#### Tropical Agricultural Research & Extension 9,2006

# Agricultural Productivity and Poverty Alleviation Issues: The Nigerian Perspective

J.C. Umeh, \*W.L. Lawal and V. U. Oboh Department of Agricultural Economics University of Agriculture, Makurdi, Benue State, Nigeria.

Accepted 19<sup>th</sup> September, 2006

#### ABSTRACT

This paper reviews the pre and post independence agricultural productivity and poverty alleviation issues in Nigeria. Descriptive statistics and secondary data were adopted in the discussion. The review indicated that a laudable performance was recorded in pre-independence period due to the establishment of model research farms., Physical rural infrastructures like motor, roads and railways for easy evacuation of farm products, commodity boards for stability of producer prices, promotion of quality of export crops, providing stable market outlet for export crops and generating foreign reserves. All these resulted in the promotion of employment in both production and post-production of agricultural activities. Rural disposable income was high and this generated high demand for consumable goods in rural areas. Surpluses generated from foreign trade were used to finance a large number of development projects. In contrast, in post- independence period, the structure of rural infrastructure began to collapse with negative impact. Average growth rate for palm oil expenditure between 1935- 1939 was 30.88% and it dropped to 7.5 post-independence. Also, food crop productivity dropped, poverty level rose and food import bill escalated. This paper therefore recommends the pre-independence model for Nigeria to use. This will encourage increase in Agricultural productivity, income level and consequently reduce poverty.

**Keywords:** Agricultural productivity, poverty alleviation, pre & post independence, rural infrastructure, export markets, export crops

## **INTRODUCTION**

Productivity according to the dictionary of economics and commerce is the amount of production in relation to the labour employed. Infact, efforts are constantly being made to increase the productivity of labour by increasing its efficiency through education and training, by improving capital, and by better organization. Agricultural productivity, therefore, means amount of agricultural production in relation to inputs (land, labour, capital, material and technique technologies, etc.). To increase agricultural productivity therefore, issues relating to the improvement in quality and quantity of agricultural inputs should be tackled.

The World Bank estimates that 80 percent of the world's poor live in rural areas where the bulk of the people earn a living

<sup>\*</sup> Corresponding author

from farming. Thompson (1997) while tracing the roots of the problems of poverty in rural areas indicated that no country in the world has solved the problem of rural poverty focusing exclusively in agriculture. Certainly, by raising productivity in agriculture, one can improve the lot of rural people, increase the availability of food, and reduce the real price of food. But availability is not enough. Efficient and effective distribution of food to consumers is also of great concern. It also takes the purchasing power to gain access to food and other commodity needs above a family's own production.

Going beyond the improved agricultural productivity, the purchasing power of the rural farmers is largely enhanced at least at the initial stage by the infusion of time, place and form utilities to the agricultural produce. This is possible with the supply of rural infrastructure (social, institutional and physical). There is therefore value addition and there are also rural employment opportunities. Progressively, offfarm employment opportunities begin to materialize leading to increasing purchasing power for the rural farm households.

Poverty really is a state of despondence and impoverishment. Conventionally, the income or expenditure level that can sustain a bare minimum standard of living measures it. By this conventional pattern, the World Development Report (WDR) specified upper and lower poverty lines of US \$ 370 and US\$ 275 respectively for the 1985 purchasing power parity dollar. These limits defined poor and very poor people, though of course when discussing poverty within countries WDR uses country-specific poverty lines (The World Bank, 1993). Furthermore, poverty alleviation is not just measured by the levels of income and consumption improvement. Health, life expectancy, access to clean water, etc. are key indicators. For this reason, the WDR supplemented consumption-based measures with others such as nutrition, underfive mortality rate, school enrolment rates, etc. Large number of this, if not ,all flow from inter-relatedness of improved productivity and rural infrastructure.

Viewed holistically, one may not be completely off the right mark to say that the improvement of agricultural productivity and thus enhancement of factors of production on the one hand and the infusion of the utilities (time, form and place) to the produce on the other hand relate to poverty alleviation. This is particularly so when the improvement spans both the production and post-production activities. Two clear-cut illustrations substantiate this position. The first is the establishment of research centers, which is an institutional infrastructure (Idachaba, 1985). From these centers flow improved crop varieties, which largely have the potentials to improve crop yields. The second is the improvement of rural road network, which is a physical infrastructure. This reduces transport losses and factor input costs at the farm gate, the quantities of input (improved seeds. fertilizer, agrochemicals, etc.) bought are increased and output market is enlarged (Umeh, 1986). Income is enlarged and there is very likely urge to translate the enhanced income goals into the acquisition of goods and services for an enhanced quality of life of the rural people (Umeh et al., 1996).

This paper therefore discusses in a fairly broad outline, the agricultural and

poverty alleviation issues using the Nigeria case. Descriptive statistics and secondary data were adopted in the discussion. The rest of the paper is partitioned into four sections. In section two the pride of place which agriculture commands in the Nigerian economy is highlighted to create a clear-cut background for the discussion of issues of agricultural productivity and poverty alleviation. The third section examines the issues that arise in the areas of agricultural productivity and poverty alleviation. The fourth section attempts some remedies while the summary and conclusion appear in section five.

## PROBLEMS AND PROSPECTS OF THE NIGERIAN AGRICULTURE SECTOR

Agriculture, before pre-independence played a dominant role in the Nigerian economy (Federal Republic Nigeria, 1989). Some of these roles were:

- a. Provision of adequate food for the increasing population;
- b. Provision of raw materials for a buding industrial sector;
- c. Provision of public revenue;
- d. Provision of employment opportunities for an expanding labour force;
- e. Provision of foreign exchange; and
- f. Source of huge internal market for industrial goods and services.

In the pre-independence period, therefore, performance of agriculture was laudable. There was indeed economic boom. For example, people, particularly the rural population, were employed in either the production or post-production agricultural activities. Rural disposable income increased. The favorable economic change accelerated the demand for the consumable goods in rural areas. Surpluses generated from the foreign trade were used to finance a large number of development projects. To say the least, poverty could have been alleviated to some impressive degree during this period of favorable economic change.

At this time therefore, issues bordering on agricultural research, rural infrastructure, incentive/subsidies, guaranteed market, remunerative price/income, etc. were tackled particularly for the export crop. For example, research for export crop production in Nigeria dates back to 1899 when a model farm was stared at Moor Plantation, Ibadan, to propagate rubber trees (Idachaba, 1980). The funding for the research organizations flowed from the surpluses of the export market/marketing Boards.

For the issues on the rural infrastructure (physical), rail and motor roads were constructed by the British Government to ease the evacuation of export crops from the hinterlands to the sea.

Commodity Boards handled marketing issues for the export crop commodities. The first, the Cocoa Marketing Board was established in 1947 and was followed by the Groundnut, Cotton and Palm Produce Marketing Boards. The achievements of the Marketing Boards are in five areas. These are ensuring stability of producer prices; promoting the quality of export produce; providing a stable market outlet for export crops; using foreign exchange surpluses from export crop commodities to finance agricultural research and other large agricultural development projects;

|           | Palm Oil        |   | Palm Kernels    | ernels  | Cocoa           | a   | Cott on         |  | Grou            | Groundnut   |
|-----------|-----------------|---|-----------------|---|-----------------|---|-----------------|--|-----------------|---|
| Year      | Level<br>(tons) | Growth<br>Rate<br>(1900-4<br>Base<br>Period)<br>(%) | Level<br>(tons) | Growth<br>Rate<br>(1900-4<br>Base<br>Period)<br>(%) | Level<br>(tons) | Growth<br>Rate<br>(1900-4<br>Base<br>Period)<br>(%) | Level<br>(tons) | Growth<br>Rate<br>(1900-4<br>Base Pe-<br>riod) (%) | Level<br>(tons) | Growth<br>Rate<br>(1900-4<br>Base<br>Period)<br>(%) |
| 1900 - 4  | 53,729          | 1   | 120, 778        | ı   | 305             | 1   | 132             | ı  | 475             | ı   |
| 1905 - 9  | 65,177          | 21.3  | 130, 241        | 7.8   | 1,167           | 282.6   | 1,383           | 947.7  | 1,531           | 122.3   |
| 1910 - 14 | 77,771          | 44.7  | 174, 236        | 44.3  | 3,857           | 1,164.6   | 1,884           | 1,322.3  | 8,195           | 1,625.3   |
| 1915 - 19 | 80, 485         | 49.8  | 184, 567        | 52.8  | 13,887          | 4,453.1   | 2,112           | 1,500.0  | 41,300          | 8,594.7   |
| 1920 - 24 | 90, 352         | 68.2  | 203, 021        | 68.1  | 27,276          | 8,843.0   | 3,940           | 2,884.8  | 44,278          | 9,221.7   |
| 1925 – 29 | 124, 716        | 132, 1  | 255, 469        | 111.5   | 45,483          | 14,812.5  | 6,038           | 4,474.2  | 109,068         | 22,861.7  |
| 1930 - 34 | 122, 302        | 127.6   | 274, 584        | 127.3   | 62,978          | 20,548.5  | 4,594           | 3,380.3  | 188,744         | 39,635.6  |
| 1935 – 39 | 139, 000        | 158.7   | 224, 000        | 176.5   | 96,000          | 31,375.4  | 8,332           | 6,212.1  | 249,600         | 52,447.4  |
| 1940 – 44 | 134, 377        | 150.1   | 320.613         | 165.5   | 102,379         | 33,466.9  | 9,913           | 7,409.8  | 181,901         | 38,194.9  |
| ļ         | ,               |   |                 |   |                 |   |                 |  |                 |   |

Table 1: Nigeria: Export of some Selected Commodities, 1900 – 1944

Source: Original data collected from (1) Nigerian Handbook 1936 and Nigeria Trade Report, 1936 - 1945, Lagos \*Figures averaged for each quinquennium

Government Print: (2) Ekundare R. O., <u>An Economic History of Nigeria</u>, 1860 – 1960, PP. 156 – 174, 1973.

30

and ensuring a steadily growing export crop commodity (Table 1).

There were little or no issues tackled by the British government for the production of food crops since there was no problem of food in a native population accustomed for centuries to the supply of its food needs from its fields and forests (Lagemann *et al.*, 1975; Nweke, 1980 and Umeh, 1994). Thus issues raised by the colonial government were in the export crop sub-sector where problems arose.

Federal Republic of Nigeria (1989) indicated that problems in the Nigeria agriculture started to emerge as from the first decade of the country's independence (1960-1969). Some of the obvious signs include:

- i. Food supply short-falls;
- ii. Rising food prices;
- iii. Declining foreign exchange earnings from agricultural exports;
- Iv. Dwindling disposable income; and
- v. Absorptive capacity for labour in agricultural industry began to fall with rising rural – urban migration.

These situations worsened soon after the Nigerian civil war, 1967 - 70. The decade 1970 - 1979 for example, witnessed a rapid deterioration in the country's agricultural industry (Federal Republic of Nigeria, 1989). All the signs of poor agricultural performances in the first decade of independence assumed worse dimensions. The situation was compounded by the following factors:

1. The civil war devastated the agricultural resource base in the Eastern Nigeria which constituted the theatre of war;

- 2. There was labour withdrawal from the agricultural sector into the army;
- 3. Severe droughts in some parts of the country; and
- 4. The oil boom with its expanded foreign exchange earnings led to severe distortions in both the government's fiscal and monetary policies culminating into some serious problems in the agricultural industry.

Several evidences may be shown at this point to illustrate the situation in the agricultural sector. Table 2 shows very low and in some cases large negative annual rates of major Nigerian food crops. Table 3 indicates large negative growth rates in the purchases of export crop by the commodity boards. Table 2 contrasts remarkable with Table 1. Table 4 shows large food import bills for Nigeria to cushion the large food demand deficits presented in Table 5. Household expenditure, a proxy for purchasing power is shown in Table 6. The rural household purchasing power is the lowest among the three categories of households.

| _              |  |
|----------------|--|
|                |  |
| ä              |  |
| rop            |  |
| Ű              |  |
| ÷              |  |
| 2              |  |
| Ř              |  |
| Ξ              |  |
| 5              |  |
| Γ <b>Ξ</b>     |  |
| S              |  |
| Ĕ              |  |
| 13             |  |
| .E.            |  |
| st             |  |
| E              |  |
| n              |  |
| <b>i</b>       |  |
| ct             |  |
| Ē              |  |
| þ              |  |
| ĭ              |  |
| 4              |  |
| (NAFPP): P     |  |
|                |  |
|                |  |
| H              |  |
| N.             |  |
| E              |  |
| e              |  |
| E              |  |
| B              |  |
| a              |  |
| 5              |  |
| õ              |  |
| 2              |  |
|                |  |
| U O            |  |
| Ę.             |  |
| 2              |  |
| qr             |  |
| õ              |  |
| $\mathbf{Pr}$  |  |
|                |  |
| 00             |  |
| ŏ              |  |
| Γ <b>ι</b>     |  |
| Ď              |  |
| ţ              |  |
| ra             |  |
| e              |  |
| e.             |  |
| చ              |  |
| $\blacksquare$ |  |
| IE             |  |
| nź             |  |
| <u>0</u>       |  |
| I              |  |
| Ž              |  |
| <b>F</b> -1    |  |
| 0              |  |
| e              |  |
| q              |  |
| โล             |  |
|                |  |
|                |  |

| Metric ton) |
|-------------|
| 000, uI)    |
| 1970 – 1982 |
| Grains 19   |

|      | ANNUAL<br>GROWTH<br>RATE (%)<br>(1970) | -9.10         | 0.20    | 1.10   | -6.00  | 0.40 | 0.02  |
|------|--|---------------|---------|--------|--------|------|-------|
|      | 1982                                   | 2,<br>308     | • • •   | :      | 816    | 374  | 27    |
|      | 1981                                   | 2, 159        | 4,413   | 3, 681 | 765    | 326  | 26    |
|      | 1980                                   | 1, 988        | 8, 613  | 3, 445 | 745    | 306  | 24    |
|      | 1979                                   | 1, 976 1, 988 | 3, 785  | 2, 714 | 760    | 294  | 22    |
|      | 1978                                   | 2, 009        | 3, 628  | 3, 025 | 772    | 446  | 22    |
|      | 1977                                   | 1, 935        | 3, 750  | 3, 079 | 1,037  | 304  | 21    |
| YEAR | 1976                                   | 3, 237        | 3, 138  | 3, 079 | 1,311  | 456  | 20    |
|      | 1975                                   | 3, 352        | 4, 372  | 4, 839 | 780    | 543  | 18    |
|      | 1974                                   | 3, 206        | 3, 717  | 4, 452 | 746    | 543  | 18    |
|      | 1973                                   | 2,729         | 2, 597  | 2, 940 | 704    | 468  | 15    |
|      | 1972                                   | 3, 156        | 3, 367  | 2,524  | 830    | 397  | 20    |
|      | 1971                                   | 4,719         | 5,265   | 2, 911 | 1, 322 | 279  | 20    |
|      | 1970                                   | 5,180         | 4,044   | 3,077  | 1,376  | 293  | 19    |
|      | CROP                                   | Cassava       | Sorghum | Millet | Maize  | Rice | Wheat |

Alternative source of the estimates is Central Bank of Nigeria. Source : Umeh (1994)

| <b>(</b> 9 |
|------------|
| 80 (5      |
| 619/       |
| 1-1        |
| L/0L       |
| ia 19      |
| liger      |
| ds, Nj     |
| Boar       |
| dity ]     |
| omno       |
| Cor        |
| by         |
| ases       |
| urch       |
| in p       |
| wth        |
| grov       |
| e of       |
| Rat        |
| e 3:       |
| able       |
| E          |

|               |             |          | Commodity |            |             |            |
|---------------|-------------|----------|-----------|------------|-------------|------------|
| Year          | Palm kernel | Palm oil | Cocoa     | Benni-seed | Seed cotton | Groundnuts |
| 1970/71-71/72 | 4.0         | 23.5     | -15.0     | -44.6      | -3.6        | 7.0        |
| 1971/72-72/73 | -12.7       | -33.7    | -6.0      | 13.1       | 29.4        | 82.0       |
| 1972/73-73/74 | -14.3       | -33.7    | -1.2      | -14.2      | -40.0       | -92.1      |
| 1973/74-74/75 | 31.1        | 78.7     | 0.03      | 0.03       | 62.5        | 267.7      |
| 1974/75-75/76 | -7.9        | -75.0    | 1.4       | 27.6       | -50.0       | -38.2      |
| 1975/76-76/77 | 1.4         | 53.3     | -23.5     | -64.0      | -202.9      | 48.1       |
| 1976/77-77/78 | -37.8       | -66.1    | 22.9      | 11.0       | -45.8       | -5.5       |
| 1977/78-78/79 | 36.6        | n.n.     | -34.7     | n.n.       | 1.9         | n.n.       |
| 1978/79-79/80 | -3.6        | n.n.     | -19.5     | n.n.       | n.n.        | n.n.       |
| Average       | 036         | -7.57    | -5.17     | -6.5       | 19.60       | 38.42      |
|               |             |          |           |            |             |            |

Source: Idachaba (1985).

| 1997,    |      |
|----------|------|
| - 10     |      |
| 1990     |      |
| <u> </u> |      |
| (SITC)   |      |
| tion     |      |
| ifica    |      |
| Jass     |      |
| nde (    |      |
| l Tra    |      |
| iona     |      |
| ernat    |      |
| Inte     |      |
| lard     |      |
| Stand    |      |
| of S     |      |
| basis    |      |
| the      |      |
| rt on t  |      |
| npor     |      |
| od Iı    |      |
| d Fo     |      |
| lecte    |      |
| l: Sel   | ion) |
| ble 4    | Mill |
| Tal      | S    |

| 1990   | 1991   | 1992    | 1993    | 1994    | 1995    | 1996    | 1997      | Percentage change over the previous year | ge chang | ge over t | he previ | ous year |       |      |
|--------|--------|---------|---------|---------|---------|---------|-----------|--|----------|-----------|----------|----------|-------|------|
|        |        |         |         |         |         |         |           | 1991                                     | 1992     | 1993      | 1994     | 1995     | 1996  | 197  |
| 3,7635 | 7,7855 | 11,7384 | 13,9129 | 16,5858 | 88,3499 | 75,9546 | 100,640.3 | 106.9                                    | 50.8     | 18.5      | 19.2     | 4260     | -14.0 | 32.5 |
| 181.4  | 179.0  | 286.3   | 496.9   | 885.2   | 3,020.5 | 2,250.5 | 5074.3    | -1.3                                     | 59.9     | 73.6      | 62.0     | 2711     | -25.5 | 125  |
| 136.0  | 715.9  | 1,002.1 | 1,325.0 | 1,610.3 | 8306.4  | 7,314.7 | 11,840.0  | 426.4                                    | 40.0     | 32.2      | 21.5     | 4103     | -11.9 | 61.9 |

Source: Njike and Umeh (2000).

34

| Com-<br>modity       |              | 1985 |       |           |              | 2000 |           | Deficit % |
|----------------------|--------------|------|-------|-----------|--------------|------|-----------|-----------|
|                      | ( <b>D</b> ) |      | (S)   | Deficit % | ( <b>D</b> ) |      | (S)       |           |
| Rice                 | 1791         |      | 975   | 46.0      | 2790         |      | 1132      | 59.0      |
| Maize                | 2634         |      | 2374  | 10.0      | 4104         |      | 2756      | 33.0      |
| Sorghum              | 4500         |      | 4000  | 11.0      | 7011         |      | 4644      | 34.0      |
| Millet               | 4000         |      | 3500  | 13.0      | 6232         |      | 4063      | 35.0      |
| Wheat                | 1830         |      | 145   | 92.0      | 2851         |      | 168       | 94.0      |
| Cassava              | 13300        |      | 10000 | 25.0      | 20721        |      | 1161<br>0 | 44.0      |
| Cowpea               | 1300         |      | 1015  | 22.0      | 2025         |      | 1178      | 42.0      |
| Ground-<br>nut       | 560          |      | 300   | 46.0      | 872          |      | 348       | 60.0      |
| Soybean              | 80           |      | 50    | 38.0      | 125          |      | 58        | 54.0      |
| Palm oil             | 1012         |      | 518   | 49.0      | 1577         |      | 601       | 62.0      |
| Sugar                | 400          |      | 80    | 80.0      | 623          |      | 93        | 85.0      |
| Beef                 | 400          |      | 156   | 61.0      | 623          |      | 181       | 71.0      |
| Dairy<br>Product     | 350          |      | 225   | 36.0      | 545          |      | 261       | 52.0      |
| Cotton               | 78           |      | 40    | 49.0      | 122          |      | 46        | 62.0      |
| Goat<br>Meat         | 100          |      | 60    | 40.0      | 156          |      | 70        | 55.0      |
| Poultry<br>Eggs      | 260          |      | 200   | 23.0      | 405          |      | 232       | 43.0      |
| Poultry<br>Meat      | 250          |      | 126   | 50.0      | 389          |      | 146       | 62.0      |
| Fish<br>Meat         | 795          |      | 595   | 25.0      | 1239         |      | 691       | 44.0      |
| Average<br>% deficit |              |      |       | 39.83     |              |      |           | 54.94     |

Table 5: Projected Demand (D) and Supply (S) of some food Commodities in Nigeria, 1985 and 2000, '000 Ton.

Source : Njike and Umeh (2000).

## Table 6: Household Expenditure by item group by Sector, July – September 1992, Nigeria

|                               | Sectors (%) |            |       |
|-------------------------------|-------------|------------|-------|
| Item groups                   | Urban       | Semi-urban | Rural |
| Food                          | 61.91       | 43.61      | 36.68 |
| Drinks and Tobacco            | 0.97        | 1.75       | 1.65  |
| Accom/Fuel/Light              | 4.07        | 3.30       | 2.43  |
| Household Goods               | 4.96        | 3.65       | 3.30  |
| Clothing                      | 4.37        | 5.90       | 3.54  |
| Other Purchases               | 3.38        | 4.57       | 3.81  |
| Transport                     | 3.59        | 2.28       | 1.92  |
| Other Services                | 1.54        | 2.38       | 2.02  |
| Total Goods and Ser-<br>vices | 84.79       | 67.45      | 55.35 |

Source: Federal Office of Statistics (1992). National Consumer Survey Report No. 186, July – September.

## **ISSUES OF AGRICULTURAL PRO-DUCTIVITY AND POVERTY ALLE-VIATION IN NIGERIA**

Several issues arise in the Nigerian rural economy given the poor performance of the agricultural sector post independence.

First is the issue of agricultural research funding. Unlike the situation with agricultural research funding mobilization during the pre-independence, there was no organ like the Marketing Board to mobilize resources for agricultural research funding. However, it suffices to indicate that fund for research flowed from the central government's (Federal Government) efforts. Idachaba (1998) had indicated that funding for agricultural research in Nigeria postindependence period has not only been too little but shows high degree of instability.

Umeh and Odoemenem (1999) had indicated that there were large variabilities in the supplies of improved seeds in Nigeria exceeding 100% for groundnut (foundation seeds) and for wheat (certified seeds). The seed users, largely the smallscale farmers therefore went back to traditional seed sourcing procedure, thus building an inhibition towards the adoption in improved seeds. Productivity of most crops therefore indicated that Nigerian agricultural research has not succeeded in raising crop output over the years.

Second is the labour issue. Labour is the key factor in the rural farm enterprise. With labour, virtually all the rural farm (pre-and post-harvest) and non-farm activities are carried out. Even in the use of farm tools, large amount of manual energy (labour) is required to operate the low technology farm tools to realize a given level of farm size, a factor often used among the rural farmers for measuring agricultural productivity. Given the fact that Nigerian agriculture is dominated by small-holders (rural farm families) who account for about 90% of food production (Federal Republic of Nigeria, 1982) rural labour force is therefore crucial to the agricultural productivity.

Onyenweaku (2000) had listed about five constraints of labour include low agricultural labour productivity due to limited use of mechanical, chemical and biological innovations, shortage of labour due to rural-urban migration, drudgery in farm work, seasonality of labour supply and scarcity and high cost of hired labour. In any case the basic issue with rural labour is the rural problems. Umeh (1991) had indicated the overwhelming influence of rural health on rural labour supply. This is contingent upon the poor mix of limited sources of good drinking water at the rural areas and limited rural health facilities. Idachaba (1980) also added the dimension of education in the overall improvement of the rural labour quality for not only improved agricultural productivity but also for the general rural well being.

Third is the land issue. Though land issue is not as critical as labour issue, since land for food production within the rural environment does not pose much problem as land is acquired through inheritance. Though with rapid population growth rate, land belonging to a farm family/community has continued to be shared leading to small parcels of land per household. This poses its own problem to farm mechanization.

On the other hand, Onyenweaku (2000) had even raised a more general land issue on the land use decree of 1978. The decree has rather compounded rather than solving the land tenure problem for it has succeeded in creating avenues for indiscriminate and unscrupulous acquisition of people's land by Government which share same among top government functionaries. The farmers lack access to land and therefore cannot confidently invest on the land for sustained agricultural productivity.

Fourth issue is the farm-input subsidy and supply. Subsidies on agricultural input in Nigeria post-independence has been ad hoc inspired largely by political maneuver without the framework of a carefully defined agricultural development policy (Idachaba, et al 1980). For example, a fertilizer subsidy, which has been the most important, has had very many episodes. In the late 1970s and early 1980, the average subsidy was 80% of real value at the point of sale (Umeh, 1980). The Fertilizer Procurement and Distribution Unit (FPDU) of the Federal Ministry of Agriculture (FMA) administered procurement. The FDPU distributed fertilizer to the states. Since mid 1980 the subsidy on fertilizer has had varied administrative procedures. At a point fertilizers were distributed in various parts of the country at varying subsidy levels. Large consignments of the input were often lost on transit or taken across the country borders. Thus the anticipated agricultural productivity is never realized.

The agricultural credit also suffers similar problem as fertilizer. In the first place it is inadequate and the intended beneficiaries are poor and illiterate. The process of acquiring the credit often proves incomprehensible to the farmers. The urge by the administrations to improve the chance of recovery often do not materialize as a result of lack of confidence on the co-operative society officials. The overall result is a heavy dependence on informal source of credit. The vicious circle of low capital, low investment, low productivity, low income and poverty persist (Onyenweaku, 2000).

38

Fifth is the issue of agricultural extension. This is critical with regard to material and technique technology adoption. The rural farmer is more prone to adopt a welldemonstrated technology. As a result of poor motivation of the extension agents and poor logistics the agents are liable to poor commitment to their jobs. Poor adoption of the technology results with its implications on agricultural productivity.

Sixth is the rural infrastructure. For illustration, physical infrastructure (rural road-network) is briefly discussed. There is a low and wide dispersion of road lengths in Nigeria. However, the urban areas gain far more than the rural areas. The major policy instrument for rural road implementation in rural Nigeria is the World Bank Assisted Agricultural Development Project (ADP). Umeh and Adekoye (1990) had pointed out the poor distribution and maintenance of network of rural roads by ADP. The Directorate of Food, Roads and Rural Infrastructures (DFRRI) too is another policy instrument for the development and maintenance of rural roads in Nigeria. The Directorate has been scrapped for abandoning its original mission and mandate of maintaining rural roads. Traffic volume within rural Nigeria is therefore low and often restricted to dry season. Consequently, the farmers therefore suffer double tragedy – farm inputs cannot easily be acquired and transported to the farm, while farm produce cannot easily be evacuated for sale at the market centers. Agricultural productivity diminishes as well as income generation.

Other infrastructures/utilities (rural electricity, storage facilities, etc.), which promote the infusion of form, place and time utilities to the agricultural produce, are in short supplies. The resultant effect is low value addition and the placement of poor premium on the agricultural output by the consumers. Low-income generation results and rural poverty worsens. Overall the revenue generation at the grass-root by the Local Government Administration from agricultural industry becomes poor.

As an alternative means of boosting rural income, the dry season farming or more generally the irrigated farm enterprise is an issue for consideration. A large number of rural people is engaged in fadama farm enterprise using low technology approach for water supply. The River Basin Development Authorities are rural development strategy/project to develop both the surface and the underground water sources for both irrigated farming and domestic uses. However, the authorities abandoned its primary mission and mandate and went into direct agricultural production leading to colossal waste. The critical point here is that the River Basin Development Authorities should carry out its catalytic role of surface and underground water development for the use of the rural people for dry season or more generally irrigated farming which generates more income than the rain-fed farming enterprise.

## SOME REMEDIAL CONSIDERA-TIONS TO ISSUES OF AGRICUL-TURAL PRODUCTIVITY AND POV-ERTY ALLEVIATION

In attempting a remedial approach to the issues raised one anchors it all on the poor performance of the catalytic role of the government. Government's major role is to provide the infrastructures and maintain them. The farmers and the organized and unorganized private sectors, which are usually incapable of providing such social overhead either due to large capital investment required or as a result of the incapability of appropriating full benefits from such huge investments, may not be too willing to provide such social over-head capital.

With adequate funding and close monitoring of research institutes, the farmers generate required quantities of improved planting materials for use. In addition to this, with supportive agricultural extension personnel that are well motivated and mobilized, the agricultural productivity of the farmers is bound to increase.

The provision of good access roads linking the research centers, the farms and markets encourages the farmers in both their production and postproduction activities. Farm inputs are easily procured and farm produce is transported faster and in good condition to the market. Rural income will be raised leading to greater impact on the rural purchasing power and therefore poverty alleviation.

A modification of the land use decree of 1978 to limit the rate of agricultural land acquisition for non-agricultural use and thereby ensuring farmers' real investment on the land, gives the desired impetus to large remuneration from farming. It is only the government that can undertake the modification through the necessary art of the National Assembly.

The general improvement in the supplies of other components of rural infrastructures (social and institutional) is also the essential ingredients for not only agricultural productivity enhancement but also the general improvement in the rural life quality. For example, the establishment of rural health facility, improvement in access to good drinking water sources and enhanced rural hygiene through adult or formal education are important and useful for the general well being of the rural people.

The basis for the remedial suggestions here is that the small-scale farmer, the dominant element in the Nigerian agricultural industry, has demonstrated that he is very shrewd and capable of producing the desired results (Idachaba, 1988). He has shown this over time and in different parts of the country. This is possible with new technology of proven profitability, rural infrastructures, guaranteed markets, and adequate and reliable price incentive.

### SUMMARY AND CONCLUSION

#### Summary

Agricultural productivity, which is the amount of agricultural production in relation to agricultural input, is a steppingstone to poverty alleviation particularly for a country like Nigeria with more than 65 percent of the total population living in the rural areas. More so, more than 80 percent of the rural populations are involved in agricultural activities. With the improvement in the quantity and quality of farm inputs and optimum input mix the agricultural productivity is bound to increase. However, this alone does not guarantee purchasing power for the rural people to enable them gain adequate and sustained access to food and other commodity need.

40

Post-harvest and off-farm activities contributed towards poverty alleviation. In cases where they are neglected they often forestall the rate of poverty alleviation. As in the case of agricultural production whereby the rate of improvement in the input determines the rate of productivity, improvement in the supply of required facilities determines the rate of growth in rural purchasing power and therefore the rate of poverty alleviation. The improved supply is essential for an efficient handling of the post-harvest and off-farm activities.

Furthermore, some capital overheads like rural water scheme, health facilities, rural electrification, etc. do not only improve the production, post harvest and offfarm activities, but impinge directly on the rural life quality. They therefore lead to poverty alleviation and enhanced rural life quality.

Nigeria pre-and post independent episodes present contrasting examples. As a result of the improvement in both the production and post-production aspects of export crop commodities the Nigerian economy has been turned around and set on a path of growth and development. For example, the average growth rate for palm oil export 1935-1939 was 30.88% and it dropped to -7.5% post independence. Prephysical independence, infrastructure (rural road, railroad, etc.) was developed to ease the evacuation of export crops to the sea. There were employment opportunities in both the production and post-harvest aspects of the crops pre-independence. As

a result, there was an increased income flow in the rural households.

Post-independence, the structures of the rural infrastructures began to collapse with very negative impacts. Export crop growth rate dropped, the food crop productivity also dropped. Poverty level rose. Food impact bills escalated, for example food import bill for 1997 was 32.5 million.

#### CONCLUSION

Nigeria pre-independence had no problem of food rather revenue generation for financing development projects constituted a problem. Export crop was then developed through the improvement of the inputs for productivity growth rate in the export crop commodities. With the improvement in the post harvest of export crop commodities there was greater rural employment opportunities in the export crop sub-sector. Rural income rose and there was economic boom, which translated into improvement in the rural life quality. The same model is available for Nigeria to use and solve not only her food problem but also the rural poverty problem.

#### REFERENCES

- Federal Republic of Nigeria (1982). Annual Report of the Federal Ministry of Agriculture, FMA, Ikoyi, Lagos, May, 1981.
- Federal Republic of Nigeria (1989). Agricultural Policy for Nigeria, Federal Ministry of Agriculture, Water Resources and Rural Development, Lagos, 65P.

Idachaba, F. S. (1980). Agricultural Re-

search Policy in Nigeria, International Food Policy R e s e a r c h Institute (IFPRI), Research Report (17), 70P.

- Idachaba, F. S. (1980). "Concepts and Strategies of Integrated Rural Development: Lessons from Nigeria. Food Policy Technical Research Paper No. 1, Department of Agricultural Economics, University of Ibadan, Nigeria, 88P.
- Idachaba, F. S. (1985). Rural Infrastructure in Nigeria. Federal Department of Rural Development, Lagos, Nigeria, Interprinters Limited, Ibadan, 987P. Idachaba, F. S. (1988). "Strategies for Achieving Food Self-sufficiency in Nigeria". Invited Keynote Address at the 1<sup>st</sup> National Congress of Science and Technology held at the University of Ibadan, 16 August, 22P.
- Idachaba, F. S. (1998). Instability of National Agricultural Research Systems in Sub-Saharan Africa: Lessons from Nigeria. International Service for National Agricultural Research (ISNAR), Research Report 13, 158P.
- Idachaba, F. S., Kalkat, G. (1980). The Green Revolution: A Food Production Plan for Nigeria (Final Report). "Optimum Fertilizer Subsidy Scheme for Nigeria". Unpublished M.Sc. Thesis, University of Ibadan, Ibadan, Nigeria, 114P.
- Lagemann, J., Flinn, J. C., Okigbo, B. N., and Moorman, F. R. (1975). "Root Crop/Oil Palm Farming Systems: A case study from Eastern Nigeria" (Memo). Ibadan: International Institute of Tropical Agriculture, Ibadan, Nigeria.

- Nweke, F. I. (1980). "The role of market factors in the small-holder cropping system of Southeastern Nigeria". Canadian Journal of Agricultural Economics 28 (3).
- Onyenweaku, C. E. (2000). "Policy Issues and Strategies for Agricultural Production in Nigeria". An invited paper presented at the National Workshop on Enhancing Research and Development in Agriculture and Root Crops Towards Poverty Alleviation and Rural Development in Nigeria, National Root Crop Research Institute Umudike, Umuahia, 22 – 26 May. 22P.
- Thompson, R. L. (1997). "Technology, Policy and Trade: The Keys to Food Security and Environmental Protection". Presidential Address, International Association of Agricultural Economists Conference, Sacramento, USA, August, 12P.
- Umeh, J. C. (1980). "Optimum Fertilizer Subsidy schemer for Nigeria". Unpublished M. Sc. Thesis, University of Ibadan, Ibadan, Nigeria, 114p.
- Umeh, J. C. (1986). "An improved rural road system and farm input costs reduction: A rural empirical evidence". Nigerian Journal of Rural Development and Co-operative Studies. CRDC, University of Nigeria, Nsukka, Nigeria, Vol. 1, No. 3, pp. 47 – 59.
- Umeh, J. C. (1991). "Rural health and labour supplies: empirical evidence from the World Bank Assisted Agricultural Development Project in Kwara State of Nigeria". <u>Social</u> <u>Science and Medicine</u>, Vol. 32 No.

12, pp. 1351 – 1360.

- Umeh, J. C. (1994). "Nigeria's food problem: A Synthesis of incongruous and non-sustainable Production Policy Distortion". African Journal of Agricultural Sciences, Vol. 1, No. 21 (2).
- Umeh, J. C. (2000 forthcoming). Empowerment of the Non-viable Farming Sector for Scientific Production and Marketing: The Nigerian Experience". An invited Symposium paper presented at the International Conference of IAAE on Performance of Non-viable Rural Farm Sector in Rural Economy of Agro-based Developing Countries, held at Berlin, August 12 – 19. 17P.
- Umeh, J. C. and Adekoye, A. A. (1990). "Farming systems for agricultural development: A re-examination of the World Bank Assisted Agricultural Development Efforts in the Ru-

ral Nigeria". African Journal of Agricultural Sciences, Vol. 17, No. 1+2, PP. 1-22.

- Umeh, J. C., Obinne, C. P. O., Ejembi, E. P., Achamber, N. I., and Odoemenem, I. U. (1996). "Socio-economic Impact Study of the Agricultural Development Project System on the Rural Farm Families in Nigeria". Final Report, UAM/APMEU Collaborative Research Studies, FDA/APMEU, Kaduna Nigeria, Vols. 1 6.
- Umeh, J. C. and Odoemenem, I. U. (1999). The Nigerian Seed Industry: Strength, Weakness and Opportunities. Centre for Food and Agricultural Strategy (CEFAS), University of Agriculture, Makurdi, Occasional Paper Series, No. 99 – 1,35P.
- The World Bank (1993). Poverty Reduction Handbook, the World Bank, Washington D. C., April, 318P.