	1.58	0.63
Tomato	52(43.3)	53(44.2)	15(12.5)	1.31	0.68
Sorghum	5(4.2)	27(22.5)	88(73.3)	0.31	0.54
Millet	11(9.2)	8(6.7)	101(84.2)	0.25	0.62
Onions	6(5.0)	16(13.3)	98(81.7)	0.23	0.53
Soybean	4(3.3)	16(13.3)	100(83.3)	0.20	0.47
Rice	9(7.5)	1(0.8)	110(91.7)	0.16	0.53
Cowpea	3(2.5)	6(5.0)	111(92.5)	0.10	0.37

Source: Field survey 2023

Grand Mean = 0.84 NB: The values in parentheses are percentages

Sources of Inputs Available to the Respondents on Arable Crop Production

Table 3 shows that personal sourcing, family and friends were among the major sources of inputs available to the respondents with mean value $\bar{x}=1.58$, $\bar{x}=1.30$ and $\bar{x}=1.00$ respectively. Help

received from family and friends will assist respondents in crop production in terms of labor support and source their input directly. The respondents' sourcing personally enables them to ensure that the farmers' access to current agricultural knowledge will be improved, increasing productivity and providing better living conditions for the farming community, as well as promote sustainable extension methods. This finding is in tandem with Adebayo and Adeola (2008) who reported friends/relatives as major source of credit among small holder farmers in Surulere Local Government Area of Oyo State.

Table 3: Distribution of Respondents based on Sources of Inputs Available

Source of input available to respondents on arable crop production	Readily available (2)	Moderately available (1)	Not available (0)	Mean	S.D
Personal sourcing	89(74.2)	12(10.0)	19(15.8)	1.58	0.75
Family	58(48.3)	40(33.3)	22(18.3)	1.30	0.70
Friends	45(37.5)	30(25.0)	45(37.5)	1.00	0.87
Agro-input companies	25(20.8)	34(28.3)	61(50.8)	0.70	0.79
Cooperatives	26(21.7)	31(25.8)	63(52.5)	0.69	0.80
Government Special Intervention	21(17.5)	28(23.3)	71(59.2)	0.58	0.77
Commercial bank	12(10.0)	35(29.2)	73(60.8)	0.49	0.67
Micro finance banks	17(14.2)	19(15.8)	84(70.0)	0.44	0.73
Bank of Agriculture	10(8.3)	22(18.3)	88(73.3)	0.35	0.63
NGOs in Agriculture	8(6.7)	20(16.7)	91(75.8)	0.33	0.63

Source: Field survey 2023

Grand Mean = 0.75 NB: The values in parentheses are percentages

Respondents' Level of Involvement in Arable Crop Production

The level of involvement of the respondents in arable crop production was presented in Table 4, the respondents participated mostly in marketing (\bar{x} =2.58), watering (\bar{x} =2.48) and selling of produce (\bar{x} =2.48). Bush clearing (\bar{x} =2.45) and processing of produce (\bar{x} =2.40) were also largely engaged in by the respondents. The findings reveal that women are significantly involved in specific aspects of arable crop production, particularly in marketing, watering and selling of produce. This highlights their prominent role in post-harvest activities and crop maintenance tasks. Additionally, their active participation in bush clearing and processing of produce underscores their involvement in labour-intensive and value-added stages of the production process. These roles suggest that women contribute significantly to ensuring crop quality and market readiness, which are critical for the profitability and sustainability of arable crop production.

Table 4: Distribution of Respondents Based on their Level of Involvement in Arable Crops

Level of involvement	High (3)	Moderate (2)	Low (1)	Mean	SD
Marketing	77(64.2)	36(30.0)	07(5.8)	2.58	0.60
Watering	69(57.5)	40(33.3)	11(9.2)	2.48	0.66
Selling of produce	66(55.0)	45(37.5)	09(7.5)	2.48	0.63
Bush clearing	63(52.5)	48(40.0)	09(7.5)	2.45	0.63
Processing of produce	62(51.7)	44(36.7)	14(11.7)	2.40	0.61
Land preparation	52(43.3)	59(49.2)	09(7.5)	2.36	0.61
Planting	52(43.3)	59(49.2)	09(7.5)	2.36	0.61
Fertilizer application	45(37.5)	69(57.5)	06(5.0)	2.33	0.56
Harvesting	58(48.3)	41(34.2)	21(17.5)	2.31	0.75
Sourcing of planting materials	41(34.2)	58(48.3)	21(17.5)	2.17	0.70
Pest and Disease management	40(33.3)	60(50.0)	20(16.7)	2.17	0.69
Mulching	40(33.3)	55(45.8)	25(20.8)	2.13	0.72

Field survey, 2023

Grand Mean = 2.35

NB: The values in parentheses are percentages

However, their predominant focus on these areas may reflect traditional gender roles, with limited participation in decision-making processes, land preparation and mechanized farming, often dominated by men. This finding is in tandem with Bryceson who reported that agricultural operations are divided along the line of gender and age.

Constraints Facing Respondents' Involvement in Arable Crop Production

Table 5 indicates that inadequate credit, lack of training opportunity and lack of market were the leading constraints faced by the respondents with mean values $\bar{x}=1.59$, $\bar{x}=1.27$ and $\bar{x}=1.27$. The inadequate credit is caused by limited financial ability to meet the initial payment required for agricultural credit, women are rarely considered creditworthy because they have no collateral such as land and existing infrastructure (Pal *et al*, 2022). Lack of training opportunity is a problem faced by the respondents because women are more likely to be vulnerable than men, particularly during times of job loss and low income (OECD, 2010). Restricted access to markets prevents women from selling their produce at competitive prices and limits their ability to establish stable supply chains. This not only reduces their profitability but also diminishes their bargaining power, leaving them vulnerable to exploitation by intermediaries. This finding is in tandem with Quddus and Kropp (2020) who reported use of credit as part of constraints facing women farmers in Bangladesh.

Table 5: Distribution of Respondents Based on Constraints Faced (n=120)

Constraints to respondents' involvement	Severe constraint (2)	Mild constraint (1)	Not a constraint (0)	Mean	SD	Rank
Inadequate credit	76(63.3)	39(32.5)	2(4.2)	1.59	0.57	1 st
Lack of training opportunity	63(52.5)	26(21.7)	31(25.8)	1.27	0.84	2 nd
Lack of market	51(42.5)	48(40.0)	20(16.7)	1.27	0.73	2 nd
Inadequate Labour	52(43.3)	39(32.5)	29(24.2)	1.19	0.80	4 rd
Pest infestation and disease infection	44(36.7)	50(41.7)	26(21.7)	1.15	0.75	5 th
If others, specify	47(39.2)	23(19.2)	50(41.7)	0.98	0.90	6 th
Home and family care	25(20.8)	49(40.8)	46(38.3)	0.83	0.75	7 th
Lack of family support	24(20.0)	50(41.7)	46(38.3)	0.82	0.74	8 th
Religious/Cultural barrier	26(21.7)	34(28.3)	60(50.0)	0.72	0.80	9 th
Gender discrimination	15(12.5)	28(23.3)	77(64.2)	0.48	0.71	10 th

NB: The values in parentheses are percentages.

Source: Field survey 2023

Association Between Personal Characteristics and their Level of Involvement in Arable Crop Production

Chi-square result on Table 6 shows that there was significant relationship between marital status and sourcing of planting materials ($\chi^2 = 14.112$; $p = 0.008$). This suggests that married individuals may have broader social and economic networks, facilitating easier access to resources like seeds and planting supplies. This could be due to shared household income, collaboration with spouses or support from extended family networks. Also, Chi-square test showed that a significant and positive relationship ($\chi^2 = 13.703$; $p = 0.003$) existed between marital status and fertilizer application. This implies that married individuals benefited from combined household resources or shared knowledge, enabling them to invest in or prioritize fertilizer application more than single individuals.

Table 6: Chi-square Test of Relationship Between Socioeconomic Characteristics and Level of Involvement of Respondents in Arable Crop Production

Variables	χ^2	df	CC	P-value	Decision
Marital Status vs:					
Sourcing of planting materials	14.112	6	0.151	0.008	Significant
Fertilizer application	13.703	6	0.320	0.003	Significant

NB: Significance level = 0.05

Source: Field survey 2023

CONCLUSION AND RECOMMENDATIONS

The study concludes that the respondents play an active role in arable crop production, particularly in cultivating vegetables, maize, pepper, okra and tomatoes. Their involvement is supported by personal and familial resource sourcing. However, significant constraints such as inadequate credit facilities, lack of training opportunities, limited market access, insufficient labor, pest infestations, and disease outbreaks hinder their productivity. Therefore, it is recommended that targeted programmes be implemented to provide better access to credit, practical agricultural training and effective pest management strategies. The programmes should be tailored to the specific needs and socioeconomic conditions of women farmers to improve their productivity and promote household food security.

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