

- ects of sectoral ministries and agencies.
- (4) Definition of a manageable area for integrated area development schemes and creation of a strong coordinating framework (e.g., public authority) to coordinate planning and implementation of rural development projects and services.
- (5) The creation of viable and effective rural organizations to serve as channels of participation and mobilization for rural development programs and projects. These organizations should be led and controlled by the poorer and more disadvantaged members of the rural communities.

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Agricultural Development Policy in Nigeria (1975-1980): Goals, Objectives, and Performance

FESTUS C. NZE*

The agricultural development policy of Nigeria is addressed toward the radical transformation of the economy which is characterized by general unemployment due to the seasonal nature of agricultural activities, the division of labor between sexes, and the seasonal shortage of labor at peak periods of land clearing, weeding, planting, and harvesting. A ₦30 billion capital expenditure has been appropriated to operationalize these policies and support the programs lined up to gain self-sufficiency in food and to give Nigerian agriculture the status it enjoyed from 1940 to the mid-1960s as an "engine of growth" in economy. Among the programs to support the policy goals are cooperative production, farm input, and infrastructure programs.

The role of agriculture in the process of economic development cannot be overemphasized. It provides, as economic development gets under way, the increased food supplies required to sustain a growing population and provides in addition the raw materials and fiber for industrial production. Through the export of agricultural produce, foreign exchange is earned for economic development. As the production process improves and output per farm increases, the agricultural sector in the long-run releases labor for the non-farm sectors of the economy. Agriculture in addition contributes to increased capital formation needed for overhead investment and industrial expansion. As the purchasing power of the rural population increases resulting from increased farm output and net cost incomes, the demand

for industrial goods and products of other non-farm sectors is stimulated.

This paper is a performance appraisal of the agricultural development policies enunciated in the Nigerian Third National Development Plan, 1975-1980. The paper is divided into five parts. Part I presents the geo-agro-political setting of Nigeria. Part II outlines the agricultural development policies enunciated in the 1975-1980 Development Plan. Part III is a performance appraisal of the different programs associated with the overall policies in the Plan. In Part IV, selected major reasons for the unsatisfactory performance of the agricultural sector in the period under review are discussed. In Part V, a series of policy challenges, which the Nigerian government should accept if agriculture is to be restored to a position of powerful preeminence in the Nigerian economy, are presented.

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Nineteen States, Eighty Million People, and the Agricultural Sector

Nigeria is an independent republic in West Africa. It is a federation of 19 states

and is the most populous country in Africa with an estimated population of 80 million people. It spans an area of 357,000 square miles (925,000 square kilometers) and has a land mass extending inland from the eastern end of the Gulf of Guinea deep into the western savannah. Nigeria lies between the Cameroons on the East and Benin on the West; to the North is Niger and to the Northeast is Chad. It gained independence from Britain on 1 October 1960. Total cultivable land in Nigeria is estimated at 74.0 million hectares, out of which 34.0 million hectares or less than 58 per cent is being cultivated.¹ This proportion of land is cultivated by 80 percent of the population living in the rural areas. The rest of the land lies in medium-to long-term fallow. Agricultural land in Nigeria is underutilized.

The qualitative depreciation of most of the land under frequent cultivation is glaring. The underutilization of agricultural land itself is a function of institutional constraints — the land tenure system² and seasonal labor shortages. The land tenure system is mainly responsible for the fragmentation of holdings and the difficulties in mechanization and modernization of agricultural production. Farmers' initiative is dampened by the generally low return from production, especially of food crops. It is worthy to note that the

average national level of fertilizer consumption is 1.28 kg. per cropped hectare as compared to a recommended average of about 18.18 kg. per hectare.³ The savannah lands of Nigeria sustain the bulk of the country's livestock. Substantial population of goats, sheep, and poultry abound in all the states of the Federation. Most of the pigs are reared in the southern parts of the country. Nearly all the cattle are located in the northern parts of the country.

About 39 percent of the country's land area may be classified as forest land and roughly ten percent, or about 9.6 million hectares, are occupied by forest reserves which are made up of mangroves, high forest, and savannah woodland. The forest products of Nigeria are many and varied. By far, the most economically important at present are wood products, such as timber, firewood, and poles. The volume of commercial timber in the country has been estimated at 70 million cubic meters. Removal of industrial woods from Nigerian forests probably stands at just below two million cubic meters annually.⁴

Nigeria has several river systems. The Niger, Benue, Gongola, Hadejia, Cross, Ogun, and Imo Rivers readily come to mind. These river systems coupled with the ground water which is yet little investigated provide a water-resource base for modernized agriculture.⁵

Production is carried out by farmers with holdings of less than two hectares on the average. They grow a variety of crops, usually including their subsistence needs of food crops. The level of technology is

¹Segun Famoriyo, "Aspects of Agricultural Development in Nigeria," Unpublished paper presented at the Social Science Seminar, Ahmadu Bello University, Zaria, Nigeria, 1979, p. 1.

²The Land Use Decree enacted by the Federal Government (1978) now vests all lands in urban areas of each state to the governor of that state, while rural lands are vested to local governments exercising jurisdiction in the particular areas. In the rural areas, local governments are authorized to grant customary rights of occupancy to individuals or organizations: 5,000 hectares for grazing and 500 hectares for food production.

³Federal Republic of Nigeria, Federal Ministry of Economic Development, *Third National Development Plan 1975-1980*, Vol. 1 (Lagos, Nigeria), p. 63.

⁴*Ibid.*

⁵*Ibid.*, p. 64.

low with land and labor as the principal inputs. The use of fertilizers and other modern inputs, such as herbicides and pesticides, is extremely limited.⁶

The dominant tools for agricultural production are manual instruments, such as hoes and cutlasses. Use of ox-drawn implements is limited, while the use of power equipment and machinery is almost nil.⁷ The low level of agricultural production technology is largely responsible for the very low yields and low productivity of resources characterizing Nigerian agriculture. The average output per worker is about ₦175 per annum⁸ or approximately US\$305, which is about half of the average per capita production in some other sectors of the economy.⁹

Capital for investment in agriculture for sometime was scarce. Thus, much of the capital formation in agriculture consisted of land improvement. During the past ten years, however, there has been a gradual increase of investment (an unsatisfactory increase though) in the agricultural sector.¹⁰ The rate of this investment is far less than that of capital formation in other sectors. The reason for this state of affairs is simply that a considerable portion of the capital funds generated by agriculture and captured as surpluses by the Marketing Boards was in-

vested in public overheads and non-agricultural activities, which were largely concentrated in the urban areas of the country rather than for infrastructure facilities in rural communities.

Agriculture in Nigeria is marked by considerable diversity of output. There is a fairly sharp regional specialization in the production of crops based on ecological characteristics. Groundnuts, cotton, millet sorghum, and cowpeas are grown in the North; while cocoa, palm-oil, rubber, yams, cassava, and maize are grown in the South. There is a great degree of variation in specific requirements for efficient production from crop to crop and from locality to locality. In spite of the diversity, agricultural production has several general features throughout the country.¹¹ Even though about 80 percent of the population in Nigeria live in the rural areas and are engaged in agriculture, the agricultural sector of the economy is "characterized by general unemployment due to the seasonal nature of agricultural activities and the division of labor between the sexes. . . (there is also) the seasonal shortage of labor at peak periods of land clearing, planting, weeding and harvesting."¹² Skilled manpower for agriculture is in short supply. Supporting and extension services are to all intents and purposes inadequate.¹³

Such then is the situation in Nigeria's agricultural sector. It is against this backdrop that the performance of the agricultural development policies and programs in the 1975-1980 Plan in Nigeria would be evaluated.

⁶E.G. Etuk, "A Critical Analysis of the Approach to Agricultural Development Programs in the Third National Development Plan 1975-80," in G. Jan Van Apeldoorn (ed.), *The Aftermath of the 1972-74 Drought in Nigeria*, Ahmadu Bello University, Zaria, Nigeria, 1977, p. 88.

⁷*Ibid.*

⁸The Nigerian currency is called Naira (₦). ₦1.00 is worth, at current exchange rates, US \$1.72.

⁹*Ibid.*

¹⁰Federal Republic of Nigeria, Federal Ministry of Economic Development, *op. cit.*, p. 64.

¹¹Etuk, *op. cit.*, p. 88.

¹²*Ibid.*, p. 89.

¹³A detailed discussion of this problem will be presented in another section of this paper.

Agricultural Development Policies and Programs in the 1975-1980 Development Plan

The Third National Development Plan, launched in 1975, stands a breed apart from previous development plans in a number of ways. It is the biggest and most ambitious plan ever prepared for Nigeria. The 1962-1968 and 1970-1974 National Development Plans, involved a capital expenditure of ₦2.2 billion and ₦3 billion, respectively. The Third National Development Plan envisaged a capital expenditure of ₦30 billion. While the previous Plans aimed at a growth rate of 4 percent and 6.6 percent, respectively, the 1975-1980 Plan projected a growth rate of 9 percent. The enormous size of the Plan is meant to ensure a radical transformation of the economy during the Plan period.

In the agricultural sector, a number of policies and objectives was adopted to aid the "radical transformation" of the economy envisaged by the government. Before itemizing these policies, a companion rationale for adopting the policies is presented.

In 1972, a food balance sheet for Nigeria was published in *A Quantitative Analysis of Food Requirements, Supplies and Demands in Nigeria, 1968-1985*. The balance sheet showed that the average Nigerian consumed 2,083 Kcal and 53.83 grams of crude protein per day in 1968-1969. The Food and Agriculture Organization (FAO) sets the minimum requirement at 2,191 Kcal and 53.8 grams of crude protein. The 1974-1975 food balance sheet made estimates along the same lines as the 1972 balance sheet (see Table 1). According to these figures, production of all food commodities rose by approximately 2.5 percent per annum during the 1969-1974 period barely

enough to keep up with the increase in population. Calories intake per head per day was estimated at 2,024 and crude protein per head at 56.46 grams. These figures came close to the 1968-1969 figures.¹⁴

The Federal Government elected to adopt policies which would lead to meeting these minimum requirements by 1979-1980. It set fresh targets which were slightly greater than the 1974-1975 projections. More concretely, the government decided that during the 1975-1980 plan period it would seek an increase in calories intake of 2,200 Kcal/person/day and crude protein consumption of between 60 and 65 grams. Table 2 shows projections for the Plan period. The table shows the required rates of growth of production and imports to attain the prescribed targets. From the figures, a 4.8 percent growth rate in food production will be required. Non-animal food production will grow by 4.5 percent, fish production by 10 percent, and livestock production by 3.9 percent. Animal protein as a percentage of total protein is expected to increase from 13.4 percent to 14.3 percent. To attain these targets, the potentials of the fisheries subsectors are to be tapped.¹⁵

Pursuant to these goals and targets the Federal Government re-adopted the policies and programs enunciated in the agricultural chapter of the *Second National Development Plan (1970-1974)* as the policies to guide action in the agricultural sector in the current plan period, namely:

(1) Ensuring food supplies in adequate quantity and quality to keep pace with

¹⁴Federal Republic of Nigeria, Federal Ministry of Economic Development, *op. cit.*, pp. 66-67.

¹⁵*Ibid.*, p. 67.

Table 1. Estimated Food Supply, 1974-1975

Crops, Livestock, and Fish	Estimated Production 1974-1975 (million tons)	Estimated Imports 1974-1975 (million tons)	Estimated food supply 1974-1975 (million tons)	Estimated annual growth-rate of production 1969-1970 to 1974-1975	Calories cap/day 1974-1975	Protein cap/day 1974-1975
Maize	1.62	—	1.50	3.1	158	4.22
Millet	3.05	—	3.05	1.8	334	11.24
Sorghum	4.02	—	4.02	1.5	426	12.34
Rice	0.42	—	0.42	6.3	41	0.79
Wheat	0.020	0.460	0.480	6.0	46	1.12
Yam	14.4	—	14.4	3.0	246	5.75
Cassava	5.5	—	5.5	1.1	166	1.36
Pulses	1.08	—	1.08	6.5	93	6.37
Sugar	0.030	0.140	0.170	4.5	25	—
Cocoyam	1.63	—	1.63	1.5	24	0.43
Melon seeds	0.11	—	0.11	5.9	18	0.77
Other food crops	*	*	*	2.5	369	4.38
Beef	0.112	0.049	0.161	*	14	0.90
Goats	0.086	—	0.086	*	4	0.46
Mutton	0.020	—	0.020	*	2	0.09
Poultry	0.068	—	0.068	*	4	0.32
Pigs	0.0135	—	0.0135	*	2	0.05
Offals	0.044	0.010	0.054	*	3	0.33
Eggs	0.068	—	0.068	*	4	0.29
Milk	0.320	0.220	0.0540	*	15	0.72
Fish	0.700	0.200	0.089	7.3	21	2.99
Other livestock food	*	*	*	2.5	8	1.33
Sub-Total food crops	*	*	*	2.4	1,946	48.97
Sub-Total livestock and fish	*	*	*	*	77	7.49
Total Food	*	*	*	*	2,023	56.46

Source: Federal Ministry of Economic Development, *Third National Development Plan 1975-1980*

*Not available.

increased population and urbanization having regards to changing tastes and the need for fair and stable prices.

(2) Expanding the production of crops with a view to increasing and further diversifying the country's foreign exchange earnings.

(3) Significantly increasing the production of agricultural raw materials to support domestic manufacturing activities, especially in the field of agro-based industries, in addition to export.

(4) Creating rural employment opportunities to absorb more of the increasing labor force in the nation, and minimizing the tendency for inadequate and inefficient use of human resources in the rural areas generally.

(5) Evolving appropriate institutional and administrative apparatus to facilitate a smooth integrated development of the agricultural potential of the country as a whole.

To give effect to these policy goals, various programs were planned.

Crop Production Programs

Parallel programs by the Federal and state governments were planned to ensure that food supply keeps pace with the growth of population and urbanization. This activity is to cover the major cereals — rice, maize, sorghum, and wheat. Grain legumes and cassava were also included in the inventory of crops to be produced by the Federal and state governments. The crop production program was estimated at ₦28,814 million. The centerpiece of the Federal government endeavor in the area of food crop production is the so-called *National Accelerated*

Food Production Program (NAFPP). The program would bring "improved practices, like high-yielding varieties, fertilizers, pesticides, credit and management to farmers through a coordinated package approach."¹⁶ The planners were optimistic that during the plan period 24,000 hectares of land would come under cultivation. And that 324,000 farmers would be involved annually generating 146,000 metric tons of rice; 97,440 tons of maize; 4,000 tons of sorghum; 9,300 tons of wheat; 3,000 tons of soybean, and 10,700 tons of pigeon peas.¹⁷

A tree crop program formed part of the crop production program. The main aim was to induce small landholder participation in replanting and plantation development. Subsidized inputs and intensive extension service were to be provided. The strategy according to the Plan document "includes the development of nucleus plantation for demonstrating modern plantation culture and the provision of processing facilities." During the plan period, 54,630 hectares of oil palm to be developed, 18,540 hectares of cocoa, and 8,900 hectares of rubber. The Plan further projected an annual output of 130,310 metric tons of palm oil and 26,400 metric tons of palm kernel from the oil palm program. The rubber project was to yield 7,950 metric tons of rubber latex.¹⁸

Farm input program. Fertilizer, pesticides, and allied chemical procurement and distribution, farm mechanization, and farm credit were some of the important highlights of the input program; ₦235 million was allocated to this program. Fertilizer was to be sold to state governments at 50 percent subsidy. An estimated

¹⁶*Ibid.*, p. 72.

¹⁷*Ibid.*

¹⁸*Ibid.*, p. 76.

Table 2. Projected Food Supply, 1979-1980

Crops, Livestock, and Fish	Target Production, 1979-1980 (million tons)	Target Imports, 1979-1980 (million tons)	Target Food Supply, 1979-1980 (million tons)	Target Rate of Growth of Production, 1974-1975 to 1979-1980 % p.a.	Calories cap/day, 1979-1980	Protein cap/day, 1979-1980
Maize	2.35	—	2.30	7.5	214	5.71
Millet	3.57	—	3.57	3.2	345	11.63
Sorghum	4.71	—	4.71	3.2	441	12.98
Rice	0.80	(-0.150)	0.65	14.5	56	1.08
Wheat	0.20	0.575	0.775	160.0	65	1.58
Yam	16.80	—	16.80	3.1	254	5.93
Cassava	6.45	—	6.45	3.2	172	1.41
Pulses	1.50	—	1.50	6.8	114	7.82
Sugar	0.08	0.140	0.220	21.6	28	—
Cocoyam	1.78	—	1.78	1.6	24	0.42
Melon seeds	1.55	—	0.155	6.0	22	0.96
Other food crops	*	8	*	2.9	377	0.46
Beef	0.143	0.044	0.187	5.0	14	0.92
Goats	0.093	—	0.093	1.7	4	0.44
Mutton	0.022	—	0.022	1.8	2	0.08
Poultry	0.086	—	0.086	4.8	4	0.35
Pigs	0.017	—	0.017	5.0	2	0.06
Offals	0.052	0.009	0.061	3.5	3	0.33
Eggs	0.091	—	0.091	6.0	5	0.38
Milk	0.360	0.29	0.650	2.4	16	0.76
Fish	1.085	0.43	1.465	10.0	31	4.35
Other livestock food	*	*	*	2.5	8	1.34
Sub-Total food crops	*	*	*	4.5	2,112	54.19
Sub-Total livestock and fish	*	*	*	5.5	89	9.01
Total food	*	*	*	4.8	2,201	63.20

Source: Federal Ministry of Economic Development, *Third National Development Plan 1975-1980*.

*Not available.

1.683 million metric tons of fertilizer would be purchased at a capital cost of ₦75 million. Pesticides and related chemicals were to be sold at subsidized rates to state governments to facilitate pest control schemes and activities. The Federal inputs program envisaged a considerable amount of research which would lead to the development and production of small and cheap motor powered and animal drawn implements to replace traditional hoes and cutlasses. To pursue these objectives, a Federal Farm Mechanization Center was slated for funding. The provision of short-, medium- and long-term credit facilities to supplement private savings for agricultural production constituted another vital ingredient of the Federal farm input program. The Nigerian Agricultural Bank advanced an initial working capital of ₦158 million for supplying credits to government projects, cooperatives, and private farmers.

Infrastructure development program.

The Federal infrastructure development program which constituted the bulk of the sub-sector capital estimate with an allocation of ₦428.826 million consisted mainly of irrigation, soil conservation, land-use survey, agricultural research, manpower, training, and grain storage and marketing. A sum of ₦290.276 million was allocated for constructing irrigation facilities, which would bring about 444,000 hectares of land under irrigation agriculture during the Plan period.¹⁹ In the soil conservation area, the Federal government proposed to embark on three major schemes of contour bunding, terracing, check damming, and drainage systems. The drought-prone areas of the Sahelian zones of the country, threatened

by desert encroachment, were to benefit from extensive afforestation programs.²⁰

In the area of agricultural research, the Plan stipulated that emphasis should be on food, tree, and industrial crops. To this end, the development of high-yielding and disease-resistant seeds would be pursued. Institutional specialization in the Federal research program was recommended. Thus, research stations in the different ecological zones were to concentrate on different classes of crops.²¹ Shortfalls in agricultural manpower in the country were to be rectified through the expansion of the Federal School of Agriculture at Umudike, Imo State. A new school of agriculture capable of admitting 500 students each year, to be trained as extension workers, was to be built during the Plan period under review.

In order to provide for national emergencies, such as drought, and for price stabilization, a Federal Grain Reserve project was endorsed. The Plan projected that by 1979-1980 the grain reserves would hold about 250,000 metric tons. Such then were the policies, the promises, and programs for agricultural development in Nigeria during the

²⁰For a fuller discussion of the schemes, see the Federal Republic of Nigeria, Federal Ministry of Economic Development, *op. cit.*, p. 85.

²¹The Umudike Research Station would focus on root crops—cassava, yam, and cocoyams. While the Jos Station with its sub-tropical climate and soil conditions would concentrate on potato. The Moor Plantation Research Station Ibadan would concentrate on rice, maize, and pulses. The Institute for Agricultural Research (Ahmadu Bello University) Samaru Zaria was slated to work on millet and sorghum. For a fuller discussion of the diffusion of research responsibilities, see *ibid.*, pp. 85-86

¹⁹This sum of money was later revised upwards to read ₦533 million.

1975-1980 period. What did these policies achieve in this vital sector of the economy? What was the performance? The third part of the paper addresses these questions.

Performance Evaluation

A prevailing myth among lay persons is that once the government sets its mind to do something and allocates funds, its goals will be achieved. This myth persists in spite of evidence to the contrary. One major reason for this myth is the failure to distinguish "policy output" from "policy impact."²² "Policy outputs" are concrete and "symbolic manifestations of public policy." They are indicators of what a government plans to do. The agricultural development policies enunciated in *The Third National Development Plan (1975-1980)* in Nigeria is a case in point. Policy outputs tell nothing about performance. The amount of money allocated to programs and projects, the units of services to be provided, the number of hectares to be ploughed, or the number of tons of fertilizer to be procured are valid measures of policy outputs. They do not tell whether the desired objectives have been achieved. "Policy impact," on the other hand, refers to performance. It tells the extent upon which a policy output has achieved its stipulated goals and objectives. The concern here is with the impact of the agricultural policies stipulated in the *Third Plan* for Nigeria.

Nachmias has stated that the process of making judgements of worth is universal; Suchman observes that this process "is basic to almost all forms of social behaviour whether that of a single in-

dividual or a complex organization."²³ Judgements of worth can issue forth, through "conventional wisdom, intuition and reliance on authority." It can also be made through observation, experience or via the scientific approach. In judging the performance of agricultural development policies and programs in Nigeria during the present Plan period recourse will be made to most of the criteria identified by Suchman.

The performance of the agricultural sector in the period under review was unsatisfactory. Put differently, policies and programs enunciated in the Plan had limited impact. A great deal of time, energy, and scarce resources was spent on erecting huge bureaucratic structures and in effecting structural changes (some of which were irrelevant) in aid of agriculture, instead of addressing the problems of peasant farmers. As a result food prices soared in the face of declining productivity on the farms. The production of raw materials and fiber for domestic industrial production petered. Importation of food and fiber claimed the attention of government. In 1977 alone ₦600 million was spent on food importation, whereas in 1970 just after the Civil War only ₦57.8 million was spent for the same purpose. In the same year (1977), agricultural exports fell to 6.4 percent from its prime position of 78 percent in 1964.²⁴

As indicated earlier, bureaucratic institution-building claimed government attention. The regional marketing boards were dismantled and replaced by seven national commodity boards, where a new

²²David Nachmias, *Public Policy Evaluation* (New York: St. Martins Press 1979), p. 2.

²³*Ibid.*, p. 3.

²⁴*Daily Times*, (20 April 1979), p. 7

job description for existing structures or mergers would have sufficed. The new boards had the responsibility for marketing various food commodities and guaranteeing minimum prices to farmers in the hope that this would create a "conducive atmosphere for increased food production." According to Forrest, these boards "have attracted little produce inasmuch as minimum prices set in relation to world market prices are below local market prices."²⁵ The boards were also responsible for establishing agencies for direct state intervention in food production, storage, and marketing.²⁶

River basin development authorities corresponding with the major river systems were created. National Root and Grains Crops Production Companies were launched. Three years after its inception the National Root Crops Production Company was still saddled with the problem of bringing its cassava production on stream. The River Basin Authorities fared no better. Little was achieved by these Authorities in the area of crop production. Efforts of the older Authorities focused on the establishment of irrigation infrastructure facilities, while the new ones broke grounds for setting up their respective administrative machinery and commissioning feasibility studies.²⁷

There was also a poor showing in the storage facilities construction projects. Out of a target 82,000 ton storage facilities to be provided during the Plan

period, only 17,000 ton capacity was completed in nine states.²⁸

At the inception of the Plan in 1975, the Federal Government established a Fertilizer and Pesticides Board. For three years, the Board remained non-functional. In the interim, the Federal Department of Agriculture performed its functions, purchasing fertilizer and pesticides centrally for the various state governments.²⁹

Of the projected 1.683 million tons of fertilizer to be purchased during the Plan period at a capital cost of ₦75 million, only 298,000 tons costing ₦12 million was purchased at the time the Second Progress Report on the Third Plan was published. The states, on their part, purchased insufficient quantities.³⁰ The plan for the establishment of a National Mechanization Center for agricultural mechanization remained dormant and tucked away in files in Lagos and Bucharest.³¹ In the states, however, tractor hiring units were established.

Plans for the training of extension manpower at the Federal level did not get off the ground. Three years after the Plan was launched, programs for expanding facilities for the development of agricultural extension manpower were not implemented beyond "maintaining existing schools of agriculture and conducting studies aimed at determining financial implications of doubling intakes in existing schools."³²

²⁵T. G. Forrest, "Agricultural Policies in Nigeria 1900-1978," forthcoming in Gavin Williams (ed.), *Rural Development in Tropical Africa* (London: Macmillan).

²⁶*Ibid.*

²⁷See Federal Republic of Nigeria, Federal Ministry of Economic Development and Reconstruction, *Second Progress Report on the National Development Plan 1975-1980* (Lagos, Nigeria, 1978), p. 34.

1982

²⁸*Ibid.*

²⁹*Ibid.*

³⁰*Ibid.*

³¹Agreement could not be reached with Romania regarding the establishment of the Center.

³²*Ibid.*

Lapses and oversights underscored strategies for providing infrastructure facilities for agricultural production in the plan.

The perennial problem of inadequate farm-to-market roads was not addressed. Even though the 1975-1980 Plan recognized the fact that "the transport system has to support the growth and development of agriculture, commerce and industry with efficient movement of people and goods throughout the country" and even expressed unguarded optimism that the state governments would give more attention to the construction of feeder roads which "will play an essential role in the nation's agricultural efforts," the bulk of the roads planned and built during the plan period "were not the types needed by farmers to evacuate their produce."³³ Government concentrated on the building of interstate and express highways and neglected farm-to-market roads urgently needed by the farming community in the rural areas. Head portage from source of production to nearby markets is still a common sight in the rural areas.³⁴ Diffusion of agricultural credit to farmers remained an elusive dream due to "unsatisfactory institutional and organization arrangements for loan disbursement."³⁵

The upshot of this state of affairs in Nigerian agriculture was an unprecedented decline in agricultural productivity and a corresponding upswing in food imports. (See Table 2). Faced with this problem, the Federal Military Government adopted a panic measure by launching the *Operation Feed The Nation*

(OFN) in 1976. This was a period of agriculture by exhortation. According to one economist:

(Operation Feed The Nation) . . . was a hurried political initiative launched in the middle of the farming season by a military regime that was anxious to secure support from urban groups and students. It was designed to promote self reliance through the mobilization of labor and the additional supply of subsidized inputs. The campaign was characterized by heavy publicity. . . in urban areas through newspapers, radio and television to cultivate backyard gardens and keep poultry.³⁶

The OFN had an administrative framework. Its national council was headed by the Army Chief of Staff, while the state councils were headed by military governors. In the states the "division of responsibilities between OFN executive committees which controlled federal funds and state ministries of agriculture was not clear and led to some conflict." Operationally, students were the standard bearers of OFN. In the summer of 1976, students who would have sought employment elsewhere were directed by the government to work on farms and help distribute inputs, like fertilizers and seeds, after undergoing a one-week orientation course at centers around the nation. To the students, the OFN was something more than a hoopla; it was a jamboree. In one university, students branded the campaign "Operation Fool The Nation." Many students reported at OFN locations — farms and gardens in three-piece suits and high-heeled shoes. Forrest observed that "in practice students as the visible signs of OFN in the countryside were

³³*Daily Times*, (March 1975), p. 7.

³⁴Famoriyo, *op. cit.*

³⁵Federal Republic of Nigeria, Federal Ministry of Economic Development, *Second Progress Report*.

³⁶Forrest, *op. cit.* The OFN launching was done with great fanfare. The televised launching showed the head of the Federal Military Government and his Chief of Staff hoeing, planting, and attending to poultry in their private gardens and poultry farms.

largely unoccupied" and that "peasants saw O.F.N. as a government and student affair." A chairman of the OFN in Niger State lamented that "instead of contributing to the success of the scheme most students were only interested in the ₦96 being paid to them at the end of every month." Out of a total of ₦9.5 million set aside for OFN at its inception, ₦6.5 million was spent on students wages.³⁷

Whether OFN succeeded or not is a moot point. This writer feels that it was not a success. It was not an all-pervasive campaign for agricultural revival. Its messages did not permeate the rural areas in the manner in which electioneering campaigns or census drives do. If anything, it made Nigerians living in urban areas aware of the critical food shortage. Funds were wasted on student wages and the mass of the farm population and farm output were not affected.³⁸

In 1978, the Federal Military Government promulgated the Land Use Decree.³⁹ This decree which, among other things, was aimed at facilitating rapid economic and social transformation of the country through a rationalization of land use, had a significant impact on agricultural development. It authorized local governments to grant customary rights of occupancy to individuals and organizations for agricultural, residential, and other purposes. The decree authorized the grant of a maximum of 5,000 hectares for grazing and 500 hectares for food production. The effect of the land decree on Nigerian agriculture remains to be seen. This measure came late by eighteen years.

³⁷ *Ibid.*

³⁸ *Ibid.*

³⁹ See Federal Military Government of Nigeria, *Land Use Decree*, 1978.

Unsatisfactory Performance in Nigerian Agriculture (1975-1980): An Analysis

It is now customary to blame the poor performance in Nigerian agriculture on such factors as inadequate supplies of agricultural inputs; shortage of qualified manpower; inadequate extension service; poor condition of feeder roads; the problem of diseases and pests, and other related problems associated with agriculture in most less developed countries.⁴⁰ The consistency with which these problems are recited tends to suggest that they are permanent and irremediable. These problems, however, could be solved given the right policies and the political will to do so.

In the 1975-1980 Plan period, however, a number of developments and contradictions in the economic and political system contributed to agricultural decline. The argument here is that these developments and contradictions diverted attention from the agricultural sector and the maladies afflicting it. These developments and contradictions will be discussed below.

The opiate effect of oil revenue on the country. The unprecedented increase in oil revenue, which Nigeria enjoyed as the decade of the 1970s opened, lulled the country and its political leaders into a false sense of economic security. In the period under review, petroleum alone "accounted for over 80 percent of Federal Government revenue and over 30 percent of the gross domestic product. . . the agricultural sector on which the nation's supply of food, feeds and fiber hitherto

⁴⁰ Federal Republic of Nigeria, Federal Ministry of Economic Development, *Second Progress Report*, p. 65.

depended grew grudgingly at a disappointing rate . . . (and as a result) Nigeria moved from a position of net exporter of food and industrial raw materials to one of net importer of both.⁴¹ Agriculture and its problems were relegated to the status of a "step-child."

All these proved destabilizing to the economy. There was rapid urbanization, agriculture stagnated, and the nation depended more than ever before on imports to satisfy consumption requirements. Nigeria in the process faced a run-away inflation. The effect of the massive efforts to meet current consumption needs from imports led to ". . . (an) immediate erosion of the nation's favorable foreign exchange balances of ₦3,102 million in 1974 to a deficit balance of ₦488.4 million by 1977."⁴²

A sizeable proportion of items imported went in support of activities in the "most favored" sectors of the economy (industry, construction, infrastructure, etc.). The construction and service industries enjoyed an unprecedented boom. Armies of contractors and petty traders emerged as the national march, for what R.A. Joseph calls the "easy and rapid wealth which greatly. . . (contrasted) with the rigor of farm work" became accentuated. The farming communities were not left out. The able-bodied left the farms for the cities where the quick money earned in contracts in the construction and service industries stood in sharp contrast to the pittance earned in

backbreaking rural agriculture. Some of the policies and programs endorsed by the pre-July 1975 regime as a result of increased oil revenues and which were subsequently carried out by the succeeding regime did not ameliorate the poor economic conditions.⁴³ An international Black Arts Festival was held for US\$200 million. While black people from all over the world danced in Nigeria for one month, the agricultural sector and other unmet socio-economic needs suffered neglect, resulting in what the *Daily Times*, a widely-read Nigerian daily newspaper, called "increased impoverishment . . . wretchedization of the poor masses . . . and shortage of food."⁴⁴

Policy makers and development values. It is almost universally acknowledged that rational thought should inform the development of public policies.⁴⁵ It is also widely accepted that policy decisions possess a distinctive value base.⁴⁶ Viewed against these fundamental tenets of public policy, it would be naive

⁴³David Lamb in his "Heady Days Are Over: Nigeria Trying to Avoid Drowning in Oil" noted that as a result of increased oil revenue, Nigeria began writing checks to finance its dreams of grandeur at home and prestige abroad. According to him, the ground was broken for seven additional universities, twelve new television stations, new international airports, and new stadiums. In 1975 he further noted that civil servants won 60 percent pay raises and backdated tax fare for ten months. This was followed by similar increases for trade unions. See *Daily Times*. (14 December 1978).

⁴⁴*Daily Times* (25 January 1978).

⁴⁵Martin Rein, *Social Science and Public Policy* (Kingsport, Tennessee: Kingston Press Inc., 1976), p. 96.

⁴⁶James E. Anderson in his book *Public Policy Making* (New York: Holt, Rinehart and Winston, 1979) presents the various categories of values which may influence decision makers in the development of public policy. See particularly Chapter I, pp. 13-15. Also see Martin Rein, *op. cit.*

⁴¹B. U. Ekong, "Nigeria's Economic Outlook," *Central Bank of Nigeria Report*, published in the *New Nigerian*, (11 August 1978), p. 5.

⁴²*Ibid.* The country also experienced the worst port congestion in the history of maritime commerce in Africa South of the Sahara.

to suggest that decisions on resource allocations to the agricultural sector were arrived at after an orderly appraisal of the importance of this sector in solving the socioeconomic problems facing the country. The food needs of the country for example were not properly appraised and their implications for orderly development were not rationally assessed. And as a result other sectors like Defense, Transport, Industry, to name just a few, enjoyed the "most favored" sector status to the detriment of the agricultural sector.

Again, the military regime, which endorsed the plan, but was ousted in a coup in July of 1975, was to all intents and purposes too simple-minded. It was not a serious regime. Its leadership had no definite or articulated strategy for national development, developing only a shopping list of projects. The regime exhibited an unguarded penchant for flamboyance and adopted postures in its conduct of public affairs which confirmed that it was out of touch with pressing economic and social problems, the solution of which was crucial to societal transformation. The planning bureaucracy caught the contagion of empty values and flamboyance and evolved an overly ambitious development plan (thanks to petroleum) with questionable priorities. Instead of strict economy and thrifty management of the increased revenue from oil, policy makers endorsed ambitious development projects inconsistent with socioeconomic problems in Nigeria.

Table 3 shows sectoral allocation of funds in the Plan before it was revised by a succeeding military regime. Table 4 shows funds allocation in the agricultural sector following the revision of the 1975-1980 Plan.

Table 3 shows that only ₦1,400 million, or 6.3 percent, of the total amount tied to

the 1975-1980 Plan went to agriculture — Nigeria's biggest industry — which the three development plan documents since independence in 1960, called the "mainstay" of the economy. Seventy percent of the Nigerian population relies on agriculture for its subsistence and income.

Table 3. Sectoral Allocations in the Third Development Plan 1975-1980

Sector	Allocation (in million)	Percentage
Agriculture	1,400	6.3
Communications	774	3.4
Defense & Security	2,200	9.9
Education	2,200	9.0
General Administration	854	3.8
Health	659	2.9
Information	201	0.9
Industry	6,000	27.2
Labor & Social Welfare	153	0.6
Power	193	0.8
Regional Development	3,200	14.4
Transport	4,557	20.6

Source: *Daily Times* (7 March 1975), p.7.

Table 4, on the other hand, shows the revised plan of expenditure in the agricultural sector. Here too the planners' preference was for conspicuous prestige

Table 4. Federal Spending in Agriculture From the Revised Third Plan

Project	Million Naira
Irrigation	535
Nigerian Agricultural Bank	150
Large scale food farms	132
Fertilizers	100
Cash crop rehabilitation	100
World Bank projects	44*
Strategic grain reserves	40
NAFPP $\frac{1}{2}$ agro service centers	23
Roots and grains production company	52

Source: T. G. Forrest, "Agricultural Policies in Nigeria, 1900-1978," Paper presented to the Political Science Department, Ahmadu Bello University, Zaria, Nigeria, February 1979 (mimeographed), p. 21 [to be published in G. Williams (ed.), *Rural Development in Tropical Africa* (Macmillan)]

*When the money put in by the states and the World Bank are added, this figure is second only to irrigation.

projects which are capital-intensive in nature. A total sum of ₦535 million was allocated to irrigation projects. Modest irrigation canals supplemented with big water pumps and sprinklers could effectively bring water to the fields. It is extremely difficult to justify the spending of such a colossal sum of money on irrigation alone. A number of economists and scholars have questioned the rationale for the irrigation projects in their present scale and magnitude.

Poopola, for example, pointed out that "these large projects are not based on any technical evaluation of the existing small and medium scale projects despite many statements of the need for such evaluation."⁴⁷ Khalil, on the other hand, reported that "traditional and modern schemes or irrigation failed during the 1972-74 drought . . . for example pilot

schemes at Ngala and Yau completely failed because Riber Ebeji and Yobe dried up during the drought."⁴⁸ Again Watts felt that the "drive for irrigation agriculture is partly a reflection of its ecological appeal and the satisfaction of drought psychology . . . (and stated that) the viability of large scale irrigation as a primary anti-drought strategy is conjec-tural."⁴⁹ In spite of these views, the Nigerian government had hoped to irrigate 274,000 hectares at the cost of ₦2.2 billion and at ₦8,000 per hectare by 1991.⁵⁰

The irrigation projects should have been scaled down to free funds for the provision of other vital inputs in agriculture, and for training adequate manpower for this sector. Before the outbreak of the Civil War, years before the inception of the Third Plan, these gigantic irrigation projects were not in existence. Yet, the agricultural sector generated sufficient exports which earned 66 percent of Nigeria's foreign exchange. When war brought the petroleum industry to a standstill in 1968, the contribution of agricultural exports to total foreign exchange earnings rose to 73.4 percent.⁵¹

Forrest, however, suggests that the commitment to big-scale irrigation in the northern states of Nigeria is "linked to the idea of substitution for import of wheat," an issue which has generated considerable optimism in Nigeria, according to him. Statistics quoted by Forrest are not only sobering but also instructive.

⁴⁸Etuk, *op. cit.*

⁴⁹Forrest, *op. cit.*

⁵⁰R. Palmer Jones cited in T. Wallace, "Agriculture for What?: Problems and Strategies of Nigeria's Food Policy in the Third Development Plan," Paper presented at the National Food Policy Conference. Ibadan, May 1979.

⁵¹See Federal Republic of Nigeria, Federal Ministry of Economic Development and Reconstruction, *op. cit.*, p. 62.

⁴⁷Cited in Forrest, *op. cit.*

In 1976 Nigeria produced about 7,000 tons of wheat and imported 733,000 tons.⁵² Here again the question of values comes in. Would it not be a better economic proposition to commit funds and resources to the production of crops in which Nigeria has a comparative advantage? From his account, low bread prices seem to be an important issue to the government. It is unlikely, however, that irrigated wheat can effectively compete with imported cereals. All told, in the planning and execution of development programs, capital intensive and prestige projects are not necessarily the most effective. With or without a windfall in oil revenue, Schumacher's book on *Small is Beautiful* and its precursor *False Start in Africa*, a treatise on economic development by Rene Dumont, should become required readings for policy makers in Nigeria.⁵³

Need for a sound agricultural base
The crucial role of agriculture in economic development is well documented.⁵⁴ Cochrane underscored this point in his *Agricultural Development Planning: Economic Concepts, Administrative Procedures and Political Process*. Nicholls further addressed this issue and stated that "until underdeveloped countries succeed in achieving and sus-

taining a reliable food surplus, they have not fulfilled the fundamental pre-conditions for economic development."⁵⁵ The posture adopted by sectoral allocation is one which is suggestive of the fact that Nigeria can industrialize without a sound agricultural sector. The development strategy espoused "overemphasizes import substitution and export-oriented industries"⁵⁶ -- iron and steel industries, car assembly plants and petro-chemical industries at the expense of agro-based industries capable of establishing vital linkages with the agricultural sector. In the absence of these kinds of industries, incentives for increased agricultural production diminished.

It is common knowledge that the agricultural sector is crucial in generating raw materials for industry. Textile factories in Nigeria in the period under review operated from an eroded raw materials base. It was something more than a paradox that the supply of cotton, a one time export item in Nigeria, diminished because production lagged. The result was that "the . . . (raw cotton) needs of domestic textile industries . . . exceeded domestic cotton output."⁵⁷ Supplies had to be imported. Reacting to the rapid decline in Nigerian agriculture and to what is clearly an inverted approach to Nigerian economic development -- the notion that Nigeria can industrialize without a strong agricultural base -- an influential Nigerian daily, the *New Nigerian*, in an editorial warned:

⁵²Forrest, *op. cit.*

⁵³E. F. Schumacher, *Small is Beautiful: Economics as if People Mattered* (New York: Harper and Row Publishers, 1973) and Rene Dumont, *False Start in Africa*, Translation by Phyllis Nauts Ott and introduction by Thomas Balogh with an additional chapter by John Hatch (New York: Praeger, 1966).

⁵⁴See for example T. O. Adeyokunnu, "Agriculture and Nigeria's Economic Development," *The Quarterly Journal of Administration*, Vol. VI, No. 1 (October 1971), p. 18.

⁵⁵William H. Nicholls, "The Place of Agriculture in Economic Development," in Carl R. Eicher *et al.*, *Agriculture in Economic Development* (New York: McGraw-Hill Book Co., 1964), p. 40.

⁵⁶G. O. I. Abolu, "Agricultural Problems in Nigeria: Economic and Political Implications," in *New Nigerian* (13 April 1978), p. 5.

⁵⁷Hunter, *et al.*, quoted in Etuk, *op. cit.*

... industrialization can make little progress unless agriculture is progressing vigorously at the same time. With a stagnant agriculture industry cannot grow. We must therefore pursue a fundamental and irreversible policy shift in favor of agricultural development for it is only by transforming agriculture in this country can the life of our ordinary people be advanced materially, socially and culturally.⁵⁸

The planners had a different view. In the 1975-1980 Plan the petro-chemical complex slated to be built was described as a "key project which will help transform the economy of the country and provide the much needed base for industrialization."⁵⁹ In the opinion of this writer, however, industrialization should begin from the stomach. Nigeria should first be able to feed her growing population and generate agricultural surpluses to which industries could make claims.

The United States and Japan became industrial powers only after they put their agricultural sectors in order. The economy of Denmark also rests on a strong agricultural pillar. The experiences of these three countries should hold lessons for Nigeria.

Policy Challenges In Nigerian Agriculture In The 1980s

The central thesis of this paper is that agricultural production in Nigeria reached an all-time low in the 1975-1980 Plan Period.⁶⁰ Given this dismal state of af-

New Nigerian, (8 November 1977), p. 1.

⁵⁹Emphasis by this writer. Here again the intoxicating effect of petroleum in Nigeria is very much in evidence.

⁶⁰According to R.A. Joseph, it got so bad that "the option of inviting foreign investors or managers to enter agricultural production was seriously canvassed." This orientation, in his words

fairs, it is imperative that a number of policy measures should be adopted to bring agriculture back to its former status as the "engine of growth" in the economy — a status it enjoyed from 1940 to about the mid-1960s.⁶¹ Six policy challenges, at least in the opinion of this writer, should be accepted by the Nigerian government to get agriculture moving again in the 1980s.

*Intensified Agricultural Tractorization Programs*⁶²

The first policy challenge is the endorsement and implementation of an

"would have been anathema two decades ago in a country whose easy path to political independence was directly related to the absence of such a community." See R.A. Joseph, "Affluence and Underdevelopment: The Nigerian Experience," in *The Journal of Modern African Studies*, Vol. 16, No. 2 (1978), pp. 221-239 for a scholarly and incisive account on the death of Nigerian agriculture among other issues.

⁶¹See *World Bank Report* (1974). According to this report, agriculture constituted the mainstay of the economy. It provided employment for over 70 percent of the labor force and contributed more than half of gross domestic product. The *Business Times* of 25 November 1975 stated that by 1960 agricultural exports accounted for 90 percent of Nigeria's export earnings. But by 1972, crude petroleum had taken over accounting for 82.1 percent of the earnings, while agriculture accounted for only 12 percent. See footnote 9 in Pito Ejiofor, *Feeding Nigeria's Growing Manpower: The Case for the Modernization of Agriculture* (mimeo), Department of Business Administration, Ahmadu Bello University, Zaria, Nigeria, 1975.

⁶²"Tractorization" is preferred by this writer to "mechanization" which tends to conjure up in the mind pictures of highly sophisticated and automated gadgets of North America and European agriculture. This in the long-run would be desirable. As a first step tractors should be used to expand the acreage cultivated. Ejiofor, *op. cit.*, also identified *tractorization* as the front wheel in his vehicular model for agricultural modernization.

intensified agricultural tractorization policy.⁶³ The hand-hoe and cutlasses used by Nigerian farmers are inadequate. They impose a great limitation on the acreage of land which could be cultivated. By internalizing the use of tractors, farmers could bring larger acreages under cultivation while eliminating the back-breaking toil which over the years has been their bane.

As a prelude to an intensive use of tractors, a program of extensive land preparation should be embarked upon in the southern states and in parts of the northern states in the 1980s.⁶⁴ The agricultural terrain in these areas is characterized by thick forests, tall trees and stumps which could limit the use of tractors. Preparing land for tractors will involve tree felling and stumping operations. The Land Use Decree now in force should greatly facilitate land preparation and their subsequent allocation to individual farmers and cooperatives.

Appropriate Agricultural Technology Policy

The second policy challenge calls for the articulation and institutionalization of a dynamic and appropriate agricultural technology program. "Appropriate

agricultural technology" is that level of applied technology which is best suited to Nigeria's cultural, economic, social, and political climates. Put differently, it should concern itself with "low cost hardware, the use of in country available resources . . . widespread applicability and cultural acceptability."⁶⁵ This fact notwithstanding, Nigeria should be able to "draw effectively from the international research community . . . (while encouraging) the growth of its own capacity."⁶⁶ The Hayami and Ruttan model for effecting international technology transfer should inform and guide this endeavor.⁶⁷ Hayami and Ruttan have identified three phases in international technology transfer. In their view, *materials transfer* is the first phase in international technology transfer. Activity in this first phase involves the importation of new materials, like agricultural machinery, seeds, animals, and the "techniques associated with these materials with spotty adoption and use." *Design transfer* contributes the second phase. This comes into being when a nation develops the capability to use blueprints and formulas, and to reproduce or manufacture the materials it previously imported.⁶⁸ According to Robert Stevens, "systematic tests of field performance of new elements of agricultural technology are carried out in this phase." In the third phase, *capacity transfer*, a nation accumulates indigenous scientific knowledge and the professional com-

⁶³The existing tractor hiring schemes in Nigeria have had some demonstration effect. The figures for tractor farmer ratio are not available, but it is common knowledge that its use is not yet diffused and internalized in the farming communities. More tractors should be provided by the government.

⁶⁴See Willard W. Cochrane, *Agricultural Development Planning: Economic Concepts, Administrative Procedures and Political Process* (New York: Praeger Publishers, 1974), p. 127, for an account of the Second Jengka Triangle Project in Malaysia and the Young San Gang Project in Korea. Timber and wood generated by similar operations in Nigeria could be exported or fed into existing processing plants and paper mills.

⁶⁵*Quarterly Newsletter*, Georgia Institute of Technology (1974).

⁶⁶Robert D. Stevens (ed.), *Tradition and Dynamics in Small Farm Agriculture: Economic Studies in Asia, Africa, and Latin America* (Ames: Iowa University Press, 1977), p. 248.

⁶⁷*Ibid.*, see particularly Chapter 9 for a fuller discussion.

⁶⁸Stevens, *op. cit.*

petence enabling it to produce a new adapted technology suited to its social and economic conditions.

The Federal Institute of Industrial Research, the Project Development Agency (PRODA), the Polytechnic, and the faculties of Engineering in Nigerian universities should be encouraged and financially supported in the 1980s to develop an action agenda, for "tapping the right combination of the three sources of agricultural technology." On the ground, at the moment, is the PRODA, located in Anambra State, which has the potential and a developed infrastructure for appropriate technology development. Since 1970, PRODA has built up a corps of indigenous engineers and scientists who have demonstrated that they can invent, adapt, and fabricate machines for local use.⁶⁹ The existing direct reduction plants for iron and steel will provide the raw materials base for technology adaptation and fabrication for Nigerian agriculture.

Appropriate technology is generally "thought of and written about as hardware simple version of tools and machines suited to labor."⁷⁰ Appropriate technology has a "software" component. In the main, the "software" component of appropriate technology consists of "processes and programs . . . (capable of) promoting economic development in predominantly rural environments of development countries."⁷¹ In this regard, organic agriculture and its related pro-

⁶⁹The Garri processing machine is a case in point. Garri is a local staple consumed throughout Nigeria and is made from cassava (tapioca).

⁷⁰*Quarterly Newsletter* (Editorial), "Economic Development Laboratory Engineering Experiment," Station, Georgia Institute of Technology (1973).

⁷¹*Ibid.*

cesses should in the 1980s be encouraged in Nigeria on a larger scale. Elsewhere, this writer observed that one of the factors inhibiting increased food production in Nigeria is the short supply of inputs like chemical fertilizers.⁷² Chemical fertilizer sells at prohibitive prices.⁷³ In the face of these developments, it is again recommended, that the Nigerian government in the 1980s, should adopt policies to institutionalize programs and processes aimed at recycling urban wastes and garbage — now an obnoxious feature of the urban geography — into farms in the form of organic manure or compost for food production. Organic manure would act as good supplement to fertilizers and would also help reduce the quantity of fertilizer imports.⁷⁴

Fuller and Abbot have scientifically proved that "manures constitute high quality fertilizing material."⁷⁵ According to Uzo Igbozuruike, "were one to disregard the heavy ecological costs of the use of artificial fertilizers. . . and discount the structural improvement which manures effect in the soil, the financial cost of using artificial fertilizers is in fact much higher than that of animal manure."⁷⁶

⁷²See Festus C. Nze, "Managing Urban Waste in Nigeria for Social and Economic Development," in the *Nigerian Journal of Public Affairs*, Vol. VII (May-October 1977), pp. 25-39.

⁷³*Ibid.*, p. 71. A rise in world fertilizer prices has been forecasted. For details see Lester Brown *et al.*, "The Global Food Crisis," in *Dialogue*, Vol. VIII, No. 2 (1975), pp. 18-19.

⁷⁴In the 1975-1980 Plan, 1.683 million metric tons of fertilizer was to be imported at the cost of ₦75 million.

⁷⁵See Uzo M.I. Igbozuruike, *Agriculture at the Cross Roads: A Comment on Agriculture Ecology* (Nigeria: University of Ife Press, n.d.).

⁷⁶*Ibid.*

Dynamic Credit and Inputs Policy

The third policy challenge in Nigerian agriculture in the 1980s is the implementation of a dynamic and completely revamped input and credit policy for Nigerian farmers.

First is the issue of agricultural credit. In spite of the poor showing of the agricultural sector in the Development Plan period under review, it would be inaccurate to suggest that the majority of Nigerian farmers are indifferent to modern agricultural inputs like fertilizers, pesticides, and improved seeds. The opposite is the case. As farmers continue to modernize, the need for agricultural credit to facilitate the acquisition of "needed inputs produced off the farm" is bound to grow. The 1975-1980 Plan recognized this fact, but inadequately addressed the administration of credit to farmers. The Federal Government's programs for credit disbursement to farmers were stifled in execution.

According to Forrest:

The Nigerian Agricultural Development Bank... had by April 1978 approved loans of ₦286 million with ₦124 million actually disbursed. Lending to state governments, state corporations and cooperatives at 3% for onlending at 5% accounted for 58% of the loans, with the remainder accounted for by loans at 5% to private companies... For private loans, the stringent conditions can only be met by companies and large scale farmers. As far as the peasantry is concerned state credit... (remained) a blunt instrument for restructuring productive relations. It is accompanied by frequent appeals to farmers to group themselves, or cooperate so that they can become more credit worthy.⁷⁷

The administrative machinery for disbursing agricultural credit in its present

form is heavily arrayed against the rural illiterate farmer. It is an oversized bureaucracy whose language and administrative processes cannot be understood by illiterate farmers. For example, farmers were always required to execute Loan Application Forms and surrender collaterals before they could qualify for agricultural credit. Delays associated with processing application forms and screening applicants caused further delays in disbursing credit to farmers for purchasing agricultural inputs. Again commercial banks helped muffle the impact of agricultural credit, through their insistence on charging exorbitant interest rates. Added to this is the tendency by some bank officials to be nepotistic in agricultural credit transactions.⁷⁸ In the light of the points raised above, the existing machinery for the administration of agricultural credit should be reviewed. A simpler and more dynamic option should be instituted.

In the 1980s, funds allocated by the Federal Government for agricultural credit should in the short-run be disbursed through local government treasuries. [These treasuries are closest to rural farmers. Here the terms and the implications of the credits sought by farmers could be explained to them in the vernacular. Each local government should keep a comprehensive register of farmers in its area of jurisdiction. This register should be constantly updated and used by each local government treasury for administering or disbursing agricultural credit. It is common knowledge in Nigeria that registers compiled for taxation and electoral purposes exist. Compiling a farmers' register for the administration of agricultural credit should not therefore pose any problem.

⁷⁷Forrest, *op. cit.*

⁷⁸See *Daily Times* (12 December 1978), p.7

In the long-run, the ruralization of agricultural banks, operationally less bureaucratic than commercial banks, should be encouraged. In the 1980s, serious thought should also be given to institutionalizing the farm credit system in Nigeria in forms other than government-supported finance houses and government-financed cooperatives. Government-sponsored and -financed cooperatives have not proved to be effective organizational forms⁷⁹ for dispensing agricultural credit. Farmers who obtain credit through this medium sometimes fail to distinguish between a loan and a gift. A cooperative in which farmers are required to provide one-half of the funds available for loans would create a sense of purpose and responsibility on the part of members and officials of the cooperatives.⁸⁰

The new and dynamic "credit" policy advocated for Nigerian agriculture in the 1980s should also have a *credit-in-kind* component. Put differently, cash credits for solving specific farm problems ought to be possible for farmers to obtain farm implements (simple light-weight implements) and related hardware as well.⁸¹ This strategy would eliminate the need of many farmers to travel distances to the cities for purchases. It would equally minimize the diversion of hard cash into non-farm purposes. The line between agricultural credit and agricultural input would under this arrangement be somewhat tenuous.

The new credit policy should be comprehensive enough to include a *Crop Insurance* clause. To the illiterate farmer in the village, experimentation with new agricultural techniques and processes (fertilizer, pesticides, new crops, and so on) is a risky business. If things go wrong, the farmer's source of livelihood is threatened; therefore, to encourage farmers to try out new techniques and methods and to "reduce the risk facing the farmer who is experimenting . . . crop insurance should be provided such that if a farmer loses his crops as a result of the adoption of new farming methods . . . (demonstrated by agricultural extension staff) he should be compensated for this loss."⁸²

With regards to agricultural inputs, the attainment of higher levels of agricultural production is the primary reason for providing improved agricultural inputs to farmers. For inputs to be useful to farmers, they should be locally available in sufficient quantities. Local availability in this context connotes the existence of the required inputs at locations "that can be reached by usual transportation in a round trip during one day."⁸³ The maladies which afflicted fertilizer acquisition and distribution during the 1975-1980 Plan period is well-documented. In a word, there were shortfalls and the distribution of existing supplies was hampered by bottlenecks and negative political influences.⁸⁴

⁷⁹See Cochrane, *op. cit.*, p. 27.

⁸⁰*Ibid.*

⁸¹The local government headquarters where the treasuries are located, should have warehouses for agricultural hardware storage. This should be a major division of the Treasury.

⁸²See Ejiofor, *op. cit.*, particularly the section on "Fallacies on Modernization" for a good discussion of the Nigerian context of farmers' receptivity to change. Also see, Willard W. Cochrane's discussion on a related topic in Cochrane, *op. cit.*, pp. 155-158

⁸³Stevens, *op. cit.*, p. 250.

⁸⁴See Forrest and Etuk, *op. cit.* See also *Second Progress Report*, on the *Third National Development Plan*, *op. cit.*, p. 38.

A strong commitment to a dynamic agricultural inputs policy should be made in the 1980s. The logistics for fertilizer procurement and distribution should be revamped. This activity should claim the attention of the Fertilizer and Pesticides Board and the Federal Department of Agriculture as the Fourth Development Plan period approaches.⁸⁵ In practical terms, input requirements for any given year should be inventoried and order filled early enough to ensure eventual delivery by December of each year.⁸⁶ As in the case of agricultural credits, local government headquarters should be suitable anchor points for input distribution to the rural areas.

The NAFPP should further decentralize its operations for good effect. Its seed multiplication program should be an all-the-year-round operation. The NAFPP should be adequately equipped to achieve this goal. Its seed multiplication program should complement efforts at fertilizer procurement by the Fertilizer and Pesticides Board. Since agricultural inputs complement each other, the only way of ensuring greater total net income to farmers and greater national agricultural production is to guarantee that the "necessary inputs are available locally . . . in the right proportions."⁸⁷

Agricultural Manpower Development

The fourth policy challenge is the development and articulation of an imaginative and comprehensive agricultural

⁸⁵According to the *Second Progress Report*, the Fertilizer and Pesticides Board was non-functional during the Plan period under review.

⁸⁶Planting begins in many parts of Nigeria as early as February and March.

⁸⁷Stevens, *op. cit.*, p. 251.

manpower development policy to help reduce the scarcity of extension personnel needed for bringing scientific information to farmers.⁸⁸ At a seminar on National Policy on Agriculture Education held at the Moore Plantation, Ibadan, in 1978, the Federal Commissioner for Agriculture, Bernard Mafeni said:

Three major problems face Nigeria's agricultural development. The first problem is the difficulty of attracting and training agricultural staff in sufficient number for effective coverage of agricultural extension. The second is the comparatively poor service conditions of agricultural workers and the lack of standardization in the syllabi of the various agricultural training institutions resulting in the varying performance of trained agricultural staff. The number and quality of extension workers are key factors in the adoption of new techniques in agriculture. The thirty schools of agriculture in the country produce only 3,000 intermediate level manpower as against the yearly requirement of 7,000. At the end of the last financial year (1977) there were more than 7,000 vacancies in the country's agricultural establishments which could not be filled.⁸⁹

The ratio of agricultural extension workers to farmers in Nigeria is 1:5,000.⁹⁰ This unsatisfactory ratio was implicit in the Commissioners' statement. In the 1980s, the problem of manpower shortage for agricultural extension work should be tackled from three angles. First, the conditions of service of extension

⁸⁸For other functions of extension staff, see Robert D. Stevens, *op. cit.*, p. 250; and I. Adefolu Akinbode, "Job Commitment Among Field Level Agricultural Extension Workers in Western Nigeria: An Empirical Investigation," in *Nigerian Journal of Public Affairs*, Vol. VI, No. 2 (October 1976), p. 33.

⁸⁹Bernard Mafeni, "Federal Commissioner for Agriculture Opening Address at Seminar on National Policy on Agriculture Education, Moore Plantation, Ibadan, Nigeria," reported in *Daily Times*, (13 May 1978), p. 5.

⁹⁰Famoriyo, *op. cit.*

workers in the country should be reviewed and improved if young school leavers are to be sufficiently attracted. In addition, the "development of rural areas should be vigorously pursued so that working conditions for extension staff could become more attractive."⁹¹

Secondly, the primary and secondary school curricula should be revised to include courses in basic Rural Science and introductory courses in Agriculture. These courses, which formed part of the primary and secondary school curricula before independence in 1960, should be reintroduced and made compulsory for all students at the primary and secondary levels. The reintroduction of Agriculture as a course of study in secondary schools would help to restore the dignity of agriculture in the minds of the young as an important economic activity and as a profession. More important, the 30 schools of agriculture in the country could draw potential trainees from the pool of secondary school graduates.

Thirdly, the existing 30 agricultural schools in the country should be expanded to absorb more trainees in agricultural extension.⁹² Agricultural extension workers

⁹¹The existing conditions of service has been identified as a "dissatisfier" to extension workers. See I.A. Akinbode, *op. cit.* Reviewing the condition of service of extension workers should include review of the existing salary structure, the provision of adequate housing for extension workers in the rural areas and the provision of the right type motor vehicles (land rovers) for mobility in the execution of tasks. Few extension workers enjoy using their personal bicycles and motorcycles in poor rural roads.

⁹²According to the Federal Commission for Agriculture, the thirty agricultural schools in Nigeria each produce on the average 100 extension workers (i.e., 3,000 extension staff annually). A target of 30,000 extension workers, that is approximately 1,000 graduates each year by the year 2000 A.D., will not be unrealistic.

should be accorded necessary recognition by the government as a professional group. The statement by the Federal Commissioner for Agriculture quoted above, refers to this group of workers as "intermediate manpower." The professionalization of the agricultural extension cadre would stimulate job commitment among members of the cadre and improve their self-image.⁹³

Accelerated Rural Development Policy

The fifth policy challenge in Nigerian agriculture in the 1980s calls for an accelerated development of the rural areas — the locale of agricultural activities in the country. The massive desertion of the rural areas by "young elements of the rural population" affected agricultural production in Nigeria in the Plan period under review. As the young left the rural areas for the cities to "have a share of the oil boom, the aging population was left behind to till the soil."⁹⁴ A comprehensive rural development program will help stem the tide of rural-urban migration. An accelerated rural development should in the 1980s be endorsed for many other reasons. First, 80 percent of the population live in rural areas dominated by agricultural activity. Social justice demands that steps be taken to ensure that the "places a Nigerian can drink pure water, use electric lights, view the television . . . and read newspapers" should include the rural areas and not the cities alone.

Secondly, spin-offs from a comprehensive rural development program would create conditions in which the policy recommendations made in this paper

⁹³For a fuller discussion of the problem of self-image, see Akinbode, *op. cit.*

⁹⁴See *Daily Star* (24 April 1978), p.2

could thrive. There is, for example, a strong interrelationship between appropriate technology and rural development. The markets for appropriate technology are varied and usually include the rural farmer. Most scaled-down technologies can best be manufactured by small manufacturing enterprises located in rural and urban areas. Rural industry almost always is small-scale and frequently "cottage" in nature and these activities are well-suited to appropriate technology in manufacturing.⁹⁵

Thirdly, the rural areas should be developed to make them sufficiently attractive to extension staff deployed to work with rural farmers. The dynamics of accelerated rural development discussed in this paper consists among others of the following important components — the improvement of the entire rural infrastructure, the provision of the basic necessities of life-like food, shelter, good roads, and medical facilities. Efforts should also be made by the Government to stimulate the dispersion of industries into Nigeria's rural areas to generate job opportunities for potential immigrants to urban centers. Agro-based industries cannot have better locations. With the establishment of all of these economic activities, repair and service activities develop. Retail and wholesale trade activities mushroom and flourish as rural areas become revitalized economically.

The "complexities of a balanced rural development are enormous, interlocked and interdependent" requiring a well-thought out approach and resource allocation well beyond the capabilities of any one Nigerian or group of Nigerians. It

⁹⁵See Ross W. Hammond, "The Increasing Emphasis on Balanced Rural Development," *Georgia Institute of Technology Newsletter* (1973).

is therefore of vital importance that the Federal and state governments in Nigeria should in the 1980s make a commitment that had not been fully made since Independence in 1960: a commitment to a policy of accelerated rural development in the interest of society and agricultural development.

Mobilization of Constituency Organizations and Rural People for Agricultural Development

The sixth policy challenge is the mobilization of rural populations through "constituency organizations,"⁹⁶ for agricultural development. Nigerian communities are well-endowed with organizations which come under the rubric of "constituency organizations." While the Israeli Kibbutz and the Chinese communes may pass as ideal models of constituency organizations or as "systems for organizing rural people . . . to assure effective action for accelerated development,"⁹⁷ constituency organizations in Nigeria manifest themselves in a variety of forms — Town/Village Improvement and Development Unions, Cooperatives, Thrift and Credit Unions, Age Grades, Women Organizations, Schools, and Religious Institutions.⁹⁸ These kinds of

⁹⁶Milton J. Esman, "Development Administration and Constituency Organization," *Public Administration Review*, Vol. XXXIII, No. 2 (March-April 1978).

⁹⁷Stevens, *op. cit.*, p. 253.

⁹⁸Religious places, like mosques and churches, have been found in an empirical study by Bakam and Mirchaulum in selected districts in the northern part of Nigeria to be effective sources of farm information. See Bakam and Mirchaulum, "The Diffusion of Agricultural Innovations and Operation Feed the Nation," Paper presented at a workshop on Operation Feed the Nation held on 6 July 1976 at the Institute of Administration, Ahmadu Bello University, Zaria, Nigeria.

constituency organizations should be mobilized to enhance agricultural program effectiveness in the rural areas. They can do this in a variety of ways — by mobilizing mass support for, and interest in the activities of agricultural extension workers. They can also act as local “retail centers for information and resources” provided by the ministry of agriculture (information posters, pamphlets, seeds, fertilizers, and agricultural implements). Given their potentials for community development action,⁹⁹ some constituency organizations, like the Town Development and Improvement Unions in the country, should be encouraged to start on a massive scale community farms or to invest in agro-based industries in the rural areas.

⁹⁹In several parts of the country, “constituency organizations” are well established with their local secretariats and local officials. Some of them have good records in the community development. University scholarships have been awarded by some constituency organizations to deserving sons and

Implementing The Policy Recommendations

This paper has reviewed agricultural development policy in the 1975-1980 Plan period. Government performance in achieving the goals and objectives set was critically appraised. The paper ends with an array of policy measures which the Nigerian Government should adopt, if Nigerian agriculture is to be salvaged from its present imperiled condition and restored to a position of preeminence in the economy. If these policies are adopted and implemented in Nigeria, it would lead to a profitable adventure in imaginative agricultural development in the 1980s, and eventually self-sufficiency in food for the country.

daughters in the community. Roads, schools, hospitals, and post offices have also been built in some rural areas by Towns Development and Improvement Unions which are constituency organizations par excellence.