

CONSTRAINTS TO WOMEN PARTICIPATION IN VEGETABLE FARMING IN WUDIL LOCAL GOVERNMENT AREA OF KANO STATE, NIGERIA

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Abstract

This study analyzes the constraints to women participation in vegetable farming in Wudil Local Government Area of Kano State, Nigeria. The specific objectives were to: identify the types of vegetables produced, and examine the constraints affecting their participation in the vegetable farming. A multistage sampling procedure was used to select 80 women vegetable farmers for the study. Primary data were collected using structured questionnaires and analyzed using descriptive statistics using frequencies and percentages. The result of the study disclosed that mean age was 35.6 years, and also (2.06%) are married with an average household size of 5 persons. However, mean farming experience was 8 years with most (68.7%) of the respondents without access to credit. The result further shows that Major vegetables they produce are Pepper (36.3%), tomatoes (31.3%). While the results revealed that major constraints affecting their participations are: lack of capital (90.0%), high cost of inputs (81.0%), and pest and disease (73.0%). The study concludes that while women are active participants, their productivity is constrained by a combination of financial, technical, and institutional challenges. Consequently, it is recommended that government and development agencies should facilitate accessible credit to leverage its strong positive influence, strengthen gender-sensitive extension services to build on the significant benefit of advisory contact, and subsidize farm inputs to mitigate the critical constraint of high costs. These interventions are essential to enhance women's participation, improve productivity, and promote sustainable livelihoods in the study area.

Keywords: Constraints, Women, Vegetables, Participation and Wudil Local Government Area

1. Introduction

Globally, Women have been actively involved in farming, food processing and preservation (Edeoghon, 2020). In Nigeria, records have shown that 60% women engaged in agriculture to sustain their livelihoods. Bilkisuet, al (2022) in their study reported that women contribute significantly to vegetable production in Nigeria. Vegetable (leafy and fruits) are widely cultivated in most parts of sub-Sahara Africa, as a cheap and reliable source of protein, vitamins, zinc and iron. Leafy vegetables constitute about 30% to 50% of iron and vitamins A in resource poor diet. Vegetable production in Nigeria is characterized by use of crude implements, non-availability of inputs, illiteracy, expensive and complex technologies. (Mofeke et al. 2023). Vegetable production encourage women to strengthen food provisioning and work close to the homestead and permit them to child care-taking, general household management, control over household resources, budget, decision-making and the Incomes from vegetable production was used to pay for their children school fees and provision of health care and nutrition. In Nigeria, vegetable production has been ongoing for decades, providing employment and income for the increasing population, especially during the long dry season. However, the outputs mainly credited to Men and is often constrained by inadequate infrastructure, agronomic and socio-economic variable (Buabonget, al, 2024). Wudil local government area of Kano State has a suitable land for vegetable production. The vegetable produced in the area are the tomatoes, onions, pepper, lettuce, cabbage, carrot and many more and most of the vegetables produce are lost owing to poor post-harvest handling, storage and processing methods. It has been acknowledged that Women participation in vegetable production is unknown and not well documented in the study area. Essentially, women tend to dominate urban cultivation because of proximity to their homestead and security. Women vegetable farmers contribute to fill the gap for increasing demand for vegetables as a result of rapid urbanization in Kano State.

2. METHODOLOGY

The Study Area

Wudil is located in the East-central part of Kano State situated within the central area of Kano State; it is about 43 kilometers away from the Kano municipality. Wudil LGA covers an area of 362 square kilometers; it is located on latitude 11°49N and longitude 8°51E of the Greenwich Meridian. It shares boarder with Gaya, Garko, and Warawa to the east, south, and north/west respectively. The study area experiences four climatic conditions dry and warm season, wet and warm season, dry and hot season, and finally, the dry and cool season (Dambazau, 2008). During the hot season, day time temperature could rise to 40° Celsius especially in the months of March – May. The rainy season normally starts from late May and last up to the end of September. Rainfall is normally heavier in the months of July and August and often characterized by thunderstorms. The harmattan season is usually a cold windy and dusty period subject to dry sandy winds blowing from the Sahara. Wudil lies in the Savanna region with average annual rainfall of 39.8mm. The rainy season crops they produce include millet, sorghum, rice, cowpeas, and groundnuts, maize. While dry season crops include wheat, tomatoes, pepper, onions, and many others. Wudil is one of the most densely populated LGA in Kano state.

The LGA comprises of towns and villages which include Achika, Juma, Lajawa, Yarka, Utai, Makera, Kausani, Gware, Dagumawa, and Buda. The area's major inhabitants being members of the Hausa/Fulani ethnic division. The Hausa language is commonly spoken in the LGA. The backbone of Wudil economy is agriculture with 75% of the total working population involved in it. The major river providing water resources for fishing and dry season irrigation activities is the Hadejia River. Other important activities include livestock rearing, pottery, embroidery, blacksmithing, etc. The significance of Wudil was not only in her numerical size or in the extent of her prominence but also in her historical significance and context.

Wudil local government Area experiences a stifling, generally cloudy wet season, a partially cloudy dry season, and year-round heat. The average annual temperature fluctuates between 54°F and 102°F; it is rarely lower or higher than 49°F or 107°F. With an average daily high temperature above 99°F, the hot season spans 2.2 months, from March 16 to May 23. May is Wudil's hottest month, with an average high temperature of 100°F and low temperature of 76°F. With an average daily maximum temperature below 90°F, the chilly season spans 2 months, from December 3 to January 28. At an average low of 55°F and high of 88°F, January is the coldest month of the year in the study area. Wudil Local Government Area has an average temperature of 34 degrees Celsius and a total area of 362 square kilometers.

Sampling Procedure and Sample Size

A strategic sampling technique was adopted for the study in order to ensure fair representation of respondents from each community. The sample size was determined using Yamane's formula by selecting of women farmers from each community. A total of 80 respondents were selected from a sample frame of 131 women farmers across the communities. This method ensured that respondents were proportionally distributed and adequately represented the study population.

The sample size was determined using Yamane's formula (1967):

$n = N/(1+N(e)^2)$. Where: n = sample size, N = population size of vegetable farmers, e = margin of error (0.07),

$n = 131/(1+131(0.07)^2)$, $n = 131/(1+131(0.0049))$, $n = 131/1.64$, $n = 80$

Table 1: Sampling Frame and Sample Size

LGA	Community	Sample frame	Sample size
WUDIL	Achika	9	5
	Dagumawa	12	7
	Dankaza	13	8
	Darki	15	9
	Indabo	13	8
	Kausani	11	7
	Lajawa	18	11
	SabonGari	14	9
	Utai	16	10
	Wudil	10	6
Total		131	80

Source: Reconnaissance survey, 2025

3. RESULT AND DISCUSSIONS

Types of Vegetables Produced by Respondents

The result indicates that about 36.3% of the women vegetable farmers produce Pepper while about 13.3% of them produces Tomatoes. This indicates how the respondents contribute significantly in the utilization of the crops which are either used as spices, food additives and or condiments has been employed in the treatment of sudden attacks of convulsion, malaria, and anaemia, and in food preservation (Osabohien et al, 2021). Besides being used as a condiment, providing characteristic pungency, colour and flavour, the pepper-derived ingredients could be used for the preservation and extension of industrial products' lifespan, as well as additives or technological ingredients with antioxidant and antimicrobial activities (Prince, 2020). The result further revealed that lettuce and okra were produced by about (13.8%), (11.3%) and onion (7.5%) respectively by the women vegetable farmers in the study area. Okra is a very good source of dietary fiber, magnesium, manganese, potassium, vitamin K, vitamin C. Bede (2023) reported that Lettuce is one of the widely and daily consumed vegetable due to its cheap price and affordability among the consumers in the study area. This implies that there is low production of tomatoes, lettuce, okra and onions in the study area, this may be connected to their perishability nature, considering that most of the vegetable farmers are small scale farmers and cannot afford to preserve them for a very long period of time, despite their experiences in the production of different vegetables in the study area.

Table 2: Types of Vegetables produced by the Respondents in the study area

Vegetable Type	Frequency	Percentage
Pepper	29	36.3
Tomatoes	25	31.3
Lettuce	11	13.8
Okra	9	11.3
Onion	6	7.5
Total	80	100

Source: Field Survey, 2025

Constraints to Women's Participation in Vegetable Farming in the study area

The results show an overwhelming majority (90.0%) of respondents with low capital base and the highest severity rating 1st. The result also shows that (81.0%) of them are faced with the challenges of high cost of inputs, this limit them to expand operations, and adopt improved production technologies, Ayanwuyiet al (2020). Creating a vicious cycle of limited investment and constrained productivity and regarded as the 2nd challenge in the ranking scale.

The result further revealed that Pest and diseases accounted for (72.5%) and 3rd challenge in the ranking scale of the respondents, this reducing crop yields and quality through biotic stresses that diminish agricultural productivity and economic returns, Adeoye (2020). The result also indicates that more than (56.0%) reported poor Market access affecting the production of vegetables in the

study area thereby creating obstacles in selling produce profitably and consistently, this directly discourages production expansion and investment. Water supply inadequacies accounted for (43.8%) of respondents, particularly during the dry season farming where irrigation is dependent on artificial water supply and thereby limiting production continuity and intensification. Low Extension service (37.5%) was another constraint of the women vegetable farmers in the study area, and ranked number 6th in the ranking scale. Adebayo et, al 2020 reported that, this restrict access to technical knowledge and modern farming practices that could enhance productivity and efficiency. These constraints interact to create a complex web of challenges that limit the scope, intensity, and productivity of women's participation in vegetable farming, highlighting the need for integrated interventions that address multiple constraints simultaneously.

Table 3: Constraints to Women's Participation in Vegetable Farming

Constraints	Frequency	Percentage	Ranking
Low Capital base	72	90	1 st
High Cost of Inputs	65	81	2 nd
Pest and Diseases	58	73	3 rd
Poor Access to Market	45	56	4 th
Inadequate Water Supply	35	47	5 th
Lack of Extension Service	30	38	6 th

Source: Field Survey, 2025 *Multiple responses allowed

Conclusion and recommendations

Based on the systematic analysis it is concluded that women are central and highly active participants in the vegetable production system of the region. They demonstrate significant involvement across all major farming activities, from land preparation to marketing, with their roles being most pronounced in the crucial stages of harvesting, planting, and weeding.

The following recommendations are provided for various stakeholders to enhance the participation and productivity of women in vegetable farming. Deliberate effort must be made to increase the frequency and quality of contact with women farmers. This should involve employing more female extension agents to overcome socio-cultural barriers and developing training programs that utilize visual and practical demonstration methods suited to the educational profile of the women. Extension messages should also strongly promote crop diversification beyond pepper and tomatoes to include other nutritious and marketable vegetables, thereby spreading economic and production risks.

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