

PRODUCTIVITY IN THE AGRICULTURAL SECTOR

BY

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Introduction

For many years productivity has been a key issue for agricultural development strategies because of its impact on economic and social development. It is generally believed that the surest means through which mankind can raise itself out of poverty to a condition of relative material affluence is by increasing productivity. Productivity improvement creates the wealth that can be used to meet present needs and for investments to better meet the needs of the future. Productivity in its broad sense is a measure of how efficient and effective resources are used as inputs to produce products and services needed by the society in the long run. It is the rate of flow of output when compared with rates of flow of resources used in producing the output of goods and services. In financial terms, productivity is the value of output divided by the cost of inputs used in a given period. The basic resource inputs consist of labour, capital and natural resources. Since resource inputs seldom grow much faster than population, obviously the main source of increase of output per capita is through the growth in productivity.

There is a direct relationship therefore between individual resource productivity and nation building, because improvement in productivity of each worker or farmer leads to improvement in earnings of investors as well as more financial capital for management, and more revenue for government. Improvement in productivity is the most important factor in attaining growth in the economy and this is more so for agriculture which provide means of livelihood for over 65.0 per cent of the populace through

subsistence production which is a predominant feature of agricultural production in Nigeria. Of the 98.3 million hectares of land in Nigeria, 71.2 million hectares can be cultivated. However, only about 34 million or roughly one-third of the area is under cultivation. Output of the sector is adjudged consequently, low and labour intensive. In spite of all these limitations, the agricultural sector in Nigeria provides the main source of food for all, raw materials for industries, foreign exchange earnings through exports and employment.

The objective of the paper is to appraise the performance of the agricultural sector using the various productivity criteria. The rest of the paper is divided into four sections. Section 2 contains the concept and measurement of productivity in agriculture while section 3 reviews the performance of the agricultural sector. Section 4 focuses on the factors affecting productivity in the agricultural sector. Section 5 concludes the paper.

SECTION 2

2.0 CONCEPTS AND MEASUREMENT OF PRODUCTIVITY

2.1 Concepts of Productivity

Within a broad framework, it is possible to have different interpretations or perceptions of productivity. To some, productivity means the ability to accomplish some specified objectives irrespective of the quantum of resources used. This is often referred to as output-centred productivity. To another class of people, productivity will be synonymous with the ability to allocate resources judiciously and to avoid waste. This represents the cost-oriented concept of productivity. The latter class of adherents stress cost-consciousness and in most cases look out for opportunities to insist on budget ceilings. The cost-

oriented conception of productivity is a sharp contrast to the output-centred one. Whereas, the former stresses the need for economic use of resources, the latter places emphasis on the achievement of objectives. The premise upon which the output-centred argument is based is that conservation of resources amounts to creating a false economy especially when the basic objectives of an economy or establishment are not achieved.

Adam Smith was of the opinion that division of labour was the basis of efficiency and productiveness while Sangha (1964) the French Physiocrats believed that surplus resulted only from agriculture when labour is utilised. He stated that the same amount of labour if utilised in manufacturing could not yield surplus. What is now regarded as productivity was termed production and the rate of production, The term product net was applied to the difference between the gross output from agriculture and the cost of producing it, including the subsistence of the cultivators. For conceptual or analytical simplification, the term labour productivity is commonly used to refer to the volume of goods and services produced per worker within some specified period of the year, month, week, day or hour. The adoption of this simplified concept do not take cognisance of the fact that labour productivity is a unit resulting from the interdependent contribution of labour and other factors of production. However, the practice of using labour, especially direct labour, as the most common factor in measuring productivity is due partly to the fact that labour inputs and costs can be ascertained and quantified more easily than those of other factors, and partly due to a legacy of classical economic and Marxist thought which not only tend to regard labour as the sole source of value but also tend to regard all forms of indirect labour as 'unproductive' labour.

In most cases average annual yield per hectare does not significantly vary in one country compared with another section in the country. This is explained by the fact that no matter how the land is prepared

for planting, the soil has its limitations beyond which production per hectare may not be expected to increase. If, however, output per farm worker or per man hour expended in producing a given amount of output is calculated, substantial differences in productivity exist among individual countries. Average productivity of a farmer from a developed economy is several times higher than that of his compeers in Nigeria. This difference is traceable largely to technical factor, with the use of a tractor a farmer could plough almost 100 hectares a day as against about 2 or 3 hectares in Nigeria, where the farmer spends the whole day behind the plough drawn by a pair of bullocks or using cutlasses and hoes.

2.2 Measurement of Productivity in Agriculture

There are no serious measurement problems with single crop farms. In such farms, productivity could be determined in physical terms or in value terms. That is, a measure of productivity would simply be the ratio of physical output, e.g. tonnes or hectares of millet, to the total man hours employed in production of that crop. Similarly, the total value could be used in lieu of the physical measure.

If put in simple arithmetic terms:

$$\text{Productivity} = \frac{\text{Net Output}}{\text{Effort Input}}$$

Consequently,

$$\text{Efficiency of Land Productivity} = \frac{\text{Net Output}}{\text{No. of Hectares of Land.}}$$

Productivity of land is calculated with the assumptions that techniques of production (such as tools of cultivation, methods of irrigation, quality of seeds, fertilizers and the harvesting methods) do not undergo significant changes in one period as compared with another. Productivity is measured through the

construction of productivity indices. The index of productivity can be calculated in two ways. First, the base period could be compared with the current period, Second, the current period could be compared with the base period.

If calculations are based on the base period production composites, the unit labour requirement index will measure the ratio of labour that would have been spent in the current period to produce the base period complex of commodities to the total labour actually expended in the base period. The Laspeyre's formula is used for the construction of this index which is

$$P = \frac{\sum r_1 q_0}{\sum r_0 q_0}$$

where:

P= Productivity index

r = Unit Labour requirement in the current period (corresponding to unit price)

r₀ = unit labour requirement in the base period (corresponding to unit price)

q₀ = quantity in the base period.

If computations are to be based on the current period production composite, the unit labour requirement index indicate the ratio of the labour actually spent to produce the current complex of goods to the labour that would have been spent in the base period to produce the same complex. The Paasche formula is adopted in the computation of the index thus.

$$P = \frac{\sum r_1 q_1}{\sum r_1 q_0}$$

where:

q₁ = quantity in the current year. Other notations are the same as in the Laspeyre formula.

The Laspeyre's formula is adopted with slight modification in the computation of agricultural

production index. This index exhibit the change that takes place in units of agricultural output over a period of time.

The problem of measurement becomes more complex in the calculation of productivity in multicrop farms. It is more difficult to disaggregate the labour input and determine how much of it has gone into production of a particular crop. This problem exists in addition to the general problems relating to the influence of weather conditions on output, the effect of variety of seeds on total yield and the difference in soil fertility. The unavailability of timely and reliable statistics on agricultural activities further compounds the measurement problem. A proffered solution to these problems in terms of methodology is that productivity should be calculated in value terms and weights assigned to individual commodities to reflect their relative importance. Weights can only be assigned if the quantity or value of figures are known and depends essentially on the quantitative significance of the commodities. The agricultural sector in Nigeria is made up of four sub-sectors namely, crops, livestock, fishery and forestry and they are assigned weights of 71.09, 18.81, 4.79 and 5.39 respectively. These weights are based on their respective contribution to the GDP at the base year.

SECTION 3

3.0 PERFORMANCE OF THE AGRICULTURAL SECTOR

Over the years farmers have through the application of science and technology, evolved methods of increasing agricultural productivity. Some of the methods include the use of improved crops and stock, fertilizers and soil conditioner, better cultural and husbandry practices and provision of and more efficient use of water. Agricultural productivity which has been growing over the years at different rates can be

described as low.

For ease of analysis the periods will be divided into three. These are 1970-1985 which is regarded as pre-SAP era; 1986 - 1993 - SAP era; and 1994 - 1999 - Era of guided deregulation.

3.1 **Pre-SAP Era (1970 - 1985)**

The performance of the agricultural sector in terms of output can be gauged from Table 1. The data revealed a decline of 0.9 per cent in the growth rate of agricultural production for the period 1970-1985. Livestock and fishery output fell by 2.4 and 2.0 per cent, respectively. Crop and forestry production, however, rose by 0.3 and 2.5 per cent, respectively. During the period the Gross Domestic Product (GDP) registered an average growth of 2.6 per cent, while agriculture's GDP rose by 3.4 per cent. The share of agriculture in total GDP averaged 29.7 per cent, while manufacturing and crude oil accounted for 9.2 and 13.9 per cent, respectively (Table 2). The value of agricultural exports fluctuated from ₦265.2 million in 1970 to ₦192.1 million in 1985, representing a growth rate of 7.8 per cent and 3.4 per cent of the value of total exports during the period (Table 5). As a result of the decline in agricultural output, domestic food supply had to be augmented with large imports. The food import bill rose from a mere ₦57.7 million in 1970 to a peak of ₦1,819.6 million in 1981 before declining to ₦940.6 million in 1985, representing an average of ₦750.2 million per annum during the period and a growth rate of 25.4 per cent. It accounted for 11.4 per cent of total imports and 1.6 per cent of total GDP. In spite of the importation of food, domestic price for food remained high as the increase in consumer price index for food averaged 43.4 per cent, during the period. The value of imported food/agricultural products more than outweigh the value of agricultural exports.

The performance of the agricultural sector during this period was undermined mainly by

disincentives created by the macro-economic environment. Notable among these were:- (I) the over valuation of the naira exchange rate and the sharp increases in foreign exchange earnings which resulted from rising oil revenues and consequently aided large food imports. The changing taste arising from importation resulted in low demand for traditional food crops such as local rice, yams and beans, with the adverse consequence of reduction in production of these crops by farmers in spite of the huge subsidy on domestic production. The over-valuation of the naira, also put agricultural exports at a disadvantage; (ii) the increased inflow of petro-naira which encouraged increased wages in the public sector also drained labour from the rural areas, thereby depriving the agricultural sector of the much needed manpower for its labour intensive activities, and (iii) the protection of domestic industry through tariff concessions made it more lucrative to invest in industry, thus, shifting the terms of trade in favour of industry. Specific policy measures targeted at the agricultural sector under SAP included institutional reforms, improved pricing policy and specific production schemes for local staples.

3.2 **The SAP-Era (1986 - 1993)**

The performance of the agricultural sector under SAP was an improvement over the preceding period, for instance, aggregate agricultural production grew at an average annual rate of 9.0 per cent. This was an impressive performance when compared with a negative growth of 0.9 per cent recorded in the previous era. All the sub-sectors of agriculture (crops, livestock, fishery, other crops and forestry) contributed to this improvement as they all recorded positive growth rates, unlike in the previous period when only two sub-sectors recorded positive growth rates. The GDP grew at an annual average of 4.8 per cent and the share of agricultural output was 40.0 per cent, compared with 29.7 per cent in the

preceding period. The productivity of the sector as measured by the output per hectare showed that grain recorded an average output of 1.1 tonnes per hectare while roots and tuber, pulses and industrial crops posted outputs of 9.6, 0.5, 1.3 tonnes per hectare, respectively (Table 3).

As a reflection of the increase in agricultural output and the trade liberalisation policy of SAP, the value of agricultural exports rose on the average by 52.0 per cent while its share in total exports stood at 3.1 per cent. Also, the value of food imports during the period rose by 45.5 per cent, while the value of food import as a ratio of total imports was 10.2 per cent, reflecting largely the depreciation in the naira exchange rate. The profitability of some agricultural enterprises increased considerably resulting in expansion in their scale of operation. Others with high foreign components in their inputs became less profitable, owing to high cost of these inputs.

3.3 Era of Guided Deregulation (1994-1999)

This period represented the period of shift in policy from deregulation to guided deregulation. The growth in the output of agricultural products during this period was slower, as aggregate output rose on the average by 3.6 per cent and agriculture's GDP grew by 3.4 per cent. Its share of total GDP was 39.3 per cent. All the sub-sectors of agriculture recorded lower growth rates except fishery which grew by 9.7 per cent. Available data from the Federal Ministry of Agriculture indicated that productivity of grains and roots and tubers farmers increased to 1.6 and 10.2 tonnes per hectare, respectively. The productivity of pulses farmers remained at the SAP level while that of industrial crops farmers declined to 1.0 tonnes per hectare compared with 1.3 tonnes per hectares achieved during the SAP era. Food imports rose to an average of ₦70,484.1 million, representing an annual growth of 78.1 per cent and 11.9 per cent of total

import, reflecting the continued depreciation in the naira exchange rate, the lower output in the agricultural sector, and the reduced capital expenditure (in real terms) on the sector.

SECTION 4

4.0 FACTORS AFFECTING PRODUCTIVITY IN THE AGRICULTURAL SECTOR

Although appreciable real output growth rates have been achieved in the agricultural sector during the SAP and post-SAP era, a significant break-through in productivity to effectively guarantee domestic self sufficiency is still constrained by a number of factors. These factors could be classified as follows:

4.1 Technical Progress

Technological innovations in most cases lead to greater improvements in output per worker. Consequently, a country that has achieved a high level of technological growth tends to have a higher worker productivity. This leads to a more capital intensive and labour saving operations. In Nigeria, the level of technical progress is still very low as more than half of the population is still involved in agricultural production using rudimentary technology (cutlasses and hoes).

4.2 Quality of Labour Force

Attainment of higher productivity presupposes the availability of skilled labour force. Skilled labour force is required to transform the static past into a dynamic present and prosperous future. The inadequacy of skilled farm labour is further compounded by unavailability of labour, particularly when it is required to satisfy seasonal labour demand. This labour shortage has been aggravated by a substantial reduction in the supply of family labour due to the persistent rural-urban drift.

4.3 **Capital Intensity**

Increased technological development augment productivity. As the capital stock per worker tends to be high, there would be an increase in worker productivity. Most farmers who are small scale farmers do not have adequate capital to expand their scale of operations and take advantage of profitable packages of technology to boost productivity.

4.4 **Availability of Raw Materials**

It is a well known fact that no uninterrupted advance in real standard of living can be expected unless resources are domestically produced. Only very few, if any countries manage to achieve higher rates of productivity over a longer period of time if they depended on the import of raw materials. Productive soil, abundance of water supply, forestry and fishery are great assets to an economy. Equally important is the technical knowledge, not only to harness natural resources but also to retain their quality.

4.5 **Inconsistent Policy Measures**

Policy inconsistency often send the wrong signals to stakeholders in agriculture and prevent private sector long term capital investment that could engender increased productivity in the agricultural sector.

Frequent

policy reversals also result in non response to government policies by stake holders.

4.6 **Inadequate Funding of Research Development**

Research development which is a major source of increased productivity in the agricultural sector

has not been adequately funded in the past. In addition, research findings have not been properly coordinated and transmitted to farmers that are expected to be the ultimate beneficiaries.

4.7 **Socio-Economic Factor**

The nature and character of socio-economic set up prevailing in an economy is a factor that is germane to productivity. There may be adequate amount of raw materials and abundant supply of technical know how, however, if the existing political, economic and social institutions are not conducive to improvement, it would be difficult to anticipate substantial gains in productivity.

SECTION 5

5.0 SUMMARY AND CONCLUSION

5.1 Summary

The paper has focused attention on the importance of productivity and the problems associated with measuring it. The various concepts of productivity and their limitations were examined. While one of the concept is focused on efficient allocation of resources, the other emphasises cost efficiency. The role of labour in ensuring increased productivity was highlighted, indicating that irrespective of the breakthroughs in technological innovations, a skilled labour force would still be essential to achieve the desired impact on the agricultural sector.

The performance of the agricultural sector was reviewed and it was observed that the sector performed better during the period of deregulation when stake holders had the opportunity of taking decisions that affected production and marketing without much interference from the government. In spite of the level of performance attained, there were myriad of problems that militated against productivity in the agricultural sector. These were identified as low level of technology, quality of labour, inconsistent policy measures, inadequate funding of research development, among others.

The paper emphasized that productivity is a balance between a great variety of factors, few of which are easily definable or clearly measurable. Unless the factors associated with productivity changes are analysed, productivity measurement by itself provides limited guidance for public or private economic policy. If the country is serious about guiding the development of the agricultural sector, we cannot do without statistics on every aspect of the sector (input and output). It's absence is a serious gap in our national economic statistics and certainly weakens attempts to forecast and monitor trends in the sector.

5.2 **Concluding Remarks**

It should be kept in mind that the conventional concept of productivity is essentially one developed for management at the level of running an individual business; namely, to get as much out as possible from the resources that are employed. At the national level, however, productivity involves more complex issues because it encompasses all of the nation's resources, employed and unemployed. A nation is not maximizing the productivity of its resources unless it is employing all of them efficiently, not just some of them. As agriculture had been the mainstay of the Nigerian economy before the oil boom, it is in the national interest that agriculture be given adequate attention now, so as to ensure a stable economy when the oil market collapses.

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TABLE 1

INDEX OF AGRICULTURAL PRODUCTION BY TYPE OF ACTIVITY: 1970-1999
(1984=100)

| YEAR | AGGREGATE INDEX | CROPS | STAPLES | OTHER CROPS | LIVESTOCK | FISHERY | FORESTRY |
|----------------------|--------------------|-------|---------|----------------|-----------|---------|----------|
| 1970 | 126.0 | 144.5 | 171.6 | 82.5 | 75.1 | 101.6 | 81.5 |
| 1971 | 114.2 | 126.8 | 146.7 | 81.2 | 76.1 | 111.7 | 83.6 |
| 1972 | 94.0 | 98.0 | 101.1 | 76.9 | 74.6 | 119.3 | 85.8 |
| 1973 | 102.2 | 109.1 | 122.3 | 79.0 | 73.6 | 126.7 | 88.6 |
| 1974 | 118.7 | 132.1 | 144.5 | 103.1 | 73.6 | 128.9 | 90.4 |
| 1975 | 104.3 | 111.7 | 122.4 | 87.0 | 74.7 | 127.0 | 94.1 |
| 1976 | 97.6 | 100.6 | 105.0 | 90.6 | 77.1 | 134.9 | 96.8 |
| 1977 | 96.7 | 98.3 | 93.3 | 96.0 | 79.3 | 137.3 | 99.6 |
| 1978 | 93.5 | 92.8 | 89.0 | 101.6 | 81.7 | 141.4 | 102.4 |
| 1979 | 92.4 | 89.9 | 84.2 | 102.9 | 84.7 | 145.8 | 105.1 |
| 1980 | 92.5 | 92.0 | 85.9 | 106.2 | 75.1 | 153.4 | 106.5 |
| 1981 | 95.2 | 93.6 | 87.4 | 107.7 | 88.4 | 132.7 | 106.5 |
| 1982 | 98.3 | 95.7 | 91.4 | 105.5 | 96.1 | 136.8 | 105.7 |
| 1983 | 93.9 | 90.5 | 89.0 | 93.9 | 91.9 | 146.9 | 99.0 |
| 1984 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 1985 | 104.6 | 103.5 | 103.2 | 103.8 | 104.3 | 62.3 | 102.9 |
| 1986 | 108.3 | 111.2 | 110.0 | 115.7 | 108.1 | 69.5 | 106.1 |
| 1987 | 116.1 | 123.4 | 125.6 | 115.1 | 103.9 | 66.8 | 106.3 |
| 1988 | 138.5 | 151.7 | 159.1 | 123.7 | 110.4 | 85.7 | 109.1 |
| 1989 | 153.0 | 169.6 | 178.6 | 137.1 | 117.8 | 89.2 | 112.7 |
| 1990 | 167.5 | 180.0 | 189.4 | 144.9 | 157.1 | 77.4 | 117.1 |
| 1991 | 178.9 | 194.5 | 205.9 | 151.6 | 160.7 | 84.3 | 119.5 |
| 1992 | 200.0 | 233.3 | 254.2 | 154.6 | 159.3 | 84.3 | 122.2 |
| 1993 | 203.7 | 241.1 | 266.3 | 146.1 | 161.6 | 62.9 | 124.7 |
| 1994 | 209.7 | 249.4 | 276.8 | 146.0 | 164.1 | 67.1 | 128.0 |
| 1995 | 215.1 | 255.4 | 285.2 | 143.1 | 171.0 | 77.6 | 130.8 |
| 1996 | 227.3 | 269.6 | 298.1 | 162.2 | 176.0 | 89.4 | 131.5 |
| 1997 | 235.2 | 278.7 | 307.3 | 171.3 | 180.4 | 99.5 | 132.7 |
| 1998 | 242.4 | 288.0 | 316.1 | 182.4 | 181.3 | 105.7 | 133.6 |
| 1999 | 250.4 | 298.2 | 327.5 | 188.0 | 185.6 | 108.8 | 136.3 |
| Average Growth Rate: | | | | | | | |
| 1970-1985 | -0.9 | 0.3 | -2.4 | 2.0 | -2.4 | -2.0 | 2.5 |
| 1986-1993 | 9.0 | 11.3 | 12.9 | 5.9 | 6.3 | 7.7 | 3.1 |
| 1994-1999 | 3.6 | 3.6 | 3.5 | 4.4 | 2.3 | 9.7 | 1.5 |

Sources: (1) Statistical Bulletin, CBN
(2) CBN Annual Report (Various Issues)

TABLE 2
GROSS DOMESTIC PRODUCT AT 1984 FACTOR COST
(=N= Billion)

| YEAR | GDP AT 1984 FACTOR COST | AGRICULTURAL GDP | SHARE OF AGRIC IN TOTAL GDP | MANUFACTURING GDP | SHARE OF MANUFACTURING IN TOTAL GDP | CRUDE-OIL GDP | SHARE OF CRUDE-OIL IN TOTAL GDP |
|----------------------|----------------------------|---------------------|--------------------------------|----------------------|---|------------------|---------------------------------------|
| 1970 | 54.2 | 22.4 | 41.3 | | 0.0 | | 0.0 |
| 1971 | 65.7 | 23.6 | 35.9 | | 0.0 | | 0.0 |
| 1972 | 69.3 | 21.8 | 31.5 | | 0.0 | | 0.0 |
| 1973 | 73.8 | 20.4 | 27.6 | | 0.0 | | 0.0 |
| 1974 | 82.4 | 22.7 | 27.5 | | 0.0 | | 0.0 |
| 1975 | 80.0 | 20.4 | 25.5 | | 0.0 | | 0.0 |
| 1976 | 88.9 | 19.8 | 22.3 | | 0.0 | | 0.0 |
| 1977 | 96.1 | 21.5 | 22.4 | | 0.0 | | 0.0 |
| 1978 | 89.0 | 19.5 | 21.9 | | 0.0 | | 0.0 |
| 1979 | 91.2 | 17.5 | 19.2 | | 0.0 | | 0.0 |
| 1980 | 96.2 | 22.5 | 23.4 | | 0.0 | | 0.0 |
| 1981 | 70.4 | 24.5 | 34.8 | 7.0 | 9.9 | 9.9 | 14.1 |
| 1982 | 70.2 | 25.1 | 35.8 | 7.9 | 11.3 | 8.7 | 12.4 |
| 1983 | 66.4 | 25.0 | 37.7 | 5.5 | 8.3 | 8.5 | 12.8 |
| 1984 | 63.0 | 31.1 | 49.4 | 4.9 | 7.8 | 9.6 | 15.2 |
| 1985 | 68.9 | 27.8 | 40.3 | 5.9 | 8.6 | 10.4 | 15.1 |
| 1986 | 71.1 | 30.4 | 42.8 | 5.7 | 8.0 | 9.8 | 13.8 |
| 1987 | 70.7 | 29.4 | 41.6 | 7.7 | 10.8 | 10.2 | 14.4 |
| 1988 | 77.8 | 32.3 | 41.5 | 8.1 | 10.4 | 11.1 | 14.2 |
| 1989 | 83.5 | 33.8 | 40.5 | 8.5 | 10.2 | 11.3 | 13.6 |
| 1990 | 90.3 | 35.8 | 39.6 | 7.4 | 8.2 | 11.7 | 12.9 |
| 1991 | 96.6 | 36.5 | 37.8 | 8.1 | 8.3 | 12.7 | 13.2 |
| 1992 | 97.0 | 37.3 | 38.5 | 7.7 | 7.9 | 13.1 | 13.5 |
| 1993 | 100.0 | 37.8 | 37.8 | 7.3 | 7.3 | 12.7 | 12.7 |
| 1994 | 101.3 | 38.6 | 38.1 | 7.3 | 7.2 | 12.8 | 12.6 |
| 1995 | 103.5 | 40.0 | 38.6 | 6.9 | 6.6 | 13.1 | 12.6 |
| 1996 | 107.0 | 41.7 | 39.0 | 6.9 | 6.5 | 14.0 | 13.1 |
| 1997 | 110.4 | 43.5 | 39.4 | 7.0 | 6.3 | 14.2 | 12.8 |
| 1998 | 113.0 | 45.6 | 40.4 | 7.0 | 6.2 | 13.1 | 11.6 |
| 1999 | 116.0 | 47.2 | 40.4 | 6.8 | 5.9 | 12.9 | 11.1 |
| Average Growth Rate: | | | | | | | |
| 1970-1985 | 2.6 | 3.4 | 29.7 | -2.0 | 9.2 | 1.7 | 13.9 |
| 1986-1993 | 4.8 | 4.8 | 40.0 | 3.5 | 8.9 | 2.6 | 13.5 |
| 1994-1999 | 2.5 | 3.4 | 39.3 | -1.2 | 6.5 | 2.9 | 12.3 |

Source: Federal Office of Statistics, Lagos.

TABLE 3
TRENDS IN AGRICULTURAL PRODUCTIVITY IN NIGERIA, 1986-1996
Tonnes Per Hectare

| | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 |
|---------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| GRAINS | 0.98 | 1.10 | 0.93 | 1.12 | 1.07 | 1.04 | 1.12 | 1.15 | 1.13 | 1.22 | 1.22 |
| MAIZE | 1.65 | 1.35 | 1.44 | 1.39 | 1.13 | 1.13 | 1.12 | 1.18 | 1.27 | 1.26 | 1.33 |
| MILLET | 0.83 | 0.96 | 0.74 | 0.97 | 1.07 | 0.90 | 1.03 | 0.95 | 0.95 | 1.09 | 1.06 |
| SORGHUM | 1.06 | 1.06 | 1.14 | 1.05 | 1.00 | 0.97 | 1.08 | 1.08 | 1.08 | 1.15 | 1.14 |
| RICE | 1.97 | 1.92 | 0.78 | 2.00 | 2.07 | 1.95 | 1.96 | 1.96 | 1.42 | 1.76 | 1.75 |
| WHEAT | 1.97 | 1.93 | 0.49 | 2.00 | 2.07 | 2.07 | 2.42 | 2.36 | 2.33 | 2.20 | 2.04 |
| ACHA | 0.06 | 0.06 | 0.02 | 0.03 | 0.03 | 0.04 | 0.05 | 0.61 | 0.59 | 0.54 | 0.51 |
| ROOTS & TUBERS | 10.94 | 10.25 | 7.92 | 4.94 | 11.49 | 10.02 | 10.57 | 10.56 | 10.57 | 10.03 | 10.10 |
| CASSAVA | 11.31 | 10.77 | 10.30 | 1.24 | 12.94 | 10.19 | 10.59 | 10.59 | 10.59 | 10.67 | 10.66 |
| YAM | 11.65 | 10.10 | 5.23 | 10.43 | 10.68 | 10.35 | 11.35 | 11.35 | 11.40 | 10.54 | 10.68 |
| SWEET POTATO | 6.38 | 6.20 | 6.20 | 6.00 | 5.11 | 5.94 | 4.27 | 5.20 | 4.42 | 3.91 | 4.91 |
| IRISH POTATO | 5.75 | 5.63 | 6.43 | 6.25 | 6.75 | 7.33 | 7.30 | 7.27 | 6.92 | 6.79 | 4.95 |
| COCOYAM | 4.10 | 4.27 | 2.79 | 4.74 | 5.18 | 4.99 | 5.00 | 5.00 | 4.99 | 5.16 | 4.88 |
| PULSES | 0.44 | 0.44 | 0.51 | 0.64 | 0.62 | 0.47 | 0.48 | 0.48 | 0.48 | 0.49 | 0.48 |
| COWPEA | 0.46 | 0.46 | 0.45 | 0.75 | 0.75 | 0.50 | 0.51 | 0.51 | 0.51 | 0.49 | 0.46 |
| SOYABEAN | 0.32 | 0.33 | 0.24 | 0.40 | 0.30 | 0.31 | 0.30 | 0.30 | 0.30 | 0.47 | 0.64 |
| PLANTAIN | 6.02 | 7.49 | 9.08 | 7.48 | 7.50 | 7.52 | 7.54 | 7.06 | 6.77 | 6.53 | 6.59 |
| IND. CROPS | 1.12 | 1.25 | 1.18 | 1.32 | 1.41 | 1.34 | 1.40 | 1.11 | 1.02 | 0.98 | 1.11 |
| COTTON | 0.15 | 0.34 | 0.43 | 0.53 | 0.48 | 0.48 | 0.53 | 0.53 | 0.53 | 0.58 | 0.67 |
| G/NUT | 1.13 | 1.15 | 0.97 | 1.12 | 1.40 | 1.21 | 1.24 | 0.90 | 0.85 | 0.89 | 1.01 |
| COCOA | 0.26 | 0.29 | 0.29 | 0.36 | 0.34 | 0.37 | 0.40 | 0.42 | 0.43 | 0.26 | 0.44 |
| COFFEE | 0.50 | 0.53 | 0.53 | 0.62 | 0.73 | 0.77 | 0.80 | 0.85 | 0.88 | 1.33 | 1.21 |
| S/CANE | 40.77 | 40.09 | 40.09 | 39.13 | 41.82 | 40.36 | 38.96 | 37.71 | 33.32 | 29.45 | 29.29 |
| SHEANUT | 8.36 | 9.81 | 10.17 | 5.59 | 6.47 | 5.90 | 6.67 | 2.34 | 2.57 | 1.42 | 2.44 |
| RUBBER | 0.46 | 0.48 | 0.48 | 1.12 | 1.28 | 1.22 | 1.24 | 1.25 | 1.23 | 1.29 | 1.31 |
| GINGER | | | | 1.89 | 1.75 | 2.15 | 2.00 | 1.88 | 1.78 | 1.72 | 1.54 |
| MELON | 0.00 | 0.00 | 0.00 | 0.17 | 0.18 | 0.22 | 0.23 | 0.26 | 0.27 | 0.28 | 0.27 |
| BENNISEED | 1.46 | 1.69 | 1.61 | 2.04 | 1.89 | 1.90 | 1.89 | 1.88 | 1.99 | 2.16 | 2.28 |

Source: Federal Ministry of Agriculture.

TABLE 5
NIGERIA'S FOREIGN TRADE IN AGRICULTURAL COMMODITIES
 (=N= Million)

| Year | EXPORTS | | IMPORTS | |
|----------------------|---------|-----------------------------------|--------------|--------------------------------------|
| | Exports | Share of Agric In Total Export | Food Imports | Share of Food In Total Imports |
| 1970 | 265.2 | 30.0 | 57.7 | 459.6 |
| 1971 | 242.8 | 18.8 | 88.3 | 275.0 |
| 1972 | 164.8 | 11.6 | 95.8 | 172.0 |
| 1973 | 250.1 | 10.9 | 126.3 | 198.0 |
| 1974 | 276.0 | 4.7 | 154.8 | 178.3 |
| 1975 | 230.6 | 4.7 | 298.8 | 77.2 |
| 1976 | 274.1 | 4.1 | 441.7 | 62.1 |
| 1977 | 375.7 | 4.9 | 780.7 | 48.1 |
| 1978 | 412.8 | 6.8 | 1027.6 | 40.2 |
| 1979 | 468.0 | 4.8 | 952.2 | 49.1 |
| 1980 | 340.1 | 2.4 | 1437.5 | 23.7 |
| 1981 | 113.2 | 1.0 | 1819.6 | 6.2 |
| 1982 | 198.6 | 2.4 | 1642.3 | 12.1 |
| 1983 | 431.2 | 5.8 | 1296.7 | 33.3 |
| 1984 | 288.8 | 3.2 | 843.2 | 34.3 |
| 1985 | 192.1 | 1.6 | 940.6 | 20.4 |
| 1986 | 407.4 | 4.6 | 801.9 | 50.8 |
| 1987 | 937.4 | 3.1 | 1646.5 | 56.9 |
| 1988 | 1780.4 | 5.7 | 1220.0 | 145.9 |
| 1989 | 1726.8 | 3.0 | 2108.9 | 81.9 |
| 1990 | 2857.0 | 2.6 | 3474.5 | 82.2 |
| 1991 | 3425.0 | 2.8 | 7785.5 | 44.0 |
| 1992 | 3054.9 | 1.5 | 11738.4 | 26.0 |
| 1993 | 3437.3 | 1.6 | 13952.4 | 24.6 |
| 1994 | 3818.8 | 1.9 | 16767.2 | 22.8 |
| 1995 | 15512.0 | 1.6 | 88349.9 | 17.6 |
| 1996 | 18020.4 | 1.3 | 75954.6 | 23.7 |
| 1997 | 19826.1 | 1.6 | 100640.3 | 19.7 |
| 1998 | 16338.9 | 2.2 | 102165.1 | 16.0 |
| 1999 | 16394.9 | 1.4 | 103489.8 | 15.8 |
| Average Growth Rate: | | | | |
| 1970-1985 | 0.3 | 7.4 | 25.4 | 105.6 |
| 1986-1993 | 0.5 | 3.1 | 45.5 | 64.1 |
| 1994-1999 | 0.7 | 1.7 | 78.1 | 19.3 |

Source: Federal Office of Statistics.