

# Constraints to Commercial Agricultural Production by Women in Agriculture in Benue and Nasarawa States, Nigeria.

Lan, M.T. Ph.D; Ekele, G.E Ph.D; Amorijenu, A. Ph.D

Department of Agricultural Education, Joseph Sarwuan Tarka University Makurdi, Benue State, Nigeria.

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## ABSTRACT

The study was on constraints to Commercial Agricultural Production by Women in Agriculture in Benue and Nasarawa States, Nigeria. Specific objectives were to identify cultural and socio-economic constraints to commercial agricultural production by women in these states. The study adopted survey research design. Two research questions and two hypotheses guided the study. The population for the study was 6,742 registered women in Benue and Nasarawa States. The sample was 361 registered women. 208 and 153 women across selected wards in Benue and Nasarawa States respectively. Data was collected using a self-structured instrument titled Commercial Agricultural Production by Women Questionnaire (CCAPWQ). Three experts, one from department of Agricultural Extension and Rural Sociology, one from Test and Measurement and one from Agricultural Education, all from Joseph Sarwuan Tarka University Validated the Instrument. Cronbach alpha method was used to determine the internal consistency of the instrument and a reliability of 0.76 was established. Data was collected and analyzed using mean and standard deviation for research questions while hypotheses were tested using t-test at 0.05 level of significance. The result revealed that all the items on cultural constraints such as belief system, religion, values impeded commercial agricultural production. The result again showed that socio-economic constraints such as education, non-availability of infrastructural facilities among others affected commercial agricultural production by women. Based on the findings, it was recommended that cultural aspects constraining commercial agricultural production be relegated to the background. Again, infrastructural facilities such as schools, portable water, good roads among others be provided in the rural areas to enhance production and good health and agricultural policies formulated by the government should give due recognition to women for ease of production.

## INTRODUCTION

Women play very significant roles in agricultural production, processing, marketing processes and ensuring household consumption and nutrition (World Bank, 2011). Women in Agriculture are those women who are actively involved in the process of agricultural production from pre-planting to harvesting, processing and marketing stages of production of a produce (Ugwu, 2019). About 43% of the world's agricultural labour force are women who form the large group of small holder farmers, that provide labour during agricultural production at the subsistence level. Ugwu (2019). also reiterated that about 73% of women produce both export, arable and vegetable crops while 16% are into post-harvest activities, 15% are engaged in agro-forestry and 80% of agricultural production is from women. Thus, it is not out of point to state that women are strong pillars of food security.

In Benue and Nasarawa States, these women live mostly in rural areas with their families. They form a major source of labour on the farms and at home supplying water for the family, and food processing for consumption by family members. The women also engage in rearing of small ruminants like goats, sheep, rabbitry including rearing of birds (Mah, *et al.*, 2017). These women carryout various activities on the farm

such as planting, weeding, fertilizer application, harvesting and processing of most crops either for consumption or marketing. They sanitize the livestock pen(shed) by sweeping their droppings and unconsumed fodder, search for fodder and kitchen left overs for the livestock and provide them with drinking water. These women act as catalyst to agricultural production by men whose roles most of the time end after identification, and ploughing of site. Benue state is comprised of Tiv, Idoma who constitute the major tribes and some minor tribes along the riverine areas such as Etulo, Abakpa among others. Their settlement pattern is scattered as their men place value on inheritance of land, while Nasarawa State is made out of tribes such as Tiv, Alago, Eggon and Agatu, among other smaller ones. These women have similar characteristics with those in Benue State with an exception of some few indices. Apart from Tiv, a large percentage of them are Muslims. They are not allowed to mix and interact freely with other men and consequently do not have access to extension programmes. These women live in cluster pattern with their families. Though these women play significant roles in agricultural production, they practice subsistence agriculture which is not sustainable like commercial agriculture.

Commercial agriculture is a large scale farming of agricultural products for profit generation. It involves high investment into inputs such as machinery, improved seed varieties and breeds of crops and livestock among other (Damian *et al.*, 2023). Poutton *et al.*, (2008) viewed commercial agriculture as production intended for the market which is independent on scale of production. Commercial agriculture has obvious characteristics such as large area of cultivated land, technology is employed for carrying out all the processes of production to processing, employs skilled labour and involve huge capital investment. It is a common practice of well-to-do and educated people (Boyfield, 2013). Commercial agriculture offers employment to a large number of people, thus reducing unemployed persons in the society while subsistence agriculture uses family members as a source of labour, uses unskilled and unspecialized labour, production is mainly for consumption and involves low capital investment and minimum portion of land. Women, though are strong forces for agricultural production most often practice subsistence agriculture because of certain constraints or limitations.

Constraints are factors that restrain or limit the development, expansion, choice or progress of something. In this study, constraints are those factors that restrain the development from subsistence agricultural production to commercial production by women in agriculture. According to Apeh, *et al.*, (2023) women are confronted with factors that restrain them from commercialization of their agricultural activities. These constraints are both cultural, social, educational and economic in nature. These limits their production capacity both in quality and quantity. In most cases, subsistence farmers produce mostly their food needs which is mostly caloric needs devoid of diversification of production and healthy nutrition (Gordeev, 2023). Their diet is confined to what they can produce on their farms with little or no improved varieties or breeds of crops and livestock respectively. These farmers continuously cultivate the same piece of land due to increased population pressure with no adoption of improved systems of farming leading to loss of nutrients, soil degradation and consequently low yield (Waceke and Kimenju, 2007). For this study, these constraints will be grouped into cultural and socio economic constraints.

Culture refers to a whole complex of distinctive spiritual, material and intellectual features characterizing a society (Ajadi, *et al.*, 2015). These authors enumerated aspects of culture such as arts, modes of life, letters, fundamental rights of the human being, value system, traditional and beliefs that define a group of people. Each society has cultural characters, belief, traits and sometimes religion that distinguish them from one another. This plays very crucial role in limiting women to subsistence farming. In the views of Hernandez *et al.*, (2023) cultural constraints have significantly restrained women from commercial agricultural production.

Ogwumike in Ajadi, *et al.*, (2015) states that culture and structure determine the way social institutions cultivate and transmit behavior from one generation to another. Consequently, in most cultures in Nigeria, culture forbids women from deciding on what to produce, where and when to cultivate and sell. Women are subject to the man in the household whose authority is unquestionable by the woman. In some cultures, there is division of labour between the man and other members of the household. The men identify land for

cultivation, clearing is done by the women and household members. The men make the beds which usually brings their work to the end. Planting, post planting, harvesting and processing activities are done by women. These together with household food production increases the workload on women, thus affecting their health and less energy to do work. Women have no direct access to agricultural production resources and finance. In some African countries, it is unethical for a woman to seek for financial and material resources from other sources other than the husband or family members. Land tenure system of a group of people is another cultural feature that denies women ownership to land. Only men inherit land from their parents, so a woman has no right to own any piece of land, even if married, it is the husband that has the right to land, thus, women are forced to cultivate backyard portions for vegetables and other consumable crops, rear limited number of small ruminants and poultry at the backyard for household consumption. Women in Nigeria owed less than 10% of land (Ugwu, 2019).

The belief system of a social group also has significant negative impact on commercialization of agriculture by women in most African countries. Most community in Africa particularly Nigeria where Benue and Nasarawa states belong believe that a woman does not owe anything, whatever a woman possess belongs to the man of the household. Consequently, some women lose interest in farming activities, even those that participate in agricultural production are discouraged by the takeover of the end produce by men from their women (Ajadi *et al.*, 2015). Religion as an element of culture has greatly impacted negatively on women participation in commercial agriculture (Tanko and Ismaila, 2021). The beliefs and norms of child grow with determine the choice of farm inputs such as fertilizer, seeds, chemicals and agronomic practices the employs during production. Religion influences the belief system of a group of people. The female gender in some religions is considered to be less significant in the making of choices of agricultural inputs, access to technologies and credit facilities, (Tanko and Ismaila, 2021). The emphasis is on gender, religion and economic position of people which determine their adoption of innovations. Some religions forbid women from free interaction with the male gender. Apart from cultural constraints, social-economic constraints such as age, finance, lack of infrastructure and education are significant constraints to commercial agricultural production by women. Cash is the catalyst that activates other factors of production (Ijere in Jeraldine, 2022). Money is used to purchase inputs both primary and secondary inputs and hiring of labour among other factors of production. Women are unable to acquire loan from financial institutions as they do not usually have collateral security (Nnodin, *et al.*, 2018). For this, they are unable to purchase or hire machinery for use in agricultural production processes and processing of products for long shelf life and availability of seasonal agricultural produce. Apart from finance, educational status of a woman determines her production capacity in agriculture (Ijtuyi *et al.*, 2021). Most women in agriculture are illiterate, they do not read or hear the information provided by extension agents on billboards, fliers and radio or television talks due to language deficiency. Most of them are not allowed to participate in extension programmes for religions and belief purposes. They therefore lack information on innovations brought to farmers either on farm or during training programmes (Ugwu, 2019).

The type of settlement pattern of a group of people deter women from accessing information on agricultural innovations by extension agents. Some cultures have scattered settlement pattern while others have clustered settlement pattern. A clustered pattern encourages cooperative work, easy assessment of information from extension agents and sharing of ideas about an existing phenomenon on the farm, but this is not easily achieved in scattered settlement pattern (World Bank, 1996). Clustered settlement pattern enables farmers access to larger parcels of land for cultivation but in the scattered pattern, the land is fragmented into small pieces for both farming and development of residential homes. Other socio-economic factors include absence of infrastructural facilities in the rural areas where majority of the women reside, facilities such as schools, hospitals, electricity, good transportation network, portable water, hygienic sanitary facilities directly affect women's health, predisposing them to diseases, making them weak. This restrain them from long hours of work which is a common feature of subsistence farming and consequently reduce agricultural productivity (Dayo *et al.*, 2008). Again women in agricultural production have less political and institutional support, access to resources and economic opportunities due to gender. (Fletschner and Kenney in Hernandez, *et al.*, 2023)

## Statement of the Problem

Women play significant roles in agricultural production and processing of food for consumption by members of the household. In Nigeria, they are the major providers of labour and key drivers of rural food supply. Women are responsible for planting, post planting, harvest and post-harvest processes involved in production of an agricultural crop, likewise rearing of small animals. Though women form a major labour force in agricultural production, most of them produce only at subsistence level. Commercial production still remain a mirage as they continue to produce the same quality of food, sometimes even less year in, year out. Some produce the quantity that does not take them throughout the whole year. Thus, malnutrition, hunger and poverty has ravaged the whole of Nigeria. Food insecurity is at its peak while the population of people in Nigeria is increasing at a geometric progression and food supply is moving at arithmetic progression as food production remains at the subsistence level. A high percentage of people are suffering from nutritional diseases. This has led to an increase in death rate, insecurity among other social vices. The researcher while pondering over the present situation of food insecurity prevalent in Benue and Nasarawa States with favourable environmental conditions for agricultural production and a large number of rural women involved in agriculture set up to study the constraints to commercial agricultural production by women in agriculture in Benue and Nasarawa States are visible and hence they need to identify the forces behind this scenario. The choice of this location is because women in these areas are actively involved in agricultural production. The thrust of the study was to determine the constraints to commercial agricultural production by women in agriculture in Benue and Nasarawa States. The following objectives guided the study.

1. Identify cultural constraints to commercial agricultural production by women in agriculture in Benue and Nasarawa States.
2. Determine the socio-economic constraints to commercial agricultural production by women in agriculture in Benue and Nasarawa States.

## Research Questions

1. What are the cultural constraints to commercial agricultural production by women in agriculture in Benue and Nasarawa States?
2. What are the socio-economic constraints to commercial agricultural production by women in Agriculture in Benue and Nasarawa States?

## Hypotheses

1. There is no significant difference between the mean responses of women in agriculture in Benue and Nasarawa States on cultural constraints to commercial agricultural production by women.
2. There is no significant difference between the mean responses of women in agriculture in Benue and Nasarawa States on socio-economic constraints to commercial agricultural production by women.

## METHODOLOGY

The study adopted survey research design because data was collected from a representative sample of the population using questionnaire developed by the researcher through the review of literature. The study area was Benue and Nasarawa States. The population for the study was 6,742 registered women in agriculture. 3,886 women in Benue and 2,856 women from Nasarawa states (Benue and Nassarawa State, Ministry of Agriculture, 2024). Taro Yami formular was to obtained a sample size of 361 registered women composed of 208 and 153 across selected council wards in Benue and Nasarawa States respectively which was used for the study. Multistage sampling technique was adopted for the study where purposive sampling technique was used to select three local government areas in the three clusters based on the existing senatorial districts in Benue, giving rise to 9 selected local governments of the 23 local governments of Benue State. Again, 2 local governments were selected from the three clusters (senatorial districts) in Nasarawa State where 6 local governments areas were obtained. Then, simple random sampling technique was now adopted to select 2



council wards in 9 local governments in Benue and 6 local governments in Nasarawa States making 30 selected council wards. To obtain the actual number of women that were used for the study, proportionate stratified random sampling technique was now adopted. With the aid of Krejcie and Morgan measurement table, the sample size of registered women in agriculture in all the 30 selected council wards across Benue and Nasarawa states were obtained. 18 item questionnaire titled constraints to commercial agricultural production by women questionnaire (CCAPWQ) developed by the researcher through literature reviewed was used to collect data from the respondents. The questionnaire had 2 parts (A and B). Part A sought information on demographic characteristics of the respondents while part B which is divided into two sections (1 and 2) solicited information from the respondents on the raised questions. Respondents were expected to respond to a four-point response options of Strongly Agree, (SA), Agree, (A), Disagree (D), and Strongly Disagree (SD), valued 4, 3, 2 and 1 respectively. The instrument was face validated by 3 experts, one from the Department of Agricultural Extension and Rural Sociology, one from Test and Measurement and one from Agricultural Education Departments of Joseph Sarwuan Tarka University, Makurdi. The internal consistency of instrument was determined using Cronbach alpha method of reliability and a reliability coefficient of 0.76 was established. 361 copies were administered to farmers (women) across the two states with the aid of 7 research assistants who are familiar with the study areas. All the 361 questionnaires were retrieved. Mean and standard deviation was used to answer the research questions. Bench mark of 2.50 was established to accept any item with a mean rating of 2.50 or above as agreed while any item with a mean rating less than 2.50 was regarded as disagreed.

The decision rule for rejection or otherwise of hypotheses was based on the p-value and alpha value. A hypothesis of no significant difference was not rejected for any item whose p-value was equal to or greater than alpha value of 0.05 ( $P \geq 0.05$ ) while it was rejected for any item whose p-value was less than alpha value of 0.05 ( $P < 0.05$ ).

## RESULTS

The results of the study are presented below according to the research questions answered and the hypotheses tested.

**Research Question 1:** What are the cultural constraints to commercial agricultural production by women in agriculture in Benue and Nasarawa States?

**Hypotheses I:** There is no significant difference in the mean ratings of responses of women in agriculture in Benue and Nasarawa States on cultural constraints to commercial agricultural production by women.

Table I: Mean Rating and T-test Analysis of Responses of Women in Agriculture in Benue and Nasarawa States on Cultural Constraints to Commercial Agricultural Production by Women (N = 361: 208 Women from Benue and 153 Women from Nasarawa States).

S/N	Item Statement	$\bar{X}_1$	SD <sub>1</sub>	$\bar{X}_2$	SD <sub>2</sub>	$\bar{X}_g$	SD <sub>g</sub>	t-cal	Sig.	Remark	
										Research Question	Hypotheses
1	Land tenure system where women do not owe land on which to farm affect commercial production	2.82	0.79	2.82	0.77	2.82	0.78	0.061	0.951	Agreed	NS, NR
2	Gender biasness whereby women do not have right to anything except men affect commercial production	2.8	0.85	3.07	0.88	2.81	0.84	-0.084	0.933	Agreed	NS, NR

3	Belief system where women cannot make their decision on what to produce, where and when to sell deter commercialization of agricultural production by women.	3.08	0.88	3.07	0.89	3.08	0.88	0.104	0.917	Agreed	NS, NR
4	Loss of interest in farming by women as the end produce of their farming are taken over by their men.	2.94	1.02	2.94	1.02	2.94	1.01	0.01	0.992	Agreed	NS, NR
5	Setting aside of some days for religious purposes only reduces working hours and affect high productivity.	2.95	0.87	2.96	0.89	2.96	0.88	-0.094	0.925	Agreed	NS, NR
6	Women do not owe anything therefore cannot obtain loans from financial institutions for lack of collateral security, thus produce only on subsistence level.	2.95	0.58	2.96	0.58	2.96	0.58	0.143	0.886	Agreed	NS, NR
7	Scattered settlement system prevents women from having access innovative information from extension agents on improved production practices and increased yield.	3.09	0.96	3.09	0.96	3.09	0.96	0.002	0.999	Agreed	NS, NR
8	Cooperative work that enables large scale production is stalled in scattered settlement system as the women live far apart and are not allowed to travel to very far areas away from their jurisdiction for work.	2.64	1.16	2.64	1.17	2.64	1.16	-0.009	0.993	Agreed	NS, NR
9	Restriction of women in some religion (confinement) prevents them from access to new knowledge and financial sources.	3.56	0.83	3.56	0.82	3.56	0.82	0.024	0.981	Agreed	NS, NR

N= number of respondents,  $\bar{X}_1$ = mean of women in agriculture in Benue state ,  $SD_1$ = standard deviation of women in agriculture in Benue state,  $\bar{X}_2$ = mean of women in agriculture in Nasarawa state,  $SD_2$  = standard deviation of women in agriculture in Nasarawa state,  $\bar{X}_g$ = grand mean of respondents  $SD_g$  = grand Standard deviation of respondents, Std = Standard deviation, df = degree of freedom, t-cal = t-calculated, Sig. = P-value;  $P > 0.05$ , NS = Not significant, NR = Not rejected

Table 1 shows mean ratings and t-test analysis of responses of women in Agriculture in Benue and Nasarawa states on cultural constraints to commercial agricultural production by women. The data reveals that all the nine items had their grand mean values that ranged from 2.64 to 3.56 which were above the cut-off point of mean 2.50 on a four-point scale. This implies that all the nine items were agreed by both respondents as the cultural constraints to commercial agricultural production by women in agriculture in Benue and Nasarawa States. The standard deviation of all the nine items ranged from 0.58 to 1.16 indicating that the respondents were not far from the mean of each other in their responses. The Table further showed that the p-values of all the nine items ranged from 0.886 to 0.999 which were greater than the alpha value 0.05 at 359 degrees of freedom. This implies that the test is not significant hence there was no statistical significant difference in the mean ratings of responses of women in agriculture in Benue and Nasarawa States on cultural constraints to commercial agricultural production by women; therefore, the null hypothesis was not rejected.

**Research Question II:** What are the socio-economic Constraints to Commercial Agricultural production by Women in Benue and Nasarawa States?

**Research Hypotheses II:** There is no significant difference in the mean ratings of responses of women in Agriculture in Benue and Nasarawa States on Socio-economic constraints to commercial agricultural production by women.

Table II: Mean Ratings and t-test Analysis of Responses of Women in Agriculture in Benue and Nasarawa State on Socio-economic Constraints to Commercial Agricultural Production by Women. Women (N = 361: 208 Women from Benue and 153 Women from Nasarawa States).

S/N	Item Statement	$\bar{X}_1$	SD <sub>1</sub>	$\bar{X}_2$	SD <sub>2</sub>	$\bar{X}_G$	SD <sub>G</sub>	t-cal	Sig.	Remark	
										R Q	Hypo
1	Most women in agriculture are illiterate and cannot read extension information available on pamphlets, billboard among others.	3.01	0.74	2.99	0.76	3.01	0.75	0.262	0.793	Agreed	NS, NR
2	Most of these women are poor and do not have capital to practice commercial agriculture.	3.31	0.94	3.31	0.94	3.31	0.94	-0.012	0.99	Agreed	NS, NR
3	Low knowledge on innovative agricultural practices, high yielding crops and breeds of livestock affect commercialization of production.	3.13	0.92	3.14	0.92	3.14	0.92	-0.027	0.979	Agreed	NS, NR
4	Poor transportation network for marketing of agricultural produce leads to low production.	3.03	0.65	3.01	0.65	3.02	0.65	0.296	0.767	Agreed	NS, NR
5	Non-availability of health care facilities and services in the rural areas compromise the health of women giving rise to subsistent production only.	2.82	0.61	2.87	0.65	2.84	0.63	-0.705	0.482	Agreed	NS, NR
6	Government policies do not give room for the women in agriculture to benefit from these policies.	2.86	0.69	2.9	0.72	2.88	0.7	-0.551	0.582	Agreed	NS, NR
7	Poor education facilities in the rural areas does not encourage meaningful learning by women, thus, they remain illiterate and hang onto their subsistence system of farming.	2.79	0.64	2.85	0.67	2.82	0.65	-0.809	0.419	Agreed	NS, NR
8	Poor pricing system of buying and selling discourage women from commercial agricultural production.	2.81	0.64	2.88	0.68	2.84	0.66	-0.901	0.368	Agreed	NS, NR
9	Non-availability of storage and processing facilities lead to market glut and perishable produce such as tomatoes and pepper get rotten leading to loss of profit.	2.81	0.68	2.89	0.71	2.84	0.69	-1.097	0.273	Agreed	NS, NR

N= number of respondents,  $\bar{X}_1$ = mean of women in agriculture in Benue state , SD<sub>1</sub>= standard deviation of women in agriculture in Benue state,  $\bar{X}_2$ = mean of women in agriculture in Nasarawa state, SD<sub>2</sub> = standard deviation of women in agriculture in Nasarawa state,  $\bar{X}_G$ = grand mean of respondents SD<sub>G</sub> = grand Standard deviation of respondents, Std = Standard deviation, df = degree of freedom, t-cal = t-calculated, Sig. = P-value; P > 0.05, NS = Not significant, NR = Not rejected

Table 2 shows mean ratings and t-test analysis of responses of women in Agriculture in Benue and Nasarawa states on socio-economic constraints to commercial agricultural production by women. The data reveals that all the nine items had their grand mean values that ranged from 2.82 to 3.31 which were above the cut-off point of mean 2.50 on a four-point scale. This implies that all the nine items were agreed by both respondents as the socio-economic constraints to commercial agricultural production by women in agriculture in Benue and Nasarawa States. The standard deviation of all the nine items ranged from 0.63 to 0.94 indicating that the respondents were not far from the mean of each other in their responses. The Table

further showed that the p-values of all the nine items ranged from 0.273 to 0.979 which were greater than the alpha value 0.05 at 359 degrees of freedom. This implies that the test is not significant hence there was no statistical significant difference in the mean ratings of responses of women in agriculture in Benue and Nasarawa States on socio-economic constraints to commercial agricultural production by women; therefore, the null hypothesis was not rejected.

## DISCUSSION OF FINDINGS

The findings in table one revealed that the 9 items were cultural constraints to commercial agricultural production by women in Agriculture in Benue and Nasarawa States. This is in consonant with Ajadi, *et. al.*, (2015) who asserted that cultural characters such as belief, traits and sometimes religion play very crucial role in limiting women to subsistence farming. This again agrees with the findings of Hernandez, *et. al.*, (2023) that cultural constraints have significantly restrained women from commercial agricultural production.

The result on table two shows that all the 9 items were socio economic constraints to commercial agricultural production by women in agriculture in Benue and Nasarawa States. The findings agreed with those of Ugwu, (2019) that educational status of women determines their production capacity and their access to extension information passed through the various information media on agricultural innovations. In the same vein, Dayo *et. al.*, (2008) agreed that lack of infrastructure, good transportation network, portable water and hygienic sanitary facilities directly compromise women's health, predispose them to diseases and make them weak thereby reducing their agricultural production capacity.

## CONCLUSION

Most women in Benue and Nasarawa States are rural dwellers and play crucial roles in the production and processing of food. Despite this, cultural constraints such as belief system, values among others limit their production to subsistence level. Others are socio-economic constraints such as education, capital, infrastructural facilities and non-inclusion of women in government agricultural policies. All these constrain women from commercial agricultural production.

## RECOMMENDATIONS

The following recommendations were made based on the findings of the study.

1. Cultural beliefs and arts such as gender biasness and ownership of agricultural production factors that are inimical to agricultural production by women should be relegated to the background and women duly recognized as significant forces behind food security in Nigeria.
2. Infrastructural facilities such as schools, hospitals, electricity good transportation network, capital sources and others be established in the rural areas where these women reside to enhance their production capacity. Again, government agricultural policies should give cognizance to women to enable them develop from subsistence agriculture to commercial agriculture.

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