

# POPULATION GROWTH: IMPLICATION ON FOOD PRODUCTION IN KABBA/BUNU LOCAL GOVERNMENT AREA IN KOGI STATE.

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## **Abstract**

Food is a basic necessity of life produced by farmers who use the inadequate arable land, labour and capital to meet the food need of our present teeming population. The study area is rural having 54 villages with the primary occupation of the people being farming. Both open and close-ended questionnaires were administered to 150 farmers. Data collected were analyzed using both descriptive and inferential statistics. The result revealed that majority of the respondents were males, aged, had no formal education, had small family size, practiced mixed cropping, employed family labour and used crude tools. Chi square test revealed that respondents personal characteristics such as age, educational qualification and farming experience were significant when tested with access to production resources with the following values: ( $X^2 = 8611$ ,  $P = 0.03$ ,  $X^2 = 6.711$ ,  $P = 0.03$  and  $X^2 = 5.071$ ,  $P = 0.02$ ) respectively. Chi-square test on the relationship between access to production resources and output reveals that there exists significant relationship ( $X^2 = 13.688$ ,  $P = 0.000$ ). This is because higher access to production resources will result into higher output all things being equal. The study concluded that, rapid rural development, improved planting material, improved agricultural credit scheme, agro-chemicals and better market outlet should be an integral part in the process for the development of a sustainable food production programme to meet the food needs of our ever growing population.

## **Background**

The population of Nigeria in 1991 was 88.5 million (National population commission, 1991). By the natural increase of 3% per annum, Nigerian population in the year 2010 is expected to be 157.4 million (Bukar, Adamu and Bakshi 1997).

Onyenwuku (1987) stated that population pressure does not only directly increase the demand for food, but also indirectly reduces its supply through building development, environmental degradation and marginalization of food production; the question arises, can Africa and Nigeria in particular feed its current population? This alarming population growth in the country indicates that there is the need for a steady and rapid increase in National Agricultural productivity to meet the food requirement of the teeming population and provide the requisite raw materials for the domestic agro-based industries.

The Nigerian rural population in 1991 was 84% of her total population (Population Reference Bureau: 1997) with approximately 55% of the economically active Nigerians engaged in farming activities and are living in the rural areas. (Okunneye: 1985). Ogungbile and Olukosi (1991) maintained that over 90% of Nigeria's total agricultural production is accounted for by these rural farmers and that this is too much when compared with developed countries where

less than 4% of the total population produce enough food to adequately feed their population. This issue of food problem has necessitated the augmentation of the domestic food supply with large importation of staple food which continually depletes the nation's foreign exchange reserves. The food import bill rose significantly from N801, 967million in 1986 to #147, 301.60 million in 1996 (FOS, 1997).

However, efforts were made in the past by successive government to foster agricultural productivity, for instance in 1984 the National Productivity Centre was set up by decree 7 to increase productivity in all sectors of the economy. Nigeria, Agricultural and Co-operative Bank (NACB) now Nigeria Agricultural, Co-operative and Rural Development Bank (NACRDB) (1973), National Accelerated Food Production Programme.(NAFPP) (1974), Agricultural Development Programmes-ADP (1975), Operation Feed the Nation- OFN (1976), Agricultural and Credit Guarantee Scheme. (1977), Land Use Act Decree (1978), Green Revolution (1980), Nigeria Agricultural Insurance Company – NAIC (1984), River Basin Development Authority (1984), Directorate for Food, Road and Rural Infrastructure – DFRRRI (1986), National Directorate for Employment – NDE (1986), National Agricultural Land Development Area – NALDA (1991) to mention but a few, including the establishment of 18 agricultural research institutes, 3 federal Universities of Agriculture, 25 faculties of Agriculture in some federal and state universities. All those laudable agricultural development programmes and policies initiated and implemented have very little impact on agricultural development, farm incomes, food security, sustainable food production, nutritional status and standard of living of Nigerians. Why? .

Ogunfeditimi (1988) reported that 'some of the Government strategies to improve agricultural production are either geared towards a wrong priority, bad timing, deficient in operational strategies or fail to get to the grassroot level in order to make the desired impact" Idachaba (2000) observed that failure of these programmes could be attributed to some unintended beneficiaries who hijack such programmes.

Discussing the missing link in Nigerian agricultural development, Aboyade (1990) noted that the country needs progressive increase in food production at a level higher than the rates of population growth. He therefore suggested that the smallholder farmer needs to be the centre of agricultural research.

### **Need for the Study**

Bukar and Bakshi (1997) ascertained that Kogi State is in the central agricultural zone of Nigeria and the zone occupied 43 million hectares of which total arable land put at 24.7 million hectare but only 6.6 million hectares is currently under cultivation while Abalu (1993) in his own view opined that in Nigeria, only 45% of the total arable land area is under cultivation, there is the need therefore to find out why our farmers have not increased their production capacity? .

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Ikpi and Olayemi (1995) stated that a comparative review of the countries agricultural productivity reveals that in the United States of America for example a single farmer produces enough food for over 1000 non-farmers with some surplus to export, but in Nigeria with over 70% of her population engaged in farming, an average farmer can hardly feed himself and his immediate family much less producing for some other non-farmers or exporting the surplus, what are therefore the constraints faced by Nigerian farmers in this area. They further added that recent studies by the Economic Commission for Africa (ECA) of the United Nations (UN) 1983, 1987, 1990 and the World Bank 1985, 1988 and 1990 showed that whereas Nigeria population has in the last 10 years of expanding steadily at an average rate of about 3% while total food production in the country has been rising by not more than 1.5% per annum on the average.

Therefore to increase staple food production through the small-scale rural farmers, there is the need to investigate the factors which prevails at the farm level that affects their efficiency in production. Such investigation which this study intends to do will point to the problem areas which calls for improvement and structural adjustment, such as improving the social and economic status of farmers. This will encourage rural farmers approximately for better performance and consequently an increased productivity.

### **Research Questions**

1. What are the personal characteristics of farmers in the study area?
2. What are the production resources?
3. Do the farmers have access o production resources?
4. Does farmers' personal characteristics affect access to production resources?
5. Does farmers' access to production resources affect output?

### **Hypothesis**

The hypothesis for this study are stated in the null form as follows;

- There is no significant relationship between farmers' personal characteristics and their access to production resources.
- There is no significant relationship between farmers' access to production resources and their output.

### **Sample and Selection**

The study was carried out in Kabba/Bunu Local Government Area of Kogi State, which has a landmass of 4,350 sq. kms. In the rainforest belt of Nigeria, naturally blessed with favourable climatic and edaphic condition suitable for growing both food and cash crops and even forestry. This accounts for why the primary occupation of people here is farming.

The study area is made up of 54 villages, 20% of the villages were proportionately selected by serially arranging them and picking in a multiple of 5 to obtain 10 villages. The houses in these villages were assigned numbers and 3

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were picked in a multiple of 5 and 30% of the farming households were sampled. A systematic household sampling technique was employed to obtain a total sum of 150 respondents.

Interview accompanied with structured open and close ended questionnaires were employed to obtain information on farmers personal characteristics (e.g. age, educational level e. t. c.) and access to production resources e.g. (labour, planting material, land, capital and constraints to production e.t.c. Data collected were analyzed using both descriptive and inferential statistics.

<b>Variable</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Age in Years</b>		
30 – 40	27	18.00
41 – 50	34	22.67
Above 50	89	59.33
Total	150	100.00
<b>Gender</b>		
Male	147	98.00
Female	3	2.00
Total	150	100.00
<b>Marital Status</b>		
Married	148	98.67
Divorced	0	0.00
Widowed	2	1.33
Total	150	100.00
<b>Family Size</b>		
1 – 5	106	70.67
6 – 10	36	24.00
Above 10	8	5.33
Total	150	100.00
<b>Educational Level</b>		
No Formal	102	68.00
Primary	31	20.67
Secondary	8	5.33
Above Secondary	9	6.00
Total	150	100.00
<b>Primary Occupation</b>		
Farming	138	92.00
Civil Servant	10	6.67
Others	2	1.33
Total	150	100.00

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**Result and Discussion**

**Table 1 Respondents Personal Characteristics**

**Source: Survey Data 2004**

Table 1 above shows that majority of the respondents were aged, above 40 years and not in their productive ages (Okunmadewa; 1993). While 98.3% were male since the population sample was targeted on heads of family household, with 70 % operating at subsistence level and having small family size an indication that there is likely to be shortage of farm labour. Most rural farmers use family labour on their farms (Bukar. et. al 1997). 68% had no formal education; this encourages conservatism and low acceptability and adoption of innovation (Okunmadewa; 1993). 92% were farmers with reasonable years of farming experiences, a good population sample for the purpose of this work. Olawoye (1993) asserted that farming is a peculiar characteristic of rurality.

**Table 2 Chi – Square Analysis of Respondents Personal Characteristics**

Variable	X <sup>2</sup>	df	p-value	Decision
Age	8.611	1	0.03	Significant
Gender	2.041	1	0.15	Not significant
Marital Status	1.351	1	0.25	Not significant
Educational Level	6.711	1	0.03	Significant
Primary Occupation	2.346	1	0.14	Not significant
Farming Experience	5.071	1	0.02	Significant

Level of significance = .05

As shown in **table 2** above, age, educational level and farming experiences of respondents when tested with access to production resources using chi-square test at .05 level of significance were observed to be significant. Old age encourages conservatism and sticking to old ideas. Corroborating this is Ikpi and Olayemi (1995) who asserted that old age and lack of formal education among farmers account for low acceptability and adoption of innovation. The resultant effect of this is low access to production resources and consequently low productivity or output meaning acute food insecurity.

Variable	Frequency	Percentage
<b>Access to Farmland</b>		
Yes	150	100.00
No	0	0.00
Total	150	100.00
<b>Access to Labour</b>		
Yes	4	2.67
No	146	97.33
Total	150	100.00

<b>Source of Farm Labour</b>		
Self/Family	133	88.67
Hired	4	2.67
Exchange	13	8.67
Total	150	100.00
<b>Source of Agric. Finance</b>		
Personal Savings	140	93.34
Agric. Banks	2	1.33
Co-operative Society	8	5.33
Money Lender	0	0.00
Total	150	100.00
<b>Source of Planting Materials</b>		
I. Previous Harvest	74	49.33
II. Other Farmers		
III. Local Market		
IV. Agric. Seed		
I & II	29	19.33
I, II & III	47	31.33
Total	150	100.00
<b>Access to Agro-chemicals</b>		
Yes	4	2.67
No	146	97.33
Total	150	100.00

<b>Access to Storage Facilities</b>		
Yes	17	11.33
No	133	88.67
Total	150	100.00
<b>Access to Farm Machinery</b>		
Yes	1	0.67
No	149	99.33
Total	150	100.00
<b>Source of Agric. Information</b>		
Other Farmers	62	41.33
Radio	52	34.67
Extension Agents	34	22.67
Newspapers	2	1.33
Total	150	100.00

**Table 3 Frequency Distribution of Farmer's Access to Production Resources  
Source: Survey Data 2004.**

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**Table 3** above reveals that all the respondents had access to enough farmland. Corroborating this is Bukar et. al. (1997) asserted that only 25% of the arable land of the agricultural Zone which the study area belonged is under cultivation. 97.3% had no access to enough labour. Okunneye (1985) stated that labour is a major constraint in agricultural production. 88.67% used family labour for their farm work. Ogungbile and Olukosi (1991) ascertained that Nigerian farmers depends solely on family labour for their farming operations. 93.34% financed their farm work through family labour. Bukar et. al. (1997) stated that the principal source of agricultural credit to rural farmers is through their personal savings. This may result in reduced ability to purchase agricultural inputs, expand farm size and consequently low output. Majority of the respondents obtained their planting materials from previous harvests Aighewi et. al.(2001) ascertained that one of the primary characteristics of Nigerian rural farmers is that seeds are self-supplied (local strains). 97.33% had no access to agro-chemicals, 88.67% had no access to storage facilities, 99.33% had no access to farm machineries and so used crude tools, and majorities had no access to better market outlets and so sell their produce at give-away prices at farm gates. Finally, majority had no access to agricultural information.

**Table 4 Below Shows Chi – Square Test of Relationship Between Farmers’ Access to Production Resources and their Output. The Following Observation and Inferences Were Made**

Variable	X <sup>2</sup>	df	p-value	Decision
Access and Output	13.688	1	0.000	Significant

Level of significance = .05

**Table 4** above reveals that there exists significant relationship between access to production resources and output. This implies that the more a farmer has access to production resources such as land, labour, capital e.t.c. all things being equal the more his output and vice-versa. Corroborating this are Ikpi and Olayemi (1995) who asserted that Nigeria rural farmers have low access to production resources. That is why even though that Nigeria rural farmers are many in numbers when compared with the number of farmers in the developed world, the output of the former is considerably low when compared with those of the latter and this can not meet the food need of the ever teeming Nigeria population.

**Conclusion and Recommendations**

This study concludes that majority of the farmers are aged, had no formal education, had low access to production resources which limit their farm sizes and production levels.

The peasant farmer who is supposed to be the central figure in agricultural development process; the way they farm, the farm inputs they use, the training they receive e.t.c. For these reasons the following recommendations 7

are made, as they would enable farmers increase their farm size and all things being equal their production level to meet the food need of our teeming population;

- National agric credit facilities should be strengthened to enable farmers have access to soft loan devoid of collateral security. Farmers should be organized into farmers' co-operatives to raise and disburse loan to members.
- Rapid rural infrastructural development should be pursued with vigour to reduce rural – urban drift especially of able-bodied youths, so as to ensure access to labour and easy movement of farm products to urban centers.
- Agro chemicals (fertilizers, herbicides and pesticides) should be readily available in required quantity and quality at the appropriate time and at affordable cost cum improved and efficient channels of input distribution.
- The scope of sources of agricultural information should be broadened to cover all media, while agricultural extension division should be overhauled by giving the adequate training, employ enough able hands, supply them with mobility, security and other inputs.
- Agricultural research institutes should be adequately financed, employ able hands and supplied with all necessary tools to churn out improved varieties, Disease and pest resistant and quick maturing varieties of crops and animals.
- The activities of middlemen should be controlled and reduced so that farmers can have maximum profits.
- Agricultural education should be both formal (for school children) and non-formal (for farmers).

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