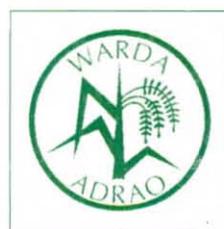
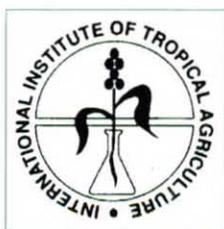


Agricultural Input Markets in Nigeria: An Assessment and A Strategy for Development



Agricultural Input Markets in Nigeria: An Assessment and a Strategy for Development

Prepared by

**International Fertilizer Development Center (IFDC)
International Institute for Tropical Agriculture (IITA)
West Africa Rice Development Association (WARDA)**

Sponsored by

**Federal Government of Nigeria (FGN)
Sasakawa Global 2000 (SG2000)
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Table of Contents

Preface	vii
Executive Summary	ix
I. Introduction	1
A. Socioeconomic Challenges	1
B. Role of Agricultural Input Markets in Confronting Socioeconomic Challenges	1
II. The Agricultural Input Markets in Nigeria: An Assessment	2
A. Overview of the Policy Environment	2
B. Fertilizer Market: Structure, Functioning, and Constraints	4
C. Seed Market: Structure, Functioning, and Constraints	5
D. The CPP Market: Structure, Functioning, and Constraints	8
E. Soil Fertility- and Nutrient Management-Related Issues	9
III. Potential of the Private Sector in Supplying Agricultural Inputs	10
IV. Constraints to Effective Private Sector Participation	13
A. Macropolicy Constraints	13
B. Market Development-Related Constraints	14
C. Technical and Input Specific Constraints	15
V. Strategy for Developing Efficient Input Markets: A Holistic Approach	15
A. Create a Conducive Macropolicy Environment	15
B. Declare and Adhere to a Consistent Input Marketing Policy	16
C. Build Human Capital for Market Development	16
D. Improve Access to Finance	16
E. Develop and Implement Regulatory Frameworks	16
F. Develop MIS	17
G. Promote Technology Transfer Activities	17
H. Strengthen Technical and Monitoring Capacity for Promoting Private Sector Seed Market Development	17
VI. Action Plan for Developing Input Markets	18
Phase I: Short-Term—Stakeholders Workshop	18
Phase II: Medium-Term—Enactment of Legislation about the Freedom of Marketing	18
Phase III: Long-Term—Capacity Building Activities	18
Implementation of the Action Plan	18
VII. Linkages With USAID/Nigeria’s Strategic Objectives	19

List of Tables and Figures

Table 1. Primary Fertilizer Companies Operating in Nigeria, August 2000

Table 2. Blending Plants in Nigeria, August 2000

Table 3. Research Institutes and Their Mandate Crops

Table 4. Foundation Seed Uptake by ADPs in 1999 and 2000

Table 5. Private Seed Companies Registered With the NSS, 2000

Table 6. PTF Agrochemical Contractors (1998)

Figure 1. The Conceptual Framework

Figure 2. Nigeria: Fertilizer Use, 1979/80-1999/00

Figure 3. The Fertilizer Market Structure of Nigeria, 2000

Figure 4. Production and Distribution of Improved Seeds in Nigeria

Figure 5. Private Seed Sector Marketing in Nigeria, 2000

Figure 6. Structure of the CPP Market in Nigeria

Figure 7. USAID/Nigeria: Strategic Framework

Acronyms and Abbreviations

ADPs	Agricultural Development Projects
AIBDF	Agricultural Inputs Business Development Fund
AIIF	Agricultural Inputs Import Fund
BASAC	Banchi State Agricultural Company
CPPs	crop protection products
ECOWAS	Economic Community of West African States
FAO	Food and Agriculture Organization of the United Nations
FASCOM	Farmer Supply Company
FASCKT	Farmer Supply Company, Katsina
FFD	Federal Fertilizer Department
FGN	Federal Government of Nigeria
FMARD	Federal Ministry of Agriculture and Rural Development
FPDD	Fertilizer Procurement and Distribution Division
FSCs	Farm Service Centers
FSFC	Federal Superphosphate Fertilizer Company Limited
IARCs	international agricultural research centers
ICI	Chemical and Allied Products
ICRISAT	International Crops Research Institute for the Semi-Arid Tropics
IFDC	International Fertilizer Development Center
IITA	International Institute for Tropical Agriculture
KASCO	Kano Agricultural Supply Company
kg	kilogram(s)
km	kilometer(s)
KNARDA	Kano State Agricultural and Rural Development Authority
LC	letter of credit
MIS	Market Information Systems
NAFCON	National Fertilizer Company of Nigeria
NARIs	national agricultural research institutes
NGOs	nongovernmental organizations
NSS	National Seed Service of the FMARD
PCU	Project Coordinating Unit of the FMARD
PTF	Petroleum Trust Fund
SFI	soil fertility initiative
SG 2000	Sasakawa-Global 2000
SO	Strategic Objective
tpd	tons per day
UNDP	United Nations Development Program
USAID	United States Agency for International Development
VAT	value-added tax
WARDA	West Africa Rice Development Association

Agricultural Input Markets in Nigeria: An Assessment and a Strategy for Development

Preface

In 1997 The Carter Center and the United States Agency for International Development (USAID) commissioned a joint study on “constraints to sustainable agricultural intensification in Sub-Sahara Africa.” The study team, consisting of well-known specialists, identified several constraints including macroeconomic instability, poor infrastructure and financial markets, and underdeveloped output and input markets. Ineffective and inefficient input supply systems, especially for modern inputs (improved seeds and mineral fertilizers), were identified as a critical constraint to the adoption of modern technologies in African agriculture. This conclusion was reinforced by several studies undertaken in recent years by the International Fertilizer Development Center (IFDC), the Food and Agriculture Organization of the United Nations (FAO), the World Bank, and other institutions under the soil fertility initiative (SFI) aimed at improving and sustaining soil fertility management in sub-Saharan Africa.

Motivated by The Carter Center/USAID study’s findings, IFDC and SG 2000¹ formed a partnership in 1998 to conduct studies and develop action plans for strengthening the functioning of input supply systems, especially fertilizer markets, in Africa. During the first round three countries, namely, Mozambique, Uganda, and Tanzania, were selected. The fertilizer market studies were completed in these countries during 1998 and 1999. For the year 2000, Ghana and Nigeria were identified as key countries for fertilizer policy and marketing studies. SG 2000 therefore provided partial funding support for this assessment work.

While IFDC was getting ready to start work in Nigeria, USAID made a request to prepare an assessment of the agricultural input markets in Nigeria. The USAID wanted to cover all three inputs—improved seeds, fertilizers, and crop protection products (CPPs). Because of their expertise and long-term presence in Nigeria, IFDC approached the International Institute for Tropical Agriculture (IITA) and the West Africa Rice Development Association (WARDA) to collaborate in this effort. Consequently, IFDC, IITA, and WARDA pooled their resources to prepare an assessment of the agricultural input markets in Nigeria and to develop a strategy for an effective participation of the private sector in the functioning of the agricultural input markets.

When the Federal Government of Nigeria (FGN) was approached to approve the assessment work, FGN welcomed the effort and contributed to it by seconding two of its staff members—one each from the Federal Ministry of Agriculture and Rural Development (FMARD) and the Food Security Office of the Presidency.

The Assessment Team consisted of the following members:

- B. L. Bumb, Policy Economist and Team Leader (IFDC)*
- A. M. Babandi, Agronomist (FGN/Projects Coordinating Unit, FMARD)*
- K. Debrah, Marketing Economist (IFDC-Africa)*
- G. Gardner, Agricultural Economist (USAID/Washington)*
- R. I. Giwa, Agricultural Economist (FGN/Food Security Office of the Presidency)*
- A. Gudugi, Agricultural Economist (USAID/Nigeria)*
- P. Kormawa, Agricultural Economist (IITA)*
- B. Ogunfowora, Input Specialist (Formerly Professor at the University of Ibadan)*
- O. Osiname, Soil Scientist (WARDA)*

1. SG 2000 is a joint program of the Sasakawa Africa Association (headed by Nobel Laureate Dr. Norman Borlaug) and the Global 2000 Program of the Carter Center (presided over by former U. S. President Jimmy Carter). Funding for the program comes from the Nippon Foundation (whose chairperson is Ayako Sono and president is Yohei Sasakawa).

The Assessment Team visited Nigeria during August 7-25. Field visits were made to Ibadan, Lagos, Abuja, Kano, Kaduna, Rano, and Zaria to interact with stakeholders—donors, policymakers, farmers, bankers, non-governmental organizations (NGOs), and private sector participants (Annex I). The team met with the management staff of the National Fertilizer Company of Nigeria (NAFCON) in Abuja.

In 1994 IFDC developed a strategy for the liberalization of the fertilizer market in Nigeria. That strategy stressed the need for phased withdrawal of subsidies and privatization accompanied by an adequate program of capacity building. However, the FGN initiated the liberalization of input markets in 1997 without supporting developments in policy, human capital, and marketing infrastructures. Consequently, input markets remain underdeveloped and fragmented and farmers do not receive good-quality inputs on time and pay unreasonably high prices. The private sector in Nigeria has a potential to supply agricultural inputs in a cost-effective manner. However, it needs support in the form of a conducive policy environment, development of management and marketing skills, access to affordable finance and market information, and effective enforcement of regulatory mechanisms to realize that potential. The assessment team recommends a holistic approach to strengthen the liberalization process and to develop efficient and sustainable agricultural input markets in Nigeria.

The preliminary impressions of the assessment team were discussed at a debriefing organized by the FMARD on August 24, 2000, in Abuja. The debriefing was attended by various stakeholders—policymakers, donors, NGOs, and private sector participants. It was decided that a stakeholders' workshop be organized to build a consensus for the proposed actions and policy measures to strengthen the input delivery system in Nigeria.

The Stakeholders' Workshop was held on October 19, 2000, in Abuja. The workshop was coordinated by the Project Coordinating Unit (PCU) of the FMARD. Over 110 stakeholders representing all segments of the marketing chain participated in the workshop. The keynote address by the Honorable Minister of Agriculture and Rural Development highlighted the need to create a conducive policy environment and to strengthen the institutional capacity for encouraging private sector participation in the agricultural input markets (Annex II).

The workshop delegates endorsed the policy and program measures proposed by the assessment team. The summary of discussions at the workshop is included in Annex III.

Logistic support provided by the FMARD and IITA for the assessment work and the stakeholders' workshop is gratefully acknowledged.

Agricultural Input Markets in Nigeria: An Assessment and a Strategy for Development

Executive Summary

I. Socioeconomic Context

At the dawn of the 21st Century, Nigeria launched a bold experiment of participatory democracy and market-based economic growth. To sustain these goals, Nigeria must confront its socioeconomic challenges of food security, environmental protection, and poverty alleviation. Without significant progress in these areas, democracy and economic development are not sustainable. Rapid growth in agriculture is essential for broad-based economic growth, but accelerating agricultural growth requires sound use of science and technology embodied in improved seed, fertilizers, CPPs, and other agronomic practices. However, without an efficient and cost-effective supply of these inputs at the farm gate, science-based growth in agricultural productivity cannot be achieved.

II. Scope and Objectives of the Study

Because of various distortions in the input supply chain, this assessment focused primarily on the issues related to the input supply system. Nonetheless, measures proposed for technology transfer and supply system improvements will strengthen input demand by improving the efficiency of input use and reducing input costs. The main objectives of the assessment are:

1. To review the structure and functioning of the agricultural input markets.
2. To assess the potentials of the private sector to supply agricultural inputs efficiently and in a sustainable manner.
3. To identify constraints to the private sector participation in input markets.
4. To develop programs and policies for strengthening the functioning of agricultural input markets.
5. To prepare an action plan for implementing the proposed policies and programs.

III. Assessment of the Agricultural Input Markets

Agricultural input markets are fragmented and underdeveloped in Nigeria. During the 1990s, Nigeria introduced input market reforms without adequate supporting developments in institutional capacity and human capital formation. As a result, fertilizer use decreased from over 500,000 nutrient tons in 1993/94 to approximately 100,000 nutrient tons in 1999/2000. The use of improved seed and pesticides also decreased. Because the input markets are not functioning properly, the transaction cost of acquiring inputs is high and even then inputs are not readily available on time and in good quality. Quality control regulations are not enforced properly. In the seed sector, funding arrangements for the National Seed Service (NSS) remain inadequate and uncertain for performing training and quality control functions. Dealer networks in rural areas are not well developed, and farmers must travel long distances to acquire inputs.

Access to finance for developing medium and small-scale enterprises is prohibitive. Market information is nearly absent. The Federal Fertilizer Department (FFD, formerly Fertilizer and Procurement Division [FPDD]) responsible for collecting and disseminating agronomic data (fertilizer response rates) and market information (input and crop output prices), is severely constrained to perform its functions. The lack of reliable data makes it difficult to calculate value-cost ratios and other relevant parameters for proper business planning.

Although the production of certified seed is managed by the private sector, arrangements for the production of foundation seed are not clearly defined. The lack of clarity about intellectual property rights discourages breeder seed production in the private sector.

Lack of proper monitoring and regulation has led to the widespread sales of outdated pesticides by untrained and unscrupulous traders endangering human health and the environment.

IV. Potential of the Private Sector to Supply Agricultural Inputs

The private sector in Nigeria has the potential to supply agricultural inputs in a cost-effective manner. There are several private companies who have entered the fertilizer, seed, and CPP business during the last few years. There are fertilizer manufacturing and blending plants who have started acquiring marketing skills for developing dealer networks. The agricultural or farm supply companies in various states are also involved in the distribution of inputs. Commercialization or privatization of these companies offer additional potential for developing private sector-based distribution channels in rural areas. Large-scale commodity importers may become potential traders in bulk imports.

However, because of public-sector monopoly in the past, all these organizations and structures did not have an opportunity to develop the necessary skills needed for efficient marketing and market development. Years of neglect and distrust have left the private sector handicapped to perform efficiently. Macroeconomic instability, policy inconsistency, lack of access to affordable finance and market information, and poor enforcement of quality control mechanisms further discourage the active participation of the private sector in the input market development.

To realize its full potential, the private sector needs genuine support and encouragement to build the necessary human capital and develop marketing infrastructures and supporting institutions. It may be premature to conclude from the half-hearted experience of the 1997-2000 period of liberalization that the private sector is not capable of supplying inputs. Building well-functioning markets requires time and resources.

V. Strategy for Developing Efficient Input Markets: A Holistic Approach

This report, based on the field work in Nigeria and drawing from market development experiences in other countries, recommends a holistic approach to strengthen the liberalization process and to develop efficient and sustainable agricultural input markets in Nigeria. Such an approach encompasses concurrent developments in several areas to realize synergy in various efforts. It requires creating an effective policy environment, building human capital for private-sector participants and supporting public-sector institutions, improving access to finance and market information, and strengthening and enforcing quality control regulations. It also mandates focusing on technology transfer activities and supporting research capacity for the private seed industry. Proposed measures are summarized below.

1. Create a Conducive Macropolicy Environment—Macroeconomic instability resulting from the depreciating exchange rate remains the single most important macropolicy factor that inhibits the growth in fertilizer use and the development of input markets. Suitable monetary and fiscal policies should be instituted to stabilize the value of domestic currency so that unnecessary risks in developing import business and domestic production of inputs could be minimized. Macroeconomic stability should be supported by developments in physical and financial infrastructures and greater security of property and life in rural areas. Such developments are essential to reduce transactions costs of input supply and to enhance output prices for farm produce, thereby creating a double incentive for the promotion of input markets.

2. Declare and Adhere to a Consistent Input Marketing Policy—Ad hoc and inconsistent policy pronouncements and proclamations of the past have left the private sector leery of the FGN intention. To restore confidence in the liberalization policy, the FGN should enact legislation about the “Freedom of Marketing” to demonstrate its support and commitment for the liberalization policy. This legislation should clearly state

that the FGN will not interfere in marketing or distribution of inputs in any way, nor will it interfere with the pricing of inputs. Similar legislation will be needed at the state level.

3. Build Human Capital for Market Development—The modern input business is highly skill intensive. To create the necessary cadre of dealers at all levels—import, wholesale, and retail—training and technical assistance programs should be implemented for imparting necessary business and technical skills to people (men and women) who want to develop input businesses in rural and urban areas. Technical training programs should also be organized for seed growers in both formal and informal sectors and NSS's training and technical assistance capabilities should be strengthened. Human capital should be built in the public sector to strengthen the implementation of regulatory and quality control laws and to develop and operate market information systems.

4. Improve Access to Finance—Technical and business skills are necessary but not sufficient to develop input business enterprises. Access to finance is indispensable because finance is the life blood of any business activity. Given the distortions in the financial markets in Nigeria, there is a need to create an Agricultural Inputs Business Development Fund (AIBDF) so that the trained, viable, and creditworthy dealers can have access to finance to develop input business. Likewise, access to foreign exchange, especially the letter of credit (LC), for fertilizer imports should be improved by creating an Agricultural Inputs Import Fund (AIIF). Both funds should be managed by viable and reputable banking enterprises.

5. Develop and Implement Regulatory Frameworks—Quality control and anti-monopoly measures are essential for well-functioning input markets. FGN should ensure the proper implementation of quality control regulation and truth-in-labeling measures so that poor quality seed and fertilizers and outdated CPPs are not sold to innocent farmers.

6. Promote Market Transparency Through a Market Information System (MIS)—Efficient functioning of competitive marketing systems depends on the continuous flow of market information and freedom of entry and exit from the market. To facilitate this function, an MIS should be developed to collect, analyze, and disseminate information about prices, deliveries, and stocks at various locations. FGN, through the FFD, should take a lead in developing and implementing the MIS. Gradually, this function should be performed by agri-input dealers' association and seed growers' association. Technical assistance should be provided to strengthen the development of input dealers and seed growers' associations.

7. Promote Technology Transfer Activities—Modern agriculture is science based and knowledge intensive. To educate farmers about new technologies, widespread farm demonstrations should be conducted. In this respect, the work done by SG 2000 in collaboration with the Ministry of Agriculture in Kano and other states should be strengthened. To improve the efficiency of fertilizer use, farmers should be allowed access to soil testing facilities and knowledge about fertilizer recommendations.

8. Strengthen Research Capacity for Promoting Private Seed Industry—During the last few years, national capacity for agricultural research, especially for breeder seed production, has been allowed to deteriorate rapidly. NSS's capacity for quality control and monitoring and training and technical assistance for seed production has also suffered significantly. There are considerable delays in releasing new varieties. To promote the development of a healthy private sector-based seed industry, additional resources should be targeted to revitalize the national research capacity, linkages with international agricultural research centers, and NSS capacity to support seed growers.

VI. Action Plan for Developing Input Markets

The Action Plan is divided into three phases, namely, short term, medium term, and long term.

Phase I—Short-Term: Stakeholders' Workshop—A stakeholders' workshop was organized to discuss the assessment report and recommendations and to build a consensus among stakeholders (policymakers, donors, private sector participants, bankers, farmers, and NGOs) about the proposed recommendations. Over 110 stakeholders representing all segments of the market chain participated in the workshop and validated the measures proposed in the assessment report.

Phase II—Medium-Term: Enactment of Legislation About the Freedom of Marketing—During the medium term, FGN should enact legislation about the freedom of marketing of agricultural inputs. The purpose of such legislation is to ensure the private sector that FGN supports the development of a private sector-based input marketing system in Nigeria. Similar measures should be introduced at the state level.

Phase III—Long-Term: Capacity Building Activities—During the long term, capacity building activities related to human capital development, regulatory frameworks and market information systems, creation of input development funds, strengthening of NSS and national research institutes and technology transfer should be undertaken.

Implementation of the Action Plan—A long-term project should be designed to implement the activities proposed in the Action Plan. The project should clearly prioritize the implementation of activities and the roles that various stakeholders (national and international) will play in the implementation of the project.

VII. Linkages With USAID/Nigeria's Strategic Objectives

The proposed Action Plan is expected to contribute directly to the achievement of USAID/Nigeria's Strategic Objective 2: "Strengthen the institutional capacity for economic reform and enhance capacity to revive agricultural growth." More specifically, the proposed Action Plan will contribute to Intermediate Result 2.2: "Private sector enabling environment enhanced, with emphasis on agriculture." The activities proposed will directly address the factors that constrain the effective participation of the Nigerian private sector in the agricultural inputs market.

Agricultural Input Markets in Nigeria: An Assessment and a Strategy for Development

I. Introduction

A. Socioeconomic Challenges

At the dawn of the 21st Century, Nigeria embarked on a bold experiment of participatory democracy and market-based economic growth. Properly implemented, both instruments of social change can empower individuals and organizations to transform the social landscape of Nigeria. Nevertheless, successful pursuit of these goals mandates well-focused attacks on food insecurity, poverty, hunger and disease, and environmental degradation. Peace and prosperity cannot be built on empty stomachs. Over 70% of the Nigerians are estimated to be poor, and a significant proportion of the population is food-insecure. Until recently, agricultural growth and food production trends have not been able to keep pace with over 3% annual growth in population on a sustainable basis. This has resulted in increasing dependence on food imports. Nigeria needs to accelerate agricultural growth and development to reduce deficit in its food balance sheet.

Nigeria's balance sheet for soil nutrient management is also in deficit. During the mid-1990s when Nigeria was using over 1 million product tons of mineral fertilizers, per hectare nutrient depletion was estimated to be over 80 kg/ha. Since the mid-1990s, fertilizer use has decreased by over one-half. In fact, decreasing fertilizer use is contributing to the increasing nutrient depletion and decreasing per capita food production in the country. The deficits in both food and soil nutrient management cannot be sustained without compromising food security and environmental protection. Moreover, slow growth in agricultural output also prevents the growth of agro-based industries and employment generation.

Accelerated agricultural growth and development remains an essential prerequisite to macroeconomic growth and stability, food security, poverty alleviation, and sustainable management of natural resources. Most poor people live in rural areas and depend on agriculture for livelihood. Thus, one way

to increase the incomes of the poor is to increase the productivity of their most important resource—land. Without increases in agricultural productivity, Nigeria, or any other African country, cannot increase food security and reduce poverty in a sustainable manner. In addition, increases in agricultural productivity are possible only through judicious management of natural resources and sound application of science and technology to agriculture. The science-based agriculture depends on the increased use of improved seeds, organic and mineral fertilizers, CPPs, skillful water management, and better agronomic practices.

B. Role of Agricultural Input Markets in Confronting Socioeconomic Challenges

To promote science-based agriculture among millions of small farmers—the backbone of Nigerian agriculture, supply of modern inputs—seed, fertilizers, and other associated inputs—should be increased. Farmers should have an easy access to these inputs at an affordable price. However, recent developments in Nigeria indicate that not only are farmers having difficulty in obtaining the necessary inputs on time and in good quality, but also they are paying very high prices. Fertilizer prices have increased from N50/bag (50 kg) in 1990 to N1,400-N1,500/bag of urea in 1999. The quality of fertilizer products has also declined. Improved seeds of different crops are not easily available at the farm gate. It is critical that the input supply system be improved to promote the adoption of new technologies for achieving various socioeconomic goals mentioned earlier. To develop efficient and sustainable input supply systems in Nigeria, this assessment was conducted with the following objectives:

1. To review the structure, functioning, and constraints of the agricultural input markets.
2. To assess the potential of the private sector to supply agricultural inputs efficiently and in a sustainable manner.
3. To identify constraints to the private sector participation in input markets.

4. To develop programs and policies for strengthening the functioning of agricultural input markets.
5. To develop an operational strategy or action plan for managing the transition from public to private sector driven agricultural input markets.

Since the mid-1990s, Nigeria had been experimenting with different organizational arrangements for supplying agri-inputs. These experiments have introduced many distortions in the input supply chain and have made inputs inaccessible and costly. This assessment has therefore focused mainly on the issues related to the supply-side of the marketing system. The underlying assumption here is that there is a considerable potential demand for agri-inputs, which remains unfulfilled due to high transaction costs resulting from distortions in the supply chain. With improvements in the supply system leading to lower prices, better quality, and timely delivery of inputs, input use could be increased significantly from current low levels. These improvements can also reduce the need for input subsidy by shifting the supply curve to the right from S_1 to S_2 (Figure 1).

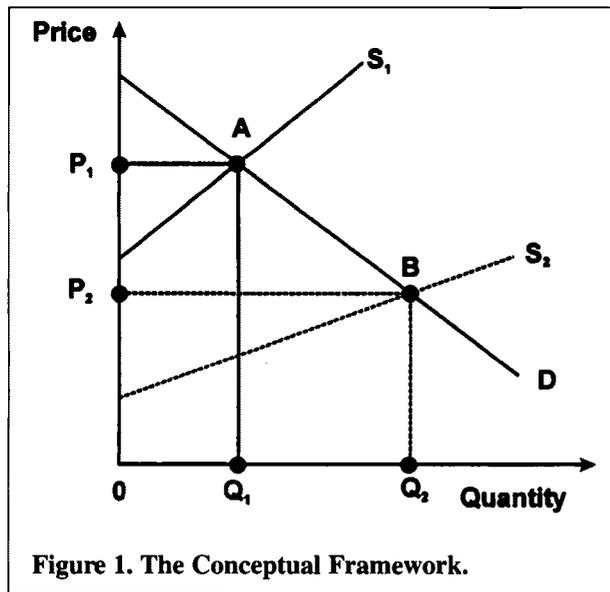


Figure 1. The Conceptual Framework.

This is not to suggest that the issues related to demand-side are not relevant. Definitely, they are relevant but require a separate study. Nonetheless, measures recommended for promoting technology transfer activities will have a positive impact on fertilizer and other input use by improving the efficiency

of nutrient use and thereby shifting the crop production function upward. Integrated nutrient management practices recommended for sustaining soil fertility will also contribute to improving demand for modern inputs—improved seeds, mineral fertilizers, and CPPs.

The remainder of the report includes six additional sections. Section II provides an assessment of the fertilizer, seed, and CPP markets in Nigeria. Then the next two sections are devoted to the potential of the private sector in supplying inputs in an efficient and cost-effective manner and the constraints it faces in realizing that potential. These sections are followed by a section on the elaboration of the strategy for developing efficient input markets based on a holistic approach. Section VI includes the action plan for implementing the proposed strategy while Section VII establishes linkages of the action plan with USAID/Nigeria's strategic objectives.

II. The Agricultural Input Markets in Nigeria: An Assessment

A. Overview of the Policy Environment

The Federal Government of Nigeria formulated its first comprehensive agricultural policy in 1985. The policy instruments, which were to remain valid for the next 15 years, were composed of macro-economic policies, agricultural-sector policies, and policies for the support services. The macro-economic policies included pricing, trade, exchange rate, and agricultural land policies. The sector-specific policies included food production, input supply and subsidy policies while the support services policies included agricultural technology generation and extension, agricultural credit, insurance, produce marketing, and research policies. The primary objective of these policies was to reinforce agriculture's contribution to food security, employment, and provision of raw materials and foreign exchange in the Nigerian economy.

Fertilizer Policy Overview—Prior to 1976, the state governments were responsible for the procurement and distribution of fertilizer until the Federal government established the Fertilizer Procurement and Distribution Division (FPDD) within the Fed-

eral Ministry of Agriculture as the central procurement and distribution unit. Two granulation plants, Federal Superphosphate Fertilizer Company Limited (FSFC) and NAFCON, were established in 1976 and 1988, respectively. These were set up as a strategy to develop domestic production capacity to meet a significant proportion of fertilizer demand. A later development in the fertilizer production scene was the installation of many bulk blending plants in various parts of the country through public and private sector initiatives. Between 1976 and 1995, several variants of the procurement and distribution arrangements between the FGN and the States were experimented. They included the involvement of the states and state organs in the transportation and distribution of imported and domestically produced fertilizers, the establishment of fertilizer depots as distribution points to the States, and the involvement of NAFCON in the distribution of locally produced fertilizers. As consumption of fertilizer increased, the inadequacies of public sector controlled procurement and distribution arrangements began to manifest in leakage and transit losses, late and non-deliveries of fertilizers to designated depots, artificial scarcity, and unsustainable subsidy burden.

Realizing that an efficient and sustainable agricultural input supply system could be achieved through the participation of the private sector, the Government started reforming the fertilizer sector in 1994 and adopted a fertilizer liberalization policy in 1996. That policy aimed at improving production, procurement and marketing efficiency and encouraging transparency and competition. The Federal government completely withdrew from procurement and distribution activities and discontinued the subsidization of fertilizer. To give relief to farmers, it reduced the import tariff on fertilizers from 10% in 1996 to 5% in 1997 and zero percent in 2000; it also abolished the value-added tax (VAT) and excise duty. However, because the reform process was not supported by developments in institutional capacity and human capital formation, fertilizer use decreased from over 500,000 nutrient tons in 1994 to approximately 100,000 nutrient tons in 1999 (Figure 2).

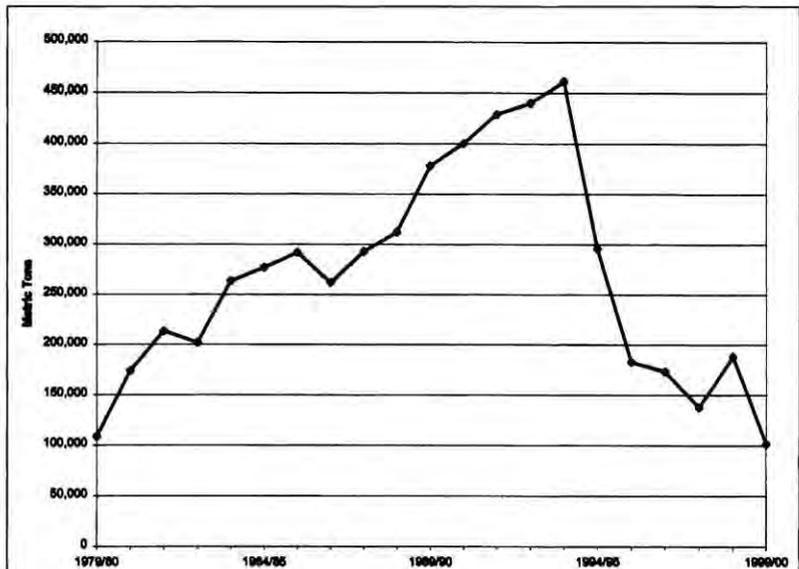


Figure 2. Nigeria: Fertilizer Use, 1979/80-1999/00.

The private sector and some states have now assumed greater responsibilities for production, procurement and marketing activities. Most of the states have established blending plants to increase the local supply of blended products while others such as Oyo State procure fertilizers from the main private sector producers and importers at market prices and distribute them to farmers at subsidized prices.

Seed Policy Overview—The national seed policy, formulated in 1992, provides guidelines for the development of the seed sector. The national agency responsible for coordinating development, monitoring policy, and implementing quality control in the national seed system is NSS of the FMARD. To give a legal backing to the seed policy, a National Agricultural Seed Decree No. 72 (1992) was enacted for regulating the various aspects of seed production, marketing, and quality control activities in Nigeria. The national seed policy is in line with regional/international standards and makes provisions for the withdrawal of public sector agencies in favor of the private sector in key areas of the seed industry. However, in practice, public- and private-sector roles are not clearly delineated. Today, the NSS roles are limited to seed technology training, quality control, and the coordination of breeder seed production. The production of breeder seed is the responsibility of agricultural research institutes, while that of foundation seed is handled by both the NSS and the private sec-

tor. Certified seed production is now in the domain of the private sector, using contract farmers.

CPP Policy Overview—Government strategy on agro-chemicals supply is to encourage the establishment of plants to manufacture or process agro-chemicals in Nigeria. For imported agro-chemicals the government’s strategy is to ensure the timely supply in adequate quantities by providing the necessary assistance for their importation. There is currently no manufacture of CPPs in the country although some companies have formulation and packaging plants. The marketing of CPPs in Nigeria is very unorganized and lacks proper legislative control. The deregulation policy has attracted many unprofessional dealers in CPPs subsector with serious implications for quality, human health, and the environment. No public sector agencies (except Agricultural Development Projects [ADPs]) are directly involved in the pricing or marketing of CPPs.

B. Fertilizer Market: Structure, Functioning, and Constraints

Figure 3 describes the current fertilizer production, procurement and marketing chain in Nigeria. About ten large fertilizer companies dominate the fertilizer market (Table 1). Some are engaged in the importation of raw materials and finished fertilizer

Table 1. Primary Fertilizer Companies Operating in Nigeria, August 2000

Company	Location
Akkad group of companies	Lagos and Kano
BUA Nig. Ltd	Lagos
Chemimex	Kaduna
Fertilizers & Chemicals	Kano
Dan Hydro	Kano
Dantata	Kano
Golden Fertilizer	Lagos
Morris Nig. Ltd.	Minna
Muka Nigeria Ltd.	Sango
Rim Merchant Bank	Lagos
Vita Pharm	Lagos

products while others are engaged in both production and importation of fertilizers. NAFCON and FSFC, the foundation of domestic fertilizer production in Nigeria, are currently out of production. NAFCON is currently being rehabilitated and may come on stream at about 60% of its capacity within six months of its rehabilitation. Nineteen blending plants (6 private and 13 public sector) of varying capacities are currently engaged in fertilizer production (Table 2). The public sector plants obtain their raw materials from the private sector companies while the private sector plants procure all their raw materials through imports.

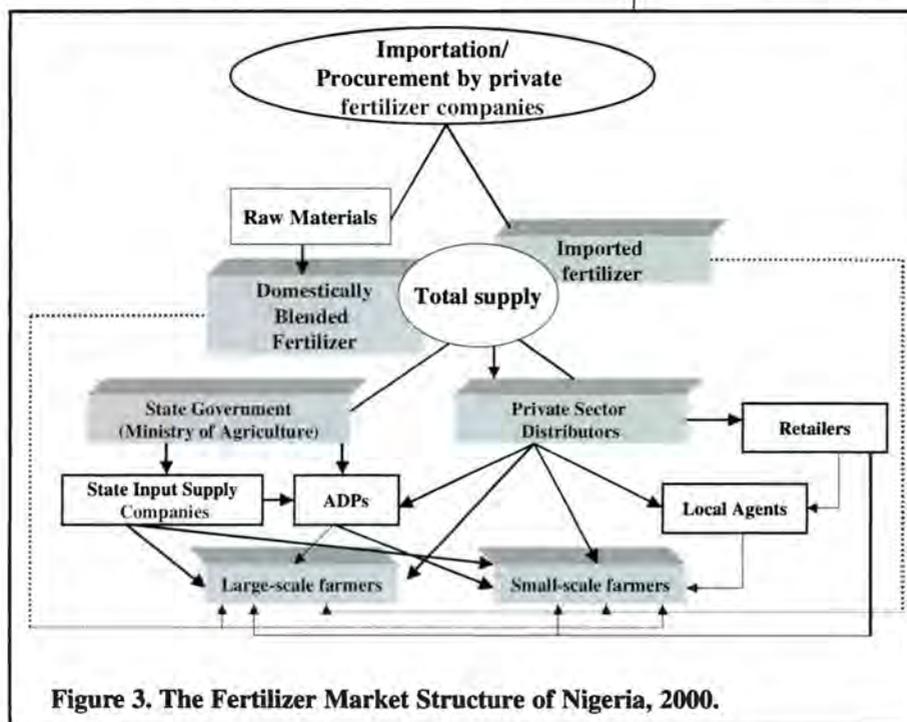


Figure 3. The Fertilizer Market Structure of Nigeria, 2000.

The fertilizers produced by the blending plants or imported into the country enter the market through both public sector and private sector marketing channels. The states distribute their products to farmers through ADPs and the Farm Service Centers (FSCs). The private sector suppliers reach the farmers through their network of distributors and retailers and to a limited extent, through the ADPs and FSCs. A few large-scale farmers get their supplies directly from the private and public sector warehouses.

Table 2. Blending Plants in Nigeria, August 2000

F & C Blending Plant	Kaduna State
Morris Blending Plant	Niger State
Zungeru Fertilizer Company	Niger State
Funtuna Blending Plant	Katsina State
Bauchi Blending Plant	Bauchi State
Gombe Blending Plant	Gombe State
Borno Blending Plant	Borno State
Agro Nutrient and Chemical Company	Kano State
KASCO Blending Plant	Kano State
Edo State Blending Plant	Edo State
SCENTUM AI Fertilizers	Enugu State
Gaskia Fertilizer Company	Kano State
Sasisa Fertilizer Company	Kano State
Zamfara Blending Plant	Zamfara State
Sokoto Blending Plant	Sokoto State
Kebbi Blending Plant	Kebbi State
Adamawa Blending Plant	Adamawa State
NAFCON Plant	River State
Crystal Fertilizer Blending Plant	Niger State

Fertilizer Market Constraints—The development of the fertilizer market is constrained by several factors, the most important of which include:

- The instability of the policy environment leading to inadequate investments in the establishment of distribution channels, capacity building, and promotional activities.
- Weak legal and regulatory framework supporting the liberalization of the fertilizer market leading to the flooding of the market by dubious quality products.
- Instability of the macroeconomic variables (interest rates, foreign exchange, tariffs, etc.). This has increased the risk of investments in fertilizer market development.
- Inadequate financial services including the high cost of procurement and distribution credit.
- Lack of market information on prices, availability, supply sources and overall market conditions.
- Poorly developed rural infrastructure leading to high transportation and high costs of fertilizer at the farm gate.
- Inadequate and sometimes obsolete port facilities and inefficient custom clearing bureaucracy that increase the landed cost of fertilizer.
- The low demand for fertilizer arising from the weak purchasing power of farmers.

C. Seed Market: Structure, Functioning, and Constraints

The seed market in Nigeria consists of both formal and informal sectors. Included under the formal sector are the public seed production and distribution organizations and the registered limited liability private seed companies, whereas the informal sector includes seed production through community-based organizations and NGOs. The National Seed Service, agricultural development projects (ADPs), and other government agencies constitute the main players in the public seed production and distribution network. FMARD regulates the seed industry. Private seed companies are registered under the Companies Act and with the NSS.

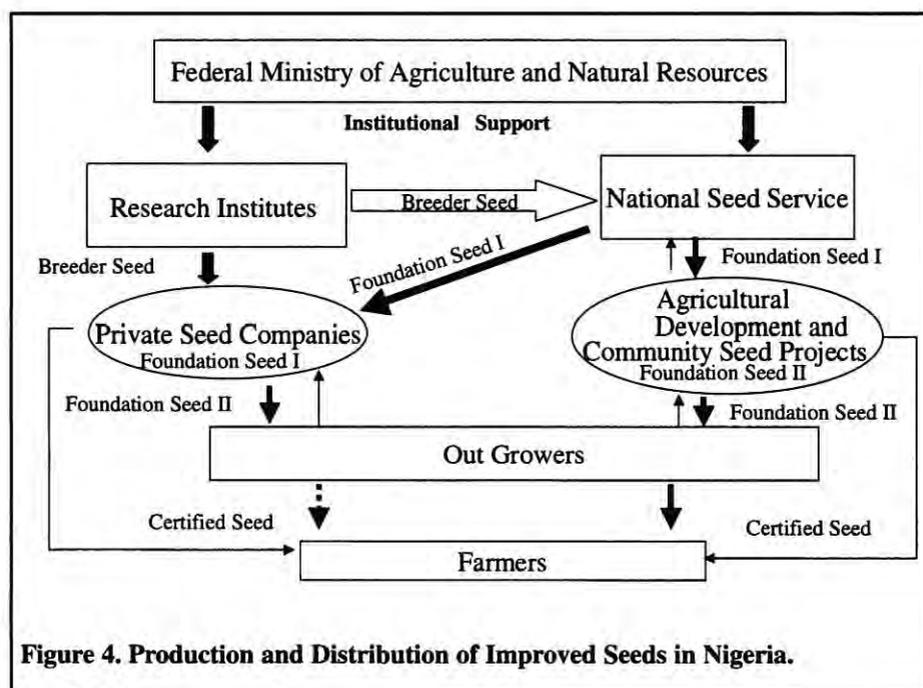
The National Seed Program recognizes three main categories of seeds: breeder, foundation, and certified seeds. Breeder seeds for both the NSS and private seed companies are supplied by the national agricultural research institutes (NARIs) and the international agricultural research centers (IARCs). In Nigeria, IITA, WARDA, and International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) are the main IARCs working in collaboration with NARIs to develop breeder seeds. The NARIs have mandates to work on specific crops for producing breeder seeds (Table 3). Breeder seeds from the research institutes are passed on to the NSS and private companies for foundation seed production. Both public and private sector organizations use contract growers to produce foundation seed. Certified seed production is primarily in the domain of the private sector. Production, distribution, and marketing of seeds in Nigeria is shown in Figure 4.

Public Sector Seed Development—This sector consists of the government departments or agencies within the Federal Ministry of Agriculture and Rural Development whose actions and activities influence or regulate the seed industry. Activities of this sector are supposed to facilitate marketing functions and foster the development of the seed industry. The 1992 Seed Decree established the National Seed Council, under which four main bodies were constituted to facilitate the development of the seed industry. These include the National Seed Service, the Crop Variety Registration and Release Committee, the Seeds Standard Committee, and the Department of Training, Information and Seed Extension.

Table 3. Research Institutes and Their Mandate Crops

Crop Research Institute	Location	Mandate Crops
IAR	Zaria	Sorghum, Maize, Groundnut, Cotton and Cowpea
NIHORT	Ibadan	Vegetable and Horticultural Seeds
NCRI	Badeggi	Rice and Soybeans
LCRI	Maiduguri	Wheat and Millet
IAR & T	Ibadan	Maize
NRCRI	Umudike	Cassava, Yam, and Irish Potato
IITA	Ibadan	Cowpea, Yam, Maize, Soybeans and Cassava
ICRISAT	Kano	Sorghum, Millet, Pigeon Pea, Groundnut
WARDA (c/o IITA)	Ibadan	Rice

Source: NSS, 2000.



Among the responsibilities provided in the National Agricultural Seeds Decree of 1992, the NSS is responsible for the production and distribution of foundation seeds and monitoring of certified seeds. In fulfillment of this function, the NSS produces foundation seed using contract growers and monitors the production and distribution of certified seed throughout the country. The certified seed is sold to farmers through farm-service centers (of the FMARD), agricultural marketing companies of different states, ADPs, and cooperative societies. Table 4 shows the uptake of foundation seeds by ADPs in 1999 and

2000. Of the five crops included in the table, only for cotton, foundation seed uptake increased in 2000 over the 1999 level.

Private Sector Seed Market—Currently there are five private seed companies operating in Nigeria (Table 5). Like the NSS, the private seed companies obtain breeder seeds from the NARIs and IARCs in the country. In addition, the private seed companies purchase foundation seeds from the NSS to complement the stocks produced from their own farms or through contract farmers. Figure 5 describes the mar-

Table 4. Foundation Seed Uptake by ADPs in 1999 and 2000 (metric tons)

	Year	
	1999	2000
Soybean	6.8	5.2
Groundnut	12.2	7.8
Rice	93.9	51.8
Cotton	302.8	455.6
Wheat	5.5	7.0 (proposed)

Source: NSS, 2000.

Table 5. Private Seed Companies Registered With the NSS, 2000

Company Name	Location	Type of Seeds Marketed
Premier Seeds (Nigeria), Ltd.	Zaria	- OP maize, rice, sorghum, cowpea, millet, wheat - Hybrid maize, and sorghum - Assorted vegetables
UAC Seed (Nigeria), Ltd.	Zaria	- OP maize, rice, cowpea, and sorghum
Alheri Seed (Nigeria), Ltd.	Zaria	- OP maize, and rice - Hybrid maize - Assorted vegetables
UT Seed, Ltd.	Tenti, Jos	- OP maize, and wheat
Savannah Seed Enterprises Ltd.	Jos	- OP maize - Hybrid maize

Source: NSS, 2000.

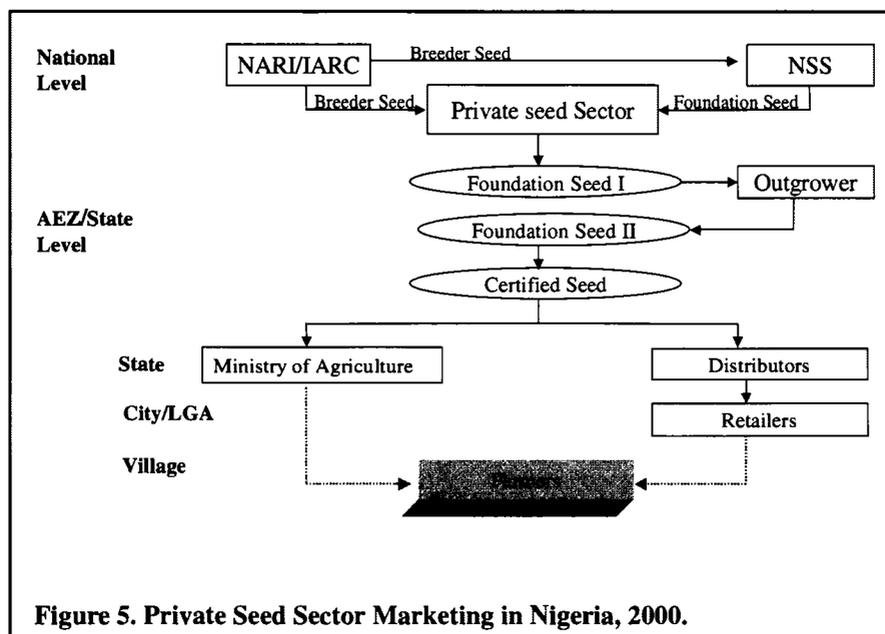


Figure 5. Private Seed Sector Marketing in Nigeria, 2000.

keting system presently operated by the private seed sector in Nigeria. Each of the companies produce and market open-pollinated certified seeds of maize and hybrid maize. Other types of seeds handled by the companies include rice, sorghum, wheat, millet, cowpea, and different vegetables.

Total certified seed produced through the NSS and the private seed companies was only 4,324 tons. There are no reliable data on the demand for various seeds either by state or agroecological zones. This poses a significant problem regarding planning for the seed sector. Certified seeds produced by the private companies enter the market through two main channels—state and private. At the state level, the Ministries of Agriculture make bulk purchases from the companies and sell at subsidized prices to farmers through FSCs. Although each company has developed its own dealership networks because of financial constraints and low demand for seeds, dealership networks are primarily concentrated in urban areas. Thus, farmers at the village level, where the seeds are primarily needed, do not have an easy access to seeds from the private companies.

Informal Seed Sector—Due to unavailability of certified seeds at the village level, programs to produce seeds of high-yielding varieties could be found in certain communities. Such community-based seed production and distribution programs focus mainly on the rapid multiplication and diffusion of specific seeds among farmers. The farmer-to-farmer seed diffusion approach is used in such programs. The IITA in collaboration with the Kano State Agricultural and Rural Development Authority (KNARDA) is promoting the adoption of improved cowpea seeds in Kano state. Such seeds are not certified; farmers make decisions about the quality and adoption at their own risk.

Seed Market Constraints—Constraints affecting the development of the seed market are as follows:

- Inadequate arrangements for seed certification and quality control.
- Slow release of new varieties due to irregular meetings of variety release committee and seed council.
- Inadequate and delayed funding for public sector institutions to perform quality control functions and research support activities.

- Insufficient resources for training and technical assistance to contract growers.
- Conflicting roles for public sector institutions and private sector organizations.
- Lack of adherence to the functions assigned to various entities in seed production.
- Discontinuance of finances for ADPs, thereby preventing them from producing and disseminating quality seeds.
- Conflicting goals of agricultural development policy.
- Lack of clarity on intellectual property rights for developing breeder seeds in the private sector.
- NSS involvement in the foundation seed production sends conflicting signals.
- Lack of clarity in the seed pricing policy.
- Lack of credit for farmers and seed dealers for business development in rural areas.
- Inadequate extension services due to poor funding of the ADPs.
- Poor rural infrastructures.

D. The CPP Market: Structure, Functioning, and Constraints

The procurement and marketing of CPPs in Nigeria have always been in the private sector domain except for supplies of the ADPs and the Japanese aid-in-kind, KR2. The market and marketing of CPPs in Nigeria are unorganized and not properly regulated. The trade deregulation has brought all kinds of traders into the CPP market making it difficult to determine various market shares and sizes. It is estimated that the private sector agrochemical companies supply about 70% of the total CPP demand of approximately N500 million. The total CPP supply is usually composed of 30% herbicides, 40% insecticides, 15% fungicides, 8% growth regulators and seed treatment chemicals, and 7% rodenticides, nematicides and others. Over the years, there has been little growth in the size (in quantity terms) of the CPP market.

The CPP market is dominated by eight large companies. Each company has full marketing supports from their multinational counterparts in Europe and America. They are: Chemical and Allied Products (ICI), Swiss Nigerian Chemical Company Limited (Ciba-Geigy), National Oil and Chemical Marketing Company (Shell), BASF Nigeria Limited (BASF),

Unichem Nigeria Ltd (Bayer), Ibachem Nigeria Ltd (Dow Elanco), Nigeria Hoechst (Hoechst), and Rhone Total (Rhone Poulenc). The structure and distribution channel for the CPPs in Nigeria is shown in Figure 6. The CPP companies supply the Federal government at the national level that in turn supplies their field offices in the states and eventually to small-scale farmers either directly or through the farm service centers. At the state level, the companies directly supply state ministries of agriculture, the ADPs, and established CPP distributors. The registered distributors supply to large-scale farmers either directly or through their local agents at the retail level. It is estimated that by volume, 60% is sold to the large-scale farms through direct sales by the companies and distributors and 40% through government agencies and ADPs to small-scale farmers.

CPP Market Constraints—The main problems facing the CPP market in Nigeria include:

- The tedious and incoherent registration procedures limiting the market to a few companies with product loyalty to their parent companies thereby limiting the choice of CPPs in the market.
- Inadequate information on the agrochemical needs of the country making it difficult for the dealers to forecast and plan their supplies accordingly.

- Unorganized CPP distribution system with weak regulatory system resulting in the sale of fake, adulterated or out-dated products.
- High cost of capital for procurement and distribution.
- Low demand as a result of the weak purchasing power of farmers.

E. Soil Fertility- and Nutrient Management-Related Issues

Soil fertility management practices in Nigeria are currently based on information derived from geological, vegetation and soil maps. On this basis, soils derived from sandstones have been shown to be low in exchangeable potassium and phosphorus while those derived from basement complex and igneous rocks are likely to be rich in Ca, Mg, K, and trace elements. Phosphorus deficiency is likely to be more widespread and severe in the forest than in the savanna ecology.

A review of crop responses to fertilizer indicates that:

1. Response to N is common to all ecological zones. The magnitude, however, increases from the forest to the savanna zone.

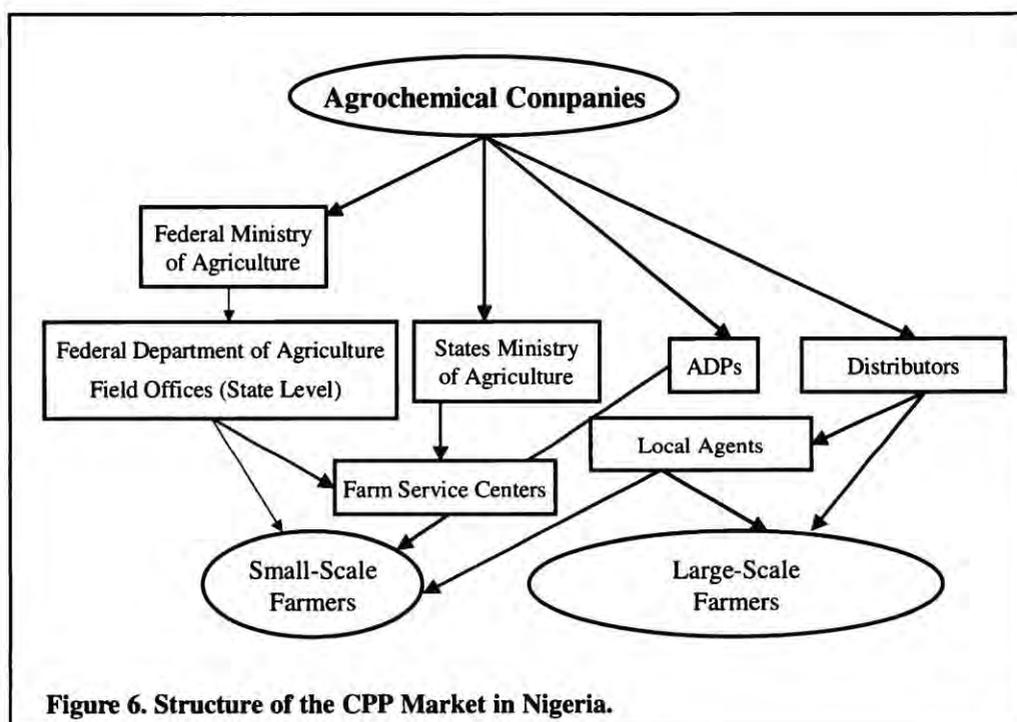


Figure 6. Structure of the CPP Market in Nigeria.

2. When N requirements are met, the deficiencies of P, K and other elements are likely to manifest themselves.
3. The severities of nutrient deficiencies are largely in the following order:
 - a. $N > P > K$ in the forest and forest transition zones.
 - b. $N > P = K$ on soils derived from sedimentary rocks like sandstones.
 - c. $N > P > K = S$ in the savanna zone.
4. Pockets of trace element responses, particularly Zn, B and Fe, are likely in light-textured soils low in organic matter.
5. Maintenance of soil organic matter is the key to soil fertility sustenance.

Other soil fertility-related issues revolve around improper use of fertilizers (e.g., inappropriate fertilizer formulations), suboptimal and untimely applications, and the lack of quality control regulatory service in Nigeria.

Compound (NPK) fertilizer products used in Nigeria include 25-10-10, 17-5-5+17(Ca), 15-15-15, 20-10-10+2Mg and 20-10-10 + B+S. However, some of these formulations are not well supported by sound agronomic requirements. For example, continued use of calcium in blended products may upset Ca/Mg balance in the soil and when used on cotton, is likely to further aggravate B deficiency by depressing B uptake. Moreover, continued use of this material may upset Ca/Mg balance in the soil. It was also reported that Nigerian farmers are not receiving guaranteed nutrient contents in their purchases. There is evidence of underweight bags ex-factory and farmers usually have no means of verifying if the bags are 1-3 kg short. Underweight bags therefore are undetected at the retail level. According to information collected from dealers, this problem also exists with imported and locally blended materials.

Another problem is the increase in the amount of fake products reaching the local markets. The mission was shown samples of fake fertilizers packaged in the bush usually the day before market days. The material contained only 14.35% N and traces of P and K. The total water solubility was less than 1.0%. Such materials are offered at very low prices to attract the farmers. If the Nigerian farmers are to gain

access to high quality fertilizers and use them efficiently, the fertilizer quality control mechanism and the regulatory framework of fertilizer laws must be fortified. Nigeria's current capacity for monitoring input quality is too weak to cope with the volume of inputs being imported into or produced within the country.

The lack of facilities for soil testing is another significant constraint. Soil testing is a chemical method of determining adequacy of essential plant nutrients in the soil. Where soil calibrations have been perfected for crops, soil testing saves the farmer the money used to purchase the fertilizer that is not required for the crop. At present there are four laboratories for soil testing in the country. These are grossly inadequate to meet the expected demand for soil testing that will arise from increased use of fertilizers. An essential attribute of soil testing laboratories is their ability to analyze a large number of samples within a short period of time so that results meet the desires and need of farmers. Modernization of existing facilities, establishment of more laboratories at more strategic locations in the country and manpower development will be essential. Because soil testing facilities generate externality, they should be developed and supported through public funds.

III. Potential of the Private Sector in Supplying Agricultural Inputs

Considerable untapped potential is available in the Nigerian private sector to support liberalization and develop well-functioning agricultural input markets. After the liberalization of the fertilizer market in 1997, private sector companies have acquired considerable experience in the management of production, importation and marketing of agricultural inputs. These companies have been making dependable business connections with both local and international financial and market institutions and have established long-term beneficial and dependable business relations with local and foreign banking systems. There is also a considerable potential in the product and input marketing at the grassroots. Prominent among the companies and distribution agents currently operating in a competitive agricultural input markets are:

- Fertilizer, seed, and CPP companies engaged in the manufacture, importation and marketing of modern agricultural inputs.
- Bulk commodity companies with considerable experience and facilities for the importation and marketing of bulk commodities similar to fertilizers.
- Nigerian importing companies that have dependable connections with international suppliers, financial institutions, both local and foreign.
- State-supported limited liability companies with considerable potential for improved efficiency and wider coverage after privatization.
- The ADPs, FSCs, community-based farmer groups and cooperative societies as agents of agricultural input retailing activities at the grassroots.

However, a more conducive business environment needs to be pursued to encourage new entrants into the agricultural input market, thus furthering competition

Fertilizer Production Facilities—As explained earlier, there were two main government-owned granulation plants in Nigeria, namely, NAFCON Onne, Rivers State, and Federal Superphosphate Fertilizer Company (FSFC), Kaduna, Kaduna State. NAFCON has an installed capacity of 1,000 tpd of ammonia; 1,500 tpd of urea; 1,000 tpd of NPK; and 586,000 tons blending capacity. However, the NPK plant has been damaged beyond repair and may therefore be scrapped. The NAFCON plant was closed in 1999 and is currently undergoing significant repairs. The plant is projected to produce at about 60% capacity after the first phase, increasing to 80%-85% capacity after the second phase of repairs estimated to be completed in 18 months.

FSFC has an installed capacity of 100,000 tons of SSP. The company is currently out of production, but there are plans to complete repairs and restructuring with a loan from Economic Community of West African States (ECOWAS) to enable it produce at full capacity. Both companies are still parastatals of the Federal Ministries of Industry, but plans are underway to privatize them after rehabilitation. When these plants are fully rehabilitated and privatized, there will be an increase in the supply of fertilizer products, particularly urea—an essential ingredient for blending operations. Privatization will increase their effi-

ciency and cost effectiveness while their operations will be more competitive and transparent. The drive to be competitive and maximize profit will encourage them to further expand their distribution channels, undertake promotional activities, and render more intensive marketing services to farmers. There are plans to install four more granulation plants of the capacity of NAFCON and two more similar to that of FSFC. In fact, the foundation stone of NAFCON II was laid in 1998, but construction work was suspended for unknown reasons. The resultant effects of all these efforts is to increase the potential for increased capacity utilization, reduce the cost of production, supply cheaper fertilizer products to the Nigerian market, and create effective demand for local consumption and export.

Bulk Blending Plants—There are 19 bulk blending plants of varying capacities located in different parts of the country. Six of these are privately owned while the others were established by Federal and State governments. In contrast to six blending plants in 1994, liberalization of the fertilizer sector has led to a significant increase in both private and public sector blending plants. As the process of liberalization advances and as the business environment becomes more conducive, increased commercialization or privatization, particularly of the state owned blending plants, may occur. There are positive indications that existing plants will expand their scale of operations while prospective investors will be attracted to the bulk blending business.

There are other fertilizer companies that are currently involved in the production, importation, and marketing of fertilizers. Most of them indicated their willingness to continue in operation, establish a marketing organization to distribute and sell their products under a liberalized system, provided the environment is made more friendly. NAFCON, Dan-Hydro, and Golden Fertilizers have in fact set up marketing channels to distribute and sell fertilizer products after the government withdrew from fertilizer operations. F & C and Morris have also begun implementing a marketing organization to distribute and sell their products. Because of the public sector monopoly in distribution of inputs in the past, these companies have had little experience in developing marketing networks and infrastructures. However,

with adequate training and technical assistance, they could also become good marketers.

Seed Market—As indicated earlier, there are five main private sector seed companies in Nigeria. Because of the nonconducive policy environment and other technical and financial constraints, these companies have not been able to develop marketing outlets in rural areas. However, considerable potential exists for more seed companies to emerge if the environment could be made more conducive for investment through the enactment of regulatory laws; effective quality control mechanisms; and the establishment of wholesale and retail outlets. The formation of the National Seed Association will represent a potent vehicle for regulating the seed industry in Nigeria. Like their fertilizer counterparts, these companies also lack experience in developing dealer networks and will need training and technical assistance to build integrated dealer networks.

CPP Market—There is a large market for agrochemicals in Nigeria. The market, dominated by eight large companies was estimated to be N500 (\$12 million) in 1997. These agrochemical companies control 70% of the market for agrochemicals. They have full marketing support from their international affiliates. However, due to extensive devaluation and decreased agricultural activities, many of the multinational agrochemical companies left the country. However, as indicated in the Petroleum Trust Fund (PTF) agrochemical contractors list (Table 6), many more Nigerian agrochemical companies have

entered the business to fill the gap created by the departure of the multinational companies.

There is no doubt that the potential for CPP market development exists in Nigeria. The multinational companies that withdrew from Nigeria will find it most compelling to re-enter the market either directly or through their Nigerian counterparts. The Agrochemical Association of Nigeria was formed to consider the interest of the members—manufacturers, importers, distributors, local marketers, and users of agrochemical products. The establishment of this association will further enhance the performance of the sector and serve to attract new entrants in the business.

Capacity for Imports and Marketing of Agricultural Inputs—Many companies have been supplying fertilizers to governmental agencies in the past, and many more have demonstrated capacities to supply through imports. Large fertilizer companies, such as Golden Fertilizers, Dan Hydro, Fertilizers and Chemicals, and NAFCON, have capabilities to import fertilizers on a large scale to benefit from economies of scale. However, these companies will need support in terms of having access to finance for imports, letters of credit, and networking in the global market.

Many agricultural input companies have established or are planning to establish wholesale and retail marketing structures in their command areas. However, many of them depend largely on the marketing infrastructure and facilities provided by state limited liability companies such as the Banchi State Agricultural Company (BASAC), the Farmer Supply Company (FASCOM), Kano Agricultural Supply Company (KASCO), and the Farmer Supply Company, Katsina (FASCKT) in Bauchi, Kaduna, Kano, and Katsina States, respectively. Similar agricultural input companies exist in the southern parts of the country. These companies have long years of experience, trained staff, storage capacities and marketing skills to manage the marketing of all agricultural inputs. Plans are being made to privatize these companies to make them more efficient and profit oriented. If and when this happens, expanded market outlets will be created to absorb the products of existing and emerging agricultural input companies.

Table 6. PTF Agrochemical Contractors (1998)

1. Rhodia Nig Ltd
2. C. Zard & Company Ltd
3. Novartis Nig Ltd
4. Candel Company Ltd
5. Dizengoff W.A Ltd
6. Saro Agrochemicals Ltd
7. Nigerian-German Chemicals Plc
8. Henkel Chemicals Nig Ltd
9. Chemicals & Allied Products Plc
10. Gaskiya Chemicals Nig Ltd
11. CPL Industries Ltd

Most of the companies also use the FSCs as their retail outlets. Many states have also established product marketing and input retailing cooperatives to provide service to their members. Oyo State, for example, has 99 such societies, each having approximately 50–100 members.

A recent development in retailing activity is the use of community-based farmer groups that act as agents to distributors of agricultural inputs in Kano State. The United Nations Development Program (UNDP) and many other NGOs are vigorously promoting community-based farmer groups as agents of change, technology transfer, and agricultural input market development. *All these facilities and organizations could be strengthened to develop efficient and sustainable agricultural input markets in Nigeria.*

IV. Constraints to Effective Private Sector Participation

It was explained in the previous section that the private sector has a considerable latent potential to supply inputs efficiently and cost effectively. However, due to several constraints, this latent potential has not been realized. These constraints can broadly be divided into three groups:

- A. Macropolicy constraints
- B. Market development-related constraints
- C. Technical constraints

A. Macropolicy Constraints

Macropolicy constraints and issues deal with creating an enabling environment for market development. A conducive environment is essential for promoting the development of input markets. Various stakeholders and the assessment team identified several constraints, which make the environment nonconductive for private sector participation in input markets. Macroeconomic instability and its associated manifestations—depreciating exchange rate, inflationary pressures, and high interest rates—have generally discouraged the private sector from making the necessary investments. The value of Naira has depreciated from N8/US \$ in 1990 to over N100/US \$ in the year 2000. The depreciating Naira not only increases the local currency costs of imported

inputs but also discourages importers from making necessary investments for import commitments because it introduces uncertainty and risks in potential returns on investment. Imports of agricultural inputs, especially fertilizers, are capital intensive and require a long gestation period. It takes about 3-4 months to receive deliveries after ordering inputs from the global markets and another 6-9 months to recover investments from farmers. Thus, one has to commit resources for nearly one year. Any depreciation of the currency after placing orders can lead to high prices and low demand resulting in excessive inventories. High interest rates (25%-30%), stringent collateral requirements, and 100% down payment for a letter of credit (LC) make the import of fertilizers an extremely risky business. Therefore, many private sector participants invest in high turn-over and low-gestation period commodities like electronics and other consumer goods. Stabilizing the value of currency and reducing interest rates are essential to encourage the private sector participation in input business.

Poor infrastructures, especially rural roads, have led to the concentration of input dealers in urban and semi-urban areas. Consequently, farmers have to travel 30-40 km to buy seeds, fertilizers, and other agrochemicals. Such distances not only add to transaction costs but also discourage farmers from adopting productivity-enhancing technologies. Congestion at the port further adds to the cost of imported fertilizers. The absence of banking offices in the countryside also discourages the development of retail networks because traders have no access to safe deposit of currency and other valuables resulting from trading activities. Isolated rural communities due to lack of roads and communication facilities have created fragmented output markets. The lack of integration of output markets results in low prices for the produce in the local community and reduces incentive for the adoption of new technologies. The development of well-functioning crop output markets (maize, rice, cowpeas, soybean, sorghum, millet, fruits and vegetables, etc.) is essential to promote input markets.¹

1. FGN has recently completed a study on improving output marketing in Nigeria. The recommendations of the study are under discussion.

Physical insecurity to life and property is another critical constraint to the deeper penetration of dealer networks in rural areas. Due to the fear of being robbed, small dealers are hesitant to invest in large stocks of fertilizers and other costly inputs and leave them in the villages. Bank robberies and armed assaults on traders further discourage investment in input market development in rural areas.

B. Market Development-Related Constraints

Unlike macropolicy constraints that affect the overall environment in which various markets function, market development-related constraints impinge directly on marketing activities and functions. **Policy uncertainty** is the single most critical constraint discouraging private sector participation in seed and fertilizer markets. Policy uncertainty is compounded by policy instability and policy inconsistency. Ad hoc changes in input distribution and pricing policy in recent years have left the private sector bewildered and unenthusiastic, if not lost. For example, in 1997, fertilizer distribution was liberalized and fertilizer subsidies were removed. This policy change encouraged the private sector participants (traders and blenders alike) to make the necessary investments in developing fertilizer business. In 1999, the FGN announced a 25% subsidy on fertilizers and forced many fertilizer dealers to supply fertilizers in various states and local government areas below the cost of acquisition. This experiment was a half-hearted success and therefore in the year 2000, FGN withdrew subsidies and granted concessions in the form of tariff removal (5% on fertilizer imports). However, this policy change at the federal level was partially nullified by some state governments who introduced subsidies in their states. To implement subsidies at the state levels, some states bought fertilizers directly from importers and blenders and thereby "crowded out" the private dealers from getting the necessary supplies for their customers. Since agriculture is a state subject and states have the full freedom to implement any policy that they wish to, one cannot criticize the state governments for subsidizing fertilizers or other inputs. What is at stake is the uncertainty their actions create for the private sector business planning. To reduce uncertainty, state governments should announce in advance the quantity of fertilizers and seed they are likely to purchase from the market so that importers and blenders can ensure

adequate supplies for both state governments and private dealers. Unless all states follow a uniform subsidy policy, fragmented state-level subsidies may encourage cross-border leakage. Fiscal sustainability of subsidies from the state budgets is doubtful; many states are not as endowed with resources as the FGN was, and even FGN was not able to sustain fertilizer subsidies and make them reach the truly needy farmers. Thus, budgetary constraints may compel the states to phase out subsidy in the not-too-distant future.

The **lack of human capital** is another constraint preventing the active participation of the private sector. Skills needed for management, business planning, marketing, forecasting demand and supply, and technical knowledge about seeds, fertilizers, and CPPs are lacking at all levels below the importers and blenders. Because most blenders and importers are concentrated in urban areas, there is a dearth of dealer networks in the countryside. Few large-scale dealers have established downstream retail networks for two reasons. First, they operated in the sheltered market in the past where the Federal government used to purchase all seed and fertilizers for distribution to farmers. Second, contract enforcement mechanisms are still weak in Nigeria. One large-scale company sold fertilizers on credit to dealers but ended up incurring heavy losses due to poor loan recovery. Consequently, most wholesalers do not sell fertilizers on credit to retailers; they practice a "cash and carry" system. In a country where access to finance is prohibitive, a "cash and carry" system may be good for the large-scale risk-averse enterprises, but it is not good for developing well-functioning markets. Substantial improvements will be needed in both contract enforcement and access to finance for business development. A large-scale program of human capital formation will be required to make input markets perform efficiently.

The **absence of regulatory frameworks** for quality control and truth-in-labeling and for preventing the formation of monopolies is another obstacle to private sector participation. The withdrawal of FGN from marketing and distribution without adequate mechanisms for quality control and truth-in-labeling has resulted in adulteration and low quality products in the market. In some cases, unscrupulous profiteers

have marketed fake products (products having less than 1% water-soluble nitrogen) in brand name bags (NAFCON and F & C). Likewise, lack of regulation and monitoring has resulted in the sale of out-dated pesticides. To promote healthy marketing of inputs, enforcement of quality and standards is an essential desirable governmental activity.

The **lack of access to finance and market information** (about global, regional, and national markets) for business development also prevents the growth of the private sector involvement in the input markets. Obtaining finance for imports or business development for a new entrepreneur is almost impossible. The limited efforts at **technology transfer** restrict the development of the market by restricting the demand. Although SG-2000 is doing a commendable job of educating and demonstrating the adoption of new technologies, its efforts are limited to a pilot scale. The government must support technology transfer activities on a large scale to create demand for inputs and market development.

C. Technical and Input Specific Constraints

Several technical factors have also prevented the growth of input markets in Nigeria. Some of the important ones are as follows:

- The lack of soil testing facilities and appropriate fertilizer recommendations restricts the demand for and supply of blended fertilizer products.
- Lack of a market and management information system for guiding policy formulation, implementation, and business planning.
- The delays in releasing the seed varieties for various crops slow down the development of the private seed industry.
- The lack of training for contract growers prevents many able farmers to produce quality commercial seed for the market.
- The sale of out-dated cheap agrochemicals 'crowds out' the honest and quality-conscious dealers from business.
- Inadequate funding support to NSS and NARIs restricts the supply of breeder seeds for various crops.

V. Strategy for Developing Efficient Input Markets: A Holistic Approach

Nigeria's move into liberalization of the fertilizer distribution system was ad hoc, sudden, and ill prepared. The necessary preconditions recommended by the 1994 IFDC study were not properly implemented. In addition, adequate institutional capacity needed to make markets run efficiently was not created. Years of neglect and distrust have left the private sector handicapped to perform efficiently. It requires genuine support and encouragement to build the necessary human capital and develop marketing infrastructures and supporting institutions. The fertilizer market remains underdeveloped and fragmented. It may be premature to draw conclusions from the half-hearted experience of the 1997-2000 period of liberalization. Building well-functioning markets requires time and resources.

To strengthen the functioning of liberalized markets, actions and policy measures are needed in several areas including policy reform, human capital formation, financial markets, regulatory frameworks, technology transfer activities, market information, output market development, and macropolicy issues. Several of these actions should be undertaken in a holistic manner so that synergistic effects could be realized.

A. Create a Conducive Macropolicy Environment

Macroeconomic instability resulting from the depreciating exchange rate remains the single most important macropolicy factor that inhibits the growth in fertilizer use and the development of input markets. Suitable monetary and fiscal policies should be instituted to stabilize the value of domestic currency so that unnecessary risks in developing import business and domestic production of inputs could be minimized.

The development of physical and financial infrastructures and crop output markets in the rural areas should receive priority in development programs. These developments are essential to link input and output markets and promote more economic interactions between rural and urban areas. More signifi-

cantly, such developments reduce transaction costs of input supply and enhance output prices for farm produce, thereby creating a double incentive for the promotion of input markets. Ensuring security of property and life in rural areas will also add to the development of the agricultural sector in general and input markets in particular.

B. Declare and Adhere to a Consistent Input Marketing Policy

Ad hoc and inconsistent policy pronouncements and proclamations of the past have left the private sector leery of the FGN intention. To restore confidence in the liberalization policy, the FGN should enact legislation about the "Freedom of Marketing" to demonstrate its support and commitment for the liberalization policy. The legislation should clearly state that the FGN will not interfere in marketing or distribution of inputs in any way, nor will it interfere with the pricing of inputs. Moreover, it should also include FGN support for building necessary marketing infrastructures.

The present seed laws should be reviewed to focus attention on seed pricing policy that encourages competitive market growth. This should also focus on the harmonization of functions of participating organizations/institutions to avoid overlapping and duplication of efforts. In addition, intellectual property rights should be granted for privately developed lines while avoiding monopoly of foundation seeds.

C. Build Human Capital for Market Development

The modern input business is highly skill intensive. To create the necessary cadre of dealers at all levels—import, wholesale, and retail, large-scale training and technical assistance programs should be implemented. Such programs should focus on imparting necessary business and technical skills to people (men and women) who want to develop input business in the rural and urban areas. Technical training programs should also be organized for farmers who want to produce commercial (certified) seed. In this context, NSS's training and technical assistance capabilities should be strengthened. Short-term repeat training programs for dealers and farmers must be conducted throughout the country. Human capital should also be built in the public sector to strengthen

the implementation of regulatory and quality control laws and to develop and operate market information systems. During the initial phase of market development, the FGN should shoulder this responsibility because such services are of "public goods" nature, and private entities are unlikely to undertake such functions.

D. Improve Access to Finance

Technical and business skills are necessary but not sufficient to develop input business enterprises. Access to finance is indispensable because finance is the lifeblood of any business activity. Given the distortions in the financial markets in Nigeria, there is a need to create an Agricultural Inputs Business Development Fund (AIBDF) so that the trained, viable, and creditworthy dealers can have access to finance to develop input business. Such a fund should be managed by a commercial bank with the provision that the fund will be used as a credit guarantee fund in extreme cases of default. To prevent the formation of monopolies or oligopolies in fertilizer imports, competition should be promoted by training a new cadre of importers and dealers and by strengthening the skills of existing and prospective importers and dealers who will have access to global markets and lower prices. For such importers, access to foreign exchange, especially access to an LC, should be strengthened by creating an Agricultural Inputs Import Fund (AIIF). Currently, as indicated earlier, commercial banks require 100% down payment for an LC guaranteeing the payment. Such requirements are inimical to business development. In most countries in Asia, commercial banks require only 30% down payment for an LC. To encourage the import business, a tripartite risk-sharing arrangement should be developed, so that the importer, the commercial bank, and the AIIF share risks in the ratio of 30%, 40%, and 30%, respectively. Mechanisms for making credit available to farmers should also be strengthened.

E. Develop and Implement Regulatory Frameworks

Quality control and anti-monopoly measures are essential for well-functioning input markets. Initially, FGN should take a lead in developing and implementing these measures and system. Gradually, these functions could be performed by agri-input dealers' association and seed growers' association. Training

and technical assistance should also be provided to build such associations.

F. Develop MIS

The establishment of an efficient MIS is an indispensable component of any successful market reform program. The MIS should be designed to monitor and evaluate the results of each step of the implementation process. Among other elements, coverage of the MIS should include:

1. Domestic production, imports, sales, exports and stocks of production plants and distributors.
2. Factory-gate prices and world market prices of different inputs at different times
3. Farm-gate prices of different inputs and outputs in different locations.
4. Supply and demand for different inputs at different locations.
5. Sales and price trends of different inputs.
6. Input-output data for different crops in different agroecological zones, etc.

G. Promote Technology Transfer Activities

Modern agriculture is science based and knowledge intensive. To educate farmers about new technologies, widespread farm demonstrations should be conducted. In this respect, the work conducted by SG 2000 in collaboration with the Ministry of Agriculture in Kano and other states should be strengthened. To improve the efficiency of fertilizer use, farmers should have effective access to soil testing facilities and knowledge about fertilizer recommendations.

Public sector agencies responsible for research and extension must be adequately funded. Also, the personnel should be adequately trained and motivated. The ADPs and farmers' supply companies should be reactivated to enable them to facilitate technology transfer and input delivery to farmers.

H. Strengthen Technical and Monitoring Capacity for Promoting Private Sector Seed Market Development

During the last few years, national capacity for agricultural research and for agricultural inputs, particularly for breeder seed production, has been al-

lowed to deteriorate rapidly. NSS's capacity for quality control and monitoring, training, and technical assistance for seed production has also suffered significantly. There are considerable delays in releasing new varieties. To promote the development of a healthy private sector-based seed industry, additional resources should be targeted to revitalize national research capacity, linkages with international agricultural research centers, and NSS capacity to support foundation seed production.

Seed Certification and Quality Control—Development of a dependable seed certification and quality control program is required to boost activities of private sector seed companies. There is a need for satellite seed testing laboratories across the country to work in concert with the main laboratory at NSS in Abuja. Quality control standards should be a major pre-occupation of the NSS. However, the NSS will require both technical and financial assistance to fulfill this role. To enable NSS to function efficiently, it may be necessary to evaluate the need for NSS to be an autonomous unit within the FMARD. Such an evaluation should also focus on redefining the roles of the NSS to support the development of a viable private seed industry in Nigeria.

Variety Release Mechanism—The slow pace of the new variety release mechanism can be addressed through a participatory variety selection process involving farmers and researchers. This method confers the definition of what is an acceptable improved variety on the users. After two years of on-farm testing, the farmers themselves can select a desirable variety that then goes immediately into nationally coordinated testing. It is expected that the process can reduce the time lapse for the release of a variety to about three years after emerging from replicated advanced yield trials.

Research Policy and Property Rights Issues—To stimulate investment in developing more superior seed varieties, there is a need to reassess the research funding mechanism with the aim of developing a strategy for introducing intellectual property rights in plant breeding. Such assessment will include both technical and legal issues.

VI. Action Plan for Developing Input Markets

The development of well-functioning agricultural input markets requires a public-private sector partnership. It is not an either-this-or-that sector approach. Both sectors have to work hand-in-hand to realize potential benefits of each one's comparative advantages. Similarly the management of the transition from public to private sector driven agricultural input market and the phasing and prioritization of the various component activities will to a large extent determine the efficiency and sustainability of the system. A badly managed transition program can lead to a chaotic and inefficient supply system, whereas a well-managed transition program can result in an efficient and sustainable system. Therefore, it is necessary to develop an action plan and implementation strategy for an effective and efficient input market development.

For maximum effect, the primary focus of the Action Plan is on the issues related to the supply side of the input delivery system. Measures for promoting of input use (demand) through technology transfer, credit to farmers, output market, infrastructure development, exchange rate stability and financial sector restructuring will complement strategies for promoting the supply side and further improve the functioning of the input markets.

Phase I: Short Term—Stakeholders Workshop

A Stakeholders Workshop was organized on October 19, 2000, in Abuja. It was designed to discuss the assessment report and validate the recommended strategy for input market development and to build consensus among stakeholders about the proposed recommendations.

The workshop was attended by over 110 stakeholders—policymakers, donors, private sector participants, bankers, farmers, and NGOs.

The keynote address by Ambassador (Dr.) Hassan Adamu, Honorable Minister of Agriculture and Rural Development (Annex II) stressed the need for undertaking efforts to strengthen the reform process

and promote a private sector-based input supply system as follows:

Although the current policy has liberalized the fertilizer subsector, it is still absolutely necessary that the government has to provide a conducive policy environment for all the stakeholders.

The aim is to pave the way for developing sound policy on fertilizer and other agricultural inputs in Nigeria and greater involvement of the private sector in the supply of inputs and enhancing distribution systems throughout the country.

The workshop delegates endorsed the policy and program measures proposed by the assessment team. The summary of discussions at the workshop is included in Annex III.

Phase II: Medium-Term—Enactment of Legislation about the Freedom of Marketing

During the medium term, FGN should enact legislation about the freedom of marketing of agricultural inputs. The purpose of such legislation is to ensure the private sector that FGN supports the development of a private sector-based input marketing system in Nigeria.

Phase III: Long-Term—Capacity Building Activities

During the long-term, capacity building activities related to human capital development, regulatory frameworks and market information systems, creation of input development funds, strengthening of FFD, NSS and national research institutes, and technology transfer should be undertaken.

Implementation of the Action Plan

A long-term project should be designed to implement the activities proposed in the Action Plan. The project should clearly prioritize the implementation of activities and the roles various stakeholders (national and international) will play in the implementation of the project.

VII. Linkages With USAID/Nigeria's Strategic Objectives

The proposed Action Plan will contribute directly to the achievement of USAID/Nigeria's Strategic Objective (SO) 2: "Strengthen the institutional capacity for economic reform and enhance capacity to revive agricultural growth" (Figure 7).

SO-2 will strengthen Nigeria's institutional capacity for economic reforms and enhance its capacity to revive agricultural growth. This objective supports Nigerian sound budgetary and audit processes and the development of an action plan to revive the agricultural sector and ensures economic empowerment of lower income farmers, especially women. More specifically, the proposed Action Plan will contribute to Intermediate Result 2.2, "Private sector en-

abling environment enhanced, with emphasis on agriculture."

The activities proposed will directly address the factors that constrain the effective participation of the Nigerian private sector in the agricultural inputs market. The assessment report has identified a number of those constraints in three general areas: macroeconomic policy constraints, market development constraints, and technical constraints and issues. The activities proposed, when considered together, constitute a holistic approach. Such an approach will simultaneously create a supportive policy environment, build human capital, improve access to finance for suppliers and users of agricultural inputs, implement effective regulatory systems, develop a market information system, and generally strengthen agricultural technology transfer to farmers.

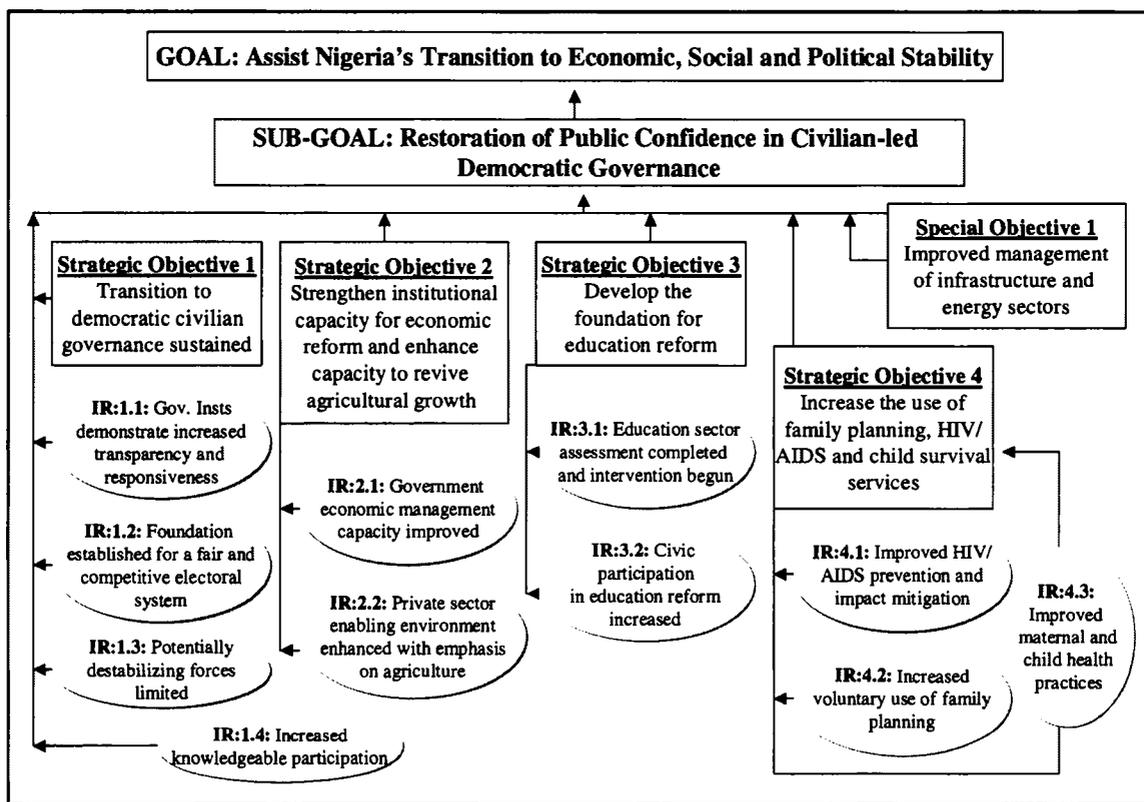


Figure 7. USAID/Nigeria: Strategic Framework.

Annex I

List of Stakeholders Visited by the Assessment Team

Annex I

List of Stakeholders Visited by the Assessment Team

A. Stakeholders Visited

1. Amb. (Dr.) Hassan Adamu
(Wakilin Adamawa)
Hon. Minister of Agriculture & Rural Development
FMARD, Area 11, P.M.B. 135
Garki, Abuja, Nigeria
Tel.: 09-314 1931
Fax: 09-314 4392
2. Mr. Oloche A. Edache
Director of Agriculture
Area 11
PMB 135
Garki, Abuja, Nigeria
Tel.: 09-314 1269
3. Dr. S. A. Ingawa
Head, Project Coordinating Unit
FMARD, P.O. Box 325
Gwagwalada, Abuja, Nigeria
Tel.: 9-8821051
Cell: 90-800718
Fax: 9-5235685
E-mail: saingawa@yahoo.com
4. Alh. R. A. Saleh
Marketing Manager
Golden Fertilizer Co., Ltd.
(Subsidiary of Flour Mills of Nigeria Plc.)
2, Old Dock Road, Apapa
P.O. Box 341
Apapa, Lagos, Nigeria
Tel.: 5803370-9
Fax: 5870395, 5871602
5. John Mastoroudes
Executive Director
Golden Fertilizer Co., Ltd.
(Subsidiary of Flour Mills of Nigeria Plc.)
2, Old Dock Road, Apapa
P.O. Box 341
Apapa, Lagos, Nigeria
Tel.: 5803370-9 D/L: 5453137
Fax: 5870395, 5871602
6. Hassan Umar
Assistant General Manager
Dan-Hydro Co., Ltd.
16, Ajose Adeogun Street
Victoria Island, Lagos
P.M.B. 12927
Marina, Lagos, Nigeria
Tel.: 01-7740297, 2610282
Fax: 01-616299
E-mail: dangote@inpoweb.abs.net
7. Adeoye Babalola (Mr.)
Deputy Director
Fax: 09-3143681
Fed. Dept of Agric (FDA)
Fed. Min. of Agriculture and Rural Development
Plot 626 Cadastral Zone A3
Garki II District
P.M.B. 135
Abuja, Nigeria
Tel.: 09-3143682

8. Dr. Ravi M. Aulakh
Chief, Office of Economic Growth
USAID
1612 Adeola Hopewell
Victoria Island
Lagos, Nigeria
Tel.: 614412, 2614-621
Fax: 2613-825, 2618-539
E-mail: raulakh@Usaid.gov
raulakh@AOL.com
9. Prince Tunde Fajana
Assistant Director
National Seed Service
Federal Department of Agriculture
KM 31, Abuja – Lokoja Road
Nigeria
Tel.: 09-5230540
10. Dr. Ahmed M. Falaki
Head of Agricultural Extension Services
SG 2000 National Coordinator
Institute for Agricultural Research, Samaru
Ahmadu Bello University
P.M.B. 1044
Zaria, Nigeria
Tel.: (069) 551867 (DL)
Residence: (069) 551082
Fax: 234-69-551355
E-mail: amfalaks@abu.edu.com
iar.abu@rcl.nig.com
sg2000@samdav.com
11. Alhaji Umaru Shehu Ndanusa
National President
Nigerian Association of Chambers of
Commerce, Industry, Mines and
Agriculture (NACCIMA)
15A Lkorodu Road, Maryland
P.M.B. 12816
Lagos, Nigeria
Tel.: 234-1-496727; 4964737
Fax: 234-1-4964737
E-mail: naccima@pinet.com.ng
12. Samuel Eremie
Senior Agriculturist
The World Bank Office, Abuja
Plot 433, Yakubu Gowon Crescent
Opposite ECOWAS Secretariat
Asokoro, P.O. Box 2826
Garki, Abuja, Nigeria
Tel.: 09-3145289-75
Fax: 09-3145267
E-mail: Seremie@Worldbank.org
13. Kanmi Shobowale
Assistant Director
National Seed Service
Federal Department of Agriculture
KM 31, Abuja – Lokoja Road
SHEDA FCT
Tel.: 09-5230540
14. Dr. A. Joshua
Managing Director
Premier Seed Nigeria Ltd.
289, Ikorodu Road, Ojota
(Near Bata Factory)
P.O. Box 12366
Ikeja, Lagos, Nigeria
Tel.: (01) 4970009
Fax: (01) 4970009

15. Kamarudeen K. Oladosu
 Manager
 Equity Bank of Nigeria Limited
 Kano Branch
 86, Murtala Mohammed Way
 P.M.B. 3521
 Kano, Nigeria
 Tel.: (064) 644261, 644262,
 644263, 644264, 642434
 D/L: (064) 641910
 Fax: (064) 641253
 E-mail: ebnkano@equity bank.com.ng
16. Mazi Nick Nzeakor
 Executive Director
 Fertilizers & Chemicals Ltd.
 14, Ademola Street
 P.O. Box 53692
 S.W. Ikoyi, Lagos
 Nigeria
 Tel.: 2694152-6
 Fax: 2691314
 D/L: 2694273
17. Sunil Pullai
 Fertilizers & Chemicals Ltd.
 14, Ademola Street
 P.O. Box 53692
 S.W. Ikoyi, Lagos
 Nigeria
 Tel.: 2694152-5
 Fax: 2691314
 D/L: 2690777/778
 E-mail: sunilpillai@yahoo.com
18. N. N. Shome
 Fertilizers & Chemicals Ltd.
 14, Ademola Street
 P.O. Box 53692
 S.W. Ikoyi, Lagos
 Nigeria
 Tel.: 2694152-6
 Fax: 2691314
 D/L: 2694273
19. Najib M. Shaikh
 General Manager
 Fertilizers & Chemicals Ltd.
 P.O. Box 8898
 Kenunavorth
 Kaduna, Nigeria
 Tel.: 62-215481
 Fax: 62-233539
20. Prof. A. O. Ogungbile
 Deputy Director
 Institute for Agric. Research
 Ahmadu Bello University
 P.M.B. 1044
 Samaru-Zaria
 Tel.: (069) 50178
 Home: (069) 51490
 Fax: 234-069-50563
21. Nath. O. Utah
 Assistant Director
 Fed. Min. of Agriculture & Natural Resources
 Fed. Dept. of Agric.
 National Seed Service
 KM 31, Sheda
 Abuja, Nigeria
 Tel.: 09-8821325

22. Ahmed Garba Bichi
 Managing Director/Chief Executive
 Kano Agricultural Supply Company Ltd.
 Kasco House
 No. 252, Maiduguri Road
 P.M.B. 3354
 Kano, Nigeria
 Tel.: 064-667256, 661611
 Fax: 666609
23. Robert H. Booth
 Deputy Director General
 International Institute of Tropical Agriculture (IITA)
 Ibadan, Nigeria
 Tel.: (234 2) 241 2626
 Fax: (234 2) 241 2221
 E-mail: r.booth@cgiar.org
 Web: www.cgiar.org/iita
24. J. I. Avajah
 Deputy Director
 Foreign Operation Dept.
 Central Bank of Nigeria
 P.M.B. 0187
 Garki, Abuja, Nigeria
 Tel.: 09-2343132-6 Ext. 2302
 D/L: 2343391
25. A. A. Adewoyin
 General Manager
 Oyo State Agricultural Inputs Supply
 Company Ltd.
 Amodu House
 Araromi, Oyo
 P.O. Box 1763, Oyo
 Oyo State, Nigeria
 Tel.: 038 240024
 Home: 038 240751
26. Alh Sani Dangote
 Vice President
 Dangote Group
 3, Osborne Road
 P.M.B. 40032
 Falomo Ikoyi,
 Lagos, Nigeria
 Tel.: 01-2695108-10, 2695275,
 685027
 Fax: 01-2695009, 2695316
 E-mail: asani@dangote-group.com
27. S. A. Makanjuola
 Managing Director/Chief Executive Officer
 Samie Holdings Ltd. (SHL)
 Km 1, Iwo Road
 Opposite Police Station
 Box 907 Agodi – Ibadan
 Oyo State, Nigeria
 Tel.: (02) 8102528
 Fax: (02) 8104236
 E-mail: samie@skannet.com
28. Dr. Dyno Keatinge
 Director, RCMD
 International Institute of Tropical Agriculture
 (IITA)
 Ibadan, Nigeria
 Tel.: (234 2) 241 2626
 Fax: (234 2) 241 2221
 E-mail: d.keatinge@cgiar.org
 Web: www.cgiar.org/iita

29. Muhammad Nda
Deputy Director
Foreign Operation Dept.
Central Bank of Nigeria
P.M.B. 0187
Garki, Abuja, Nigeria
D/L: 09-2343165
Tel.: 09-2343132-6 Ext. 2384
30. George T. Irele
Director
Large Scale Industries Dept.
Federal Ministry of Industry
Old Secretariat
P.M.B. 85
Garki, Abuja, Nigeria
Tel.: 09-2341390
Fax: 09-2341919
31. Patrick N. Ikemefuna
Chief Executive Officer
Novartis Nigeria Limited
387, Agege Motor Road
patrick.ikemefuna@novartis.com.ng
Mushin, Lagos
P.O. Box 4310, Ikeja
Lagos, Nigeria
Tel.: 01-4523 511, 523, 534, 541
774 3119, 6435, 6436
Fax: 01-4523 562, 569, 408
E-mail:
32. Emmanuel I. Ajayi
Marketing & Product Manager
Novartis Nigeria Limited
387, Agege Motor Road
Mushin, Lagos
P.O. Box 4310, Ikeja
Lagos, Nigeria
Tel.: 01-4523 511, 523, 534, 541
774 3119, 6435, 6436
Fax: 01-4523, 562, 569, 408
E-mail: emma.ajayi@novartis.com.ng
33. Dr. Fabiya Amakiri, FNSChE
Managing Director (Ag.)
National Fertilizer Company of Nigeria
Limited
NAFCON Complex, Onne
P.M.B. 5180, Port Harcourt
Tel.: (084) 820480-95 Ext. 2002/1001
Direct Line: (082) 440182
34. Alh. Aliyu Isa Danmaraya
FNFI NAMA
Executive Chairman
Danmaraya Farms Limited
Tumfafi Village
Km 20 Dambatta Road
P.O. Box 4708, Kano, Nigeria
Tel.: 064-668470
35. Yusuf Ado Kibiya
Honourable Commissioner
Ministry of Agriculture and Natural
Resources
Post Office Road
P.M.B. 3078, Kano, Nigeria
Tel.: 064-630532

36. Dr. Subhash C. Gupta
Principal Scientist (Breeding)
International Crops Research Institute
for the Semi-Arid Tropics (ICRISAT)
Western and Central Africa Regional
Program
IITA Office
Sabon Bakin Zuwa Road
P.M.B. 3491, Kano, Nigeria
Tel.: 234-64-662050
Home: 234-64-831628
Fax: 234-64-669051
E-mail: icrisat-w-nigeria@cgnet.com
37. Alh. (Engr) A.M.A. Alimi
Permanent Secretary
Ministry of Agriculture
Natural Resources and Rural Development
P.M.B. 5007, Secretariat
Agodi, Ibadan
Oyo State, Nigeria
Tel.: 02-8101472
38. Alhaji Isa
Chairman
Alh. Isa Musa Ibrahim Group
B257 Dawanau Mkt.
Kano, Nigeria
Tel.: 064-642013, 644897
Fax: 064-632001
39. Dr. Takehiko Matsui
Cowpea Physiologist
International Institute of Tropical
Agriculture (IITA)
Kano Station
Sabon Bakin Zuwo Rd.
P.M.B. 3112
Kano, Nigeria
Tel.: 064-645350-1
Fax: 064-645352
E-mail: IITA-KANO@cgiar.org
40. Herbert N. O. Ezenwa
Special Assistant (Tech)
Federal Ministry of Agric. and Rural
Development
F.C.D.A. Secretariat
Area 11, Garki, Abuja, Nigeria
Tel.: 09-234-0229, 234-6196
41. S. A. Adekola
Director
Farmers Supermart
Shop No 1
F. Abel Commercial Complex
105 Iwo Road
Ibadan, Nigeria

B. Team Members

1. Prof. Bisi Ogunfowora
Chairman/Chief Executive
Abise Consulting System (Nig.) Ltd.
Plot 57A Close A, Ogudu G.R.A.
P.O. Box 7184
Somolu, Lagos, Nigeria
Tel.: 01-234-4930847

2. Dr. Amin. Moh. Babandi
National Coordinator: Seed/Input Liaison
Services
Project Coordination Unit (PCU), FMARD
P.O. Box 325, Gwagwalada
Abuja, F.C.T., Nigeria
Tel.: (09) 8821051, 090 804425 Ext. 104
Fax: (09) 8821033
3. Dr. Olu Osiname
WARDA Interim Coordinator at IITA, Ibadan
West Africa Rice Development Association
(WARDA)
PMB 5320
Ibadan, Nigeria
Tel.: (234 – 2) 241-2626
Fax: (234 – 2) 241-2221
E-mail: O.Osiname@cgiar.org
4. Dr. Patrick M. Kormawa
Agricultural Economist
International Institute of Tropical
Agriculture (IITA)
Ibadan, Nigeria
Tel.: (234 2) 241 2626
Fax: (234 2) 241 2221
E-mail: p.kormawa@cgiar.org
Web: www.cgiar.org/iita
5. Dr. Abdulkadir Gudugi
USAID
65/67, Usuma Street
Beside European Union House
Maitama District, Abuja, Nigeria
Tel.: 09-4130086, 4130087
Fax: 09-4138046
E-mail: agudugi@USAID.gov
6. Dr. Ramalan I. Giwa
Special Asst. to the Special Advisor on
Food Security
The Presidency
National Food Security
Phase II, Fed. Secretariat
(Bulet Building) P.M.B. 500
Garki – Abuja, Nigeria
Tel.: 09-2341798
7. Dr. George Gardner
USAID/AFR/SD/ANRE
Ronald Reagan Building, Suite 4.06
1300 Pennsylvania Ave., N.W.
Washington, D.C. 20523-0046, U.S.A.
Tel.: (202) 219-0492
E-mail: ggardner@AFR-SD.org
8. Dr. Siegfried K. Debrah
Policy Economist/Project Coordinator
International Fertilizer Development
Center (IFDC)
IFDC Africa Division
B.P. 4483
Lome, Togo
Tel.: 228 21 79 71
Fax: 228 21 78 17
E-mail: kdebrah@ifdc.org
9. Dr. Balu L. Bumb
Senior Scientist – Economics
Research and Development Division
International Fertilizer Development
Center (IFDC)
P.O. Box 2040
Muscle Shoals, Alabama 35662, U.S.A.
Tel.: (256) 381-6600, Ext. 288
Fax: (256) 381-7408
E-mail: bbumb@ifdc.org

Annex II

Keynote Address by the Honourable Minister of Agriculture and Rural Development, Ambassador (Dr.) Hassan Adamu, at Stakeholders' Workshop on the Agricultural Input Markets in Nigeria: An Assessment and a Strategy for Development held at Nicon Hilton Hotel, Abuja, October 19th, 2000

Annex II

Keynote Address by the Honourable Minister of Agriculture and Rural Development, Ambassador (Dr.) Hassan Adamu, at Stakeholders' Workshop on the Agricultural Input Markets in Nigeria: An Assessment and a Strategy for Development held at Nicon Hilton Hotel, Abuja, October 19th, 2000

The Special Adviser to the President on Food Security,

The Permanent Secretary, FMARD,

The Representatives of the United States Agency for International Development (USAID), Washington DC,

The Representative of Sasakawa Global, 2000,

The Team Leader from the International Fertilizer Development Center (IFDC), Muscle Shoals, Alabama, USA,

Directors in the Federal Ministry of Agricultural and Rural Development,

Representatives of the Organised Private Sector,

Representatives of the Farmers' Union/Federation,

Representatives of Financial Institutions and Agencies,

Representatives of various Agencies involved in Agricultural Inputs activities,

Members of the Press,

Participants,

Distinguished Ladies and Gentlemen.

1. It is my pleasure and privilege to address this gathering of Distinguished Stakeholders in the Agricultural Input markets in Nigeria. My pleasure stems from the fact that we are going to discuss an important aspect of Agriculture – the aspect of Inputs Supply and Distribution. This workshop could not have been held at a more appropriate time than now and I want to first of all take this opportunity to thank the United States Government for the interest it has shown in our Agricultural Development efforts through USAID. I recall also the recent visit of some United States Department of Agriculture (USDA) Experts to Nigeria with similar objective. This is what it should be particularly as the existing cordial relationship between both countries is expected to significantly improve based on the new democratic setting in Nigeria. Both countries now share similar views on many issues including Agricultural development and it is hoped that the outcome of these recent interactions/studies/workshops would be of special blessing and benefit to both countries.

2. Agricultural inputs such as seeds, fertilizers, Agro-chemicals etc. are key ingredients for increasing agricultural productivity and their introduction and use have played a pivotal role in the country's agricultural development. Although the current policy has liberalised the fertilizer sub-sector, it is still absolutely necessary that government has to provide conducive environment for all the Stakeholders to enhance the growth and development of its production and usage.
3. To date, a number of policies have been put in place to make all Agricultural inputs available to Farmers at the right time, right place and at affordable prices with varying degrees of success. The Federal Government of Nigeria has been spending huge amount of money on agricultural inputs, especially fertilizers, every year. In 1999, for example, the Federal Government purchased fertilizers worth about 3 billion Naira and allocated to State Governments for distribution to farmers. However, the distributions were not without some problems in the States as cases of inflated prices, politicization, etc. were reported. Also, most of the State Governors did not account for the fertilizers they collected in 1999. In the light of the aforementioned, the Federal Government decided to support the fertilizer prices at source, hence the charging of zero custom duty and VAT on the commodity. The effect of this zero duty is yet to be fully felt because there had been cases of unexpected rise in fertilizer prices in the States.
4. The essence of this workshop I understand, is to discuss the findings and recommendations of the study on "Agricultural Inputs Markets in Nigeria: An Assessment and a Strategy for Development" by IFDC/IITA/WARDA sponsored by FMARD, USAID and SG 2000. The aim is to pave way for developing sound policy on fertilizer and other agricultural inputs in Nigeria and greater involvement of the private sector in the supply of inputs and enhancing distribution systems throughout the country.

I therefore expect the deliberations to include but not limited to:

- Identifying constraints to supply and distribution of agricultural inputs as related to policy and market information and suggest measures to alleviate such constraints.
 - Assisting all the stakeholders to clearly understand their relevance by bringing out realistic and definite strategies for proper sequencing and phasing for implementation of suggested measures.
 - Clarify the individual stakeholders' contributions, role and responsibilities towards a successful implementation of your recommendations.
5. The support of Government towards hosting of this workshop is in realization of the need to practically demonstrate its readiness to address the modalities of making sure that agricultural inputs of good quality especially fertilizers are in the markets in sufficient quantities and they reach their end-users – THE FARMERS. Government is no longer interested in projects that are not sustainable and therefore the need to carry all the stakeholders along in channeling the course and direction of any project. This idea is in line with the modern concept of participation whereby beneficiaries and all interest groups (i.e. key players and stakeholders) activity influence the design, direction and execution of projects, rather than merely receiving a share of the project benefits.
 6. The involvement of all the stakeholders in this discussion has numerous advantages. Firstly, the participation from the on-set would definitely improve the design of any project that may emanate as a result of these deliberations. Secondly, the involvement of all stakeholders would increase the social acceptabil-

ity of any proposed project and thereby making all to willingly contribute their quota towards execution of the project activities.

7. While this Government is very well disposed to fulfilling its obligations to Nigerians most especially our cherished farmers who constitute the largest majority every effort should be made to proffer fool-proof solutions to such identified problems among which are:
 - distribution network in the States, Local Government Areas and Wards;
 - credit to farmers to procure the inputs;
 - fake or adulteration of fertilizers, herbicides, pesticides and other Agro-chemicals; and
 - high prices of the inputs most especially fertilizers.
8. The issue of subsidy in agriculture particularly on fertilizer had been discussed in many for a and it would be difficult to ignore this in our present day Nigeria. Ours is a listening Government therefore whatever solutions that this forum would proffer to achieve our objective of making these inputs readily available, affordable and sustainable, I can assure you Government would be willing to consider them accordingly.
9. To enable us tackle the problem of adulteration of fertilizers as well, my Ministry is presently compiling a list of all fertilizer suppliers to facilitate quality monitoring in conjunction with Standards Organisation of Nigeria (SON). It is also envisaged that adequate legislation would be put in place to check adulteration and thus making it a punishable offence to market fake or adulterated fertilizers or any other Agricultural input for that matter.
10. I would like at this juncture, to urge all the participants at this workshop to ponder over some critical issues, which to my mind could facilitate the fashioning-out of appropriate supply and distribution mechanism to make the inputs reach the farmers without distortion and also how accountability can be ensured in the distribution system:
 - Greater involvement of the private sector in the supply of inputs and related services in an efficient and reliable manner.
 - Suitability, adequacy and efficiency of the organisational arrangements of public, private and NGO enterprises involved in marketing and distribution of inputs.

I expect the outcome of this workshop to throw more light into these questions and come up with appropriate and suitable recommendations.

11. I want to convey the sincere greetings of the President, Chief Olusegun Obasanjo, GCFR, to this workshop. I want again to thank the United States Agency for International Development and Sasakawa Global 2000 for their cooperation support, understanding and facilitation for this workshop.

I look forward to receiving the proceedings of the workshop as soon as possible. I wish all of you fruitful deliberations.

12. Thank you all and God Bless!

Annex III

A Report on the National Stakeholders Workshop on the Agricultural Input Markets in Nigeria: An Assessment and a Strategy for Development

Annex III

A Report on the National Stakeholders Workshop on the Agricultural Input Markets in Nigeria: An Assessment and a Strategy for Development

1.0 PREAMBLE

- 1.1 Agricultural Development in Nigeria cannot be achieved without adequate attention to input situation in the country.

Over the years, various attempts have been made by the government single-handedly and in conjunction with various International Development agencies to address the inputs problems in the country.

- 1.2 The United States Agency for International Development (USAID), through the International Fertilizer Development Center (IFDC), WARDA and IITA in its contribution to the development of the Agricultural sector in Nigeria, liaised with the FMA&RD and constituted a team that undertook a critical study on “The Agricultural Input Markets in Nigeria. An assessment and a strategy for Development.”

The team visited some states of the country with a view to:

- i. Reviewing the structure and functioning of the agricultural input markets.
- ii. Assessing the potential of the private sector to supply agricultural inputs efficiently and in a sustainable manner.
- iii. Identifying constraints to the private sector participation in input markets.
- iv. Developing programs and policies for strengthening the functioning of Agricultural input markets.

The team visited over 200 stakeholders that included farmers, input dealers, bankers, state-owned enterprises, NGOs, policy makers and donor agencies.

- 1.3 The essence of the stakeholder’s workshop therefore was to discuss the findings and recommendations of the study.

The study team membership was drawn from IFDC, IITA, WARDA, the office of the Special Adviser to the President on Food Security and FMA&RD, while the workshop was sponsored by FMARD, USAID and SG-2000.

- 1.4 The participants to the workshop were drawn from the farmers’ groups, agro-input dealers, seed producers/companies, agro-chemical manufacturers, fertilizer manufacturers/dealers, the banking sector, NGOs, policy makers, donor agencies, Research Institutes/Universities and the public sectors.

2.0 OPENING CEREMONY

- 2.1 Various government dignitaries, representatives of the International Development agencies and the private sector graced the opening ceremony.

Among the dignitaries were the Honourable Minister of Agriculture and Rural Development represented by the Honourable Minister of State for Agriculture and Rural Development – Chief Chris Agbogu, the Permanent Secretary – FMARD – Alhaji Umar Alkaleri, Director FDA – Mr. O.A. Edache, Head of Unit – PCU – Dr. S.A. Ingawa, the Special Adviser to President on Food Security, represented by Dr. Ramadan Giwa, the Director USAID, Team leader – IFDC – Dr. Balu Bumb and a host of others. A total of 112 participants were at the workshop.

2.2 Welcome Address by the Permanent Secretary (FMARD)

The Permanent Secretary (FMARD) formally welcomed the participants to Nicon Hilton, the venue of the workshop. He expressed delight at the turnout, noting that it was an indication of indepth concern for the growth of the Agricultural sector in Nigeria.

He especially thanked the International Development agencies for their concern in the development of agriculture in Nigeria. He promised the support of the Nigerian government towards achieving this noble mission.

- 2.3 The Permanent Secretary concluded by charging the participants to evolve a viable strategy that will provide solutions to constraints of input procurement and distribution.

2.4 Comments by Team Leader - IFDC

The Team Leader, Dr. Balu Bumb expressed his delight at the prompt response of the stakeholders despite the short notice to the workshop. The study, he noted accorded the team opportunity for personal interaction with the stakeholders and the workshop has brought the stakeholders together with a view to rubbing minds together to serve as a basis for advising the Nigerian government on appropriate strategy for the resolution of the lingering input supply distribution problems in the country.

He ended by expressing his appreciation to the team members for their participation in the study and contributions to the production of the report.

2.5 OBSERVATION BY DONOR REPRESENTATIVES (USAID)

The Director, USAID, Lagos considered it a great honour and privilege to be at a workshop designed to develop a sustainable system of input markets in the country.

He noted that USAID has contributed over the years in the development of the Nigerian economy along with other agencies particularly in the agricultural sector. He mentioned the

collaboration of USAID with FMARD in various analytical studies and guaranteed USAID's readiness to continue supporting agricultural development in Nigeria.

2.6 OBSERVATION BY FOOD SECURITY OFFICE (PRESIDENCY)

The representative of the Special Adviser to President on food security, expressed appreciation to the International donor agencies (USAID, WARDA, SG-2000 and IFDC) who have consistently showed great concern for the development of agriculture in Nigeria.

He was delighted at the efforts of the various agencies towards ensuring that the country develops a viable policy on agriculture, noting that the present regime has a strong resolve at developing the agricultural sector through sustainable input delivery system.

2.7 KEYNOTE ADDRESS BY THE HONOURABLE MINISTER OF AGRICULTURE AND RURAL DEVELOPMENT

The Honourable Minister thanked God for the journey mercies granted the team that went round the country on their fact-finding mission.

He expressed thanks to the donors on behalf of the Nigerian farmers for showing interest in their plight. Agricultural inputs such as seeds, fertilizers, Agro-chemicals etc, according to him, are key ingredients for increasing agricultural productivity and their introduction and use play a pivotal role in the country's agricultural development.

2.8 The Minister charged the workshop to include the following in its deliberations:

- i. Identifying constraints to supply and distribution of agricultural inputs as related to policy and market information and suggest measures to alleviate such constraints.
- ii. Assisting all the stakeholders to clearly understand their relevance by bringing out realistic and definite strategies for proper sequencing and phasing for implementation of suggested measures.
- iii. Clarify the individual stakeholders' contributions, role and responsibilities towards a successful implementation of the recommendations.

He expressed the hope that the workshop will pave way for developing sound policy on fertilizer and other agricultural inputs in Nigeria and the greater involvement of the private sector in the supply of inputs and enhance the distribution systems throughout the country.

He ended by wishing the participants a successful deliberation.

2.9 VOTE OF THANKS BY THE HEAD OF PCU

The HOU-PCU, Dr. S.A. Ingawa thanked the Honourable Minister FMARD for accepting the invitation at short notice and actually making sure that he is represented by the Honourable Minister of State.

He thanked the Director USAID for making time to be at the workshop despite his crowded schedules.

The Head of PCU appreciated the presence of the Permanent Secretary FMARD and his Directors who have found time to be at the workshop at short notice.

The Special Adviser to the President on Food Security was highly appreciated for sending his Special Assistant to represent him at the workshop.

The stakeholder's contributions to the discussions at the workshop were highly appreciated.

The Head of PCU concluded with the hope that the workshop will yield the desired dividend, while assuring the Minister of prompt delivery of the workshop proceedings.

3.0 PLENARY SESSION

The chairman of the session, Mr. O.A. Edache (Director FDA) in his opening remarks noted that the use of input has been on the decline and this has direct effect on the productivity of the farmers.

He pointed out that the workshop is intended to address this problem and possibly come-up with a sustainable strategy for input procurement and distribution system in Nigeria.

This session featured a paper presentation titled, "Assessment of Agricultural Input Markets in Nigeria: An overview" by the team leader.

3.1 TEAM LEADERS' REPORT

The team leader noted that various studies on need assessment had been conducted into various sectors of the economy and the recommendations therefrom are often not implemented. He called on the Federal Government to look critically into the findings of the team and the recommendations from the workshop.

The findings of the team were as follows:

- i. That the input markets in Nigeria are in transition and are generally fragmented and under-developed.

- ii. That the liberalization process was ad-hoc, sudden and unaccompanied by necessary institutional support system.

4.0 Syndicate Group

After the presentation of reports, three syndicate groups were formed to deliberate on the following topics:

- i. Fertilizer Markets Structure, Functioning and Constraints.
- ii. Seed Market: Structure, Functioning and Constraints.
- iii. Crop Protection Products (CPP): Structure, Functioning and Constraints.

Participants were asked to freely join any of the groups based on area of interest and/or specialization. The groups went into session and critically assessed the working paper of the workshop, made and presented their recommendations.

4.1 Presentation of syndicate group Reports:

The various reports were presented and subjected to discussions and comments.

4.2 **SYNDICATE GROUP-I REPORT**

TOPIC: FERTILIZER MARKET: STRUCTURE, FUNCTIONS AND CONSTRAINTS

The syndicate group considered fertilizer as a very important input. The group considered all available interventions that would improve the productions, distribution and utilization of fertilizer in the country. Some of the issues discussed include: policy, finance, soil testing, technology transfer, subsidy and quality control.

The recommendations of the group are as follows:

4.3 Recommendation from the Group on Fertilizer

i. Policy Consistency:

In the formulation of agricultural policy, a participatory approach by all stakeholders should be adopted.

- ii. Government should in addition consider the situation in the neighboring countries in the West-African Sub-Regions before making policies.

- iii. The pronouncement of agricultural policy should be timely to enable the stakeholders plan their activities especially those that are time specific. Policy should be in place for at least 5 years and continuity should be ensured in the event of change of government.

iv. Finance

The group adopted the IFDC team recommendation on finance with the following amendments: In the tripartite risk sharing arrangement in respect to farmers, Central Bank of Nigeria (CBN) commercial Bank and donor agencies of 30%; 40%; 30% respectively, the ratio should now be 10%, 60% and 30% respectively.

4.4 Quality Control

- i. Government should enact a law to punish adulterators of fertilizers.
- ii. Ensure that only agronomically sound fertilizer formulation are produced or imported into the country.
- iii. Government should mandate all fertilizer manufacturers/blending plants and major importers to establish fertilizer-testing laboratories for an enhanced quality control.
- iv. Fertilizer Quality monitoring and enforcement should be executed by the Federal Fertilizer Department (FFD) in collaboration with the Standard Organisation of Nigeria (SON).

4.5 Soil Testing

- i. The group endorsed the team's recommendation on soil testing; in addition all fertilizer manufacturers/companies should provide soil analysis services for farmers in their areas of operation.
- ii. The complimentary use of organic and inorganic fertilizers is recommended.

5.0 Technology Transfer

The group endorsed the team's recommendation and added with fertilizer producers and importers should fund research in respect of efficient use of fertilizer.

6.0 Subsidy

- i. Group agreed that the problem is not subsidy but subsidy administration. In view of the above, as a form of an indirect subsidy administration, government should maintain the freeze on import duties on fertilizer and raw materials. Government should increase tariff on all imported grains such as wheat, maize, rice, barley etc. so that farmers can obtain good prices for their produce and can afford to purchase fertilizer at market prices.
- ii. Government should guarantee a consistently guaranteed minimum price for agricultural produce for at least 3 years.

7.0 SYNDICATE GROUP-2 REPORT

TOPIC: SEED MARKET: STRUCTURE, FUNCTIONING AND CONSTRAINTS

7.1 INTRODUCTION

The syndicate group considered seed, as all planting materials for different types of crops. The group noted that in recognition of Root and Tuber Crops in Nigeria, the N.S.S. set up a programme for the multiplication and distribution of root and tuber crops in Ijebu-Ife, Ogun State. The programme now covers cassava, yam, potatoes, cocoyam etc. This programme under a name called ROOT AND TUBER EXPANDED PROGRAMME (RTEP) is to be assisted by the World Bank. The syndicate group discussion on the subject matter was based on the structure, functions and constraints. They agreed that the public and private sector partnership is an acceptable system approved to effectively address the issue of seed production and distribution in the country. Other recommendations made by the groups are as follows:

- i. There is need to provide human and material resources for seed certification and quality control programme of NSS viz mobility i.e. vehicles, staff training, supportive equipment for field inspection, more staff etc.
- ii. There is need to strengthen the capacity of ADPs for Internal Quality Control through provision of seed testing laboratories, and training
- iii. Variety evaluation and release of new varieties should be concluded within 2-3 years. In order to enhance the effectiveness of Variety Release Committee, the secretariat of the committee should be domiciled in the FMARD where all the NARIs are domiciled.
- iv. There should be adequate and timely funding of all public institutions that are involved in seed development activities.
- v. There should be regular training for out growers and provision of necessary support in order to facilitate seed production activities, improve the skill and entrepreneurial ability of the out growers.
- vi. In order to have a better focus of the Nigerian Seed Industry, the National Seed Council (NSC) should meet twice a year.
- vii. On the strategies to propose for an efficient seed distribution and marketing in Nigeria. The key strategy is to generate enough seed demand in the rural area and empower the farmers to buy improved seeds.
- viii. The organ gram, on flow of improved seeds to farmers, on page 15 has been modified as corrected: ADPs and private seed companies are to produce and market certified seeds. (They obtain foundation seed from NSS and use there out growers to produce certified

seeds. Seed companies may obtain Breeder Seed to produce foundation seed for their internal use).

- ix. There is need to create effective seed demand in the rural area through a viral extension and seed promotional activities.
- x. Use of Community seed Delivery system to nucleate community seed men who will be responsible for supply and marketing of improved seeds and new seed technology dissemination in the rural areas.
- xi. There is need for Farmers Empowerment programme through improved economy of rural seed delivery system.
- xii. Need to adequately strengthen NSS in order to perform their mandatory roles.
- xiii. Whatever private seed companies can produce, public sector agencies need not produce.
- xiv. Need for urgent implementation of approved incentives for the Nigerian seed industry.
- xv. Good grain prices to enhance and encourage seed demand.
- xvi. Biotechnology to be emphasised in seed varietal development. There is need to put in place a bio-safety guidelines and develop local capacity to analyse GMOs.
- xvii. Need to develop and promote rural seed storage structures for small-scale seed producers in rural areas in order to prolong shelf lives of improved seeds.

8.0 SYNDICATE GROUP-3 REPORT

TOPIC: CROP PROTECTION PRODUCTS MARKET:

The group considered the Team's Report and the constraints facing the Crop Protection Production (CPP) market in Nigeria and made the following comments, observations and recommendations:

LEGISLATION

- i. There is presently a pesticide registration decree of 1996, which is not all encompassing and universally acceptable. Though Nigeria is a signatory to the International Legislature on Pesticides, there is a need for Nigeria to urgently enact an all encompassing and universally acceptable legislation on Pesticides and Agro-chemicals within the next twelve months.

ii. ENABLING ENVIRONMENT

- a. The need to empower the farmers through appropriate training on effective use of agro-chemical in order to achieve the best results (as increased income) and thereby stimulate demands. This will translate to increased sales by the agro-chemical companies with the potential of providing suitable environment for local production.
- b. Farmer's access to micro credits through proper implementation of the provisions of the NAC & RDB and Community Banks.
- c. Support to farmers' associations and community based associations to procure agro-chemical inputs at affordable prices.

iii. POLICY IMPLEMENTATION

There should be a consistent policy in agriculture that will allow for adequate planning and enhancement of the private sector involvement in the agrochemical sector.

iv. TRANSFER OF TECHNOLOGY

- a. The need for training and retraining of marketer/handlers in the agrochemical industry to ensure quality retention and bio safety.
- b. Training and licensing of youths to serve as distributors and applicators (contract sprayers). This will assist in mopping up the unemployed youths in the communities besides the expansion of agrochemical markets. It will also facilitate proper use of agro-chemicals.
- c. The Extension Agents should be well trained to ensure appropriate technology transfer. They should also work in concert with the trained applicators in the community for the farmer to derive the expected benefit.
- d. Fostering adequate corporation between two agrochemical industries, NGOs and distributors.

v. SUBSIDY

This should be in the form of support to the farmer in such a way that it is not open to abuse as has been witnessed in recent times.

GENERAL (ATTENDANCE LIST)

S/NO.	NAME	ORGANISATION
1	Abdul. A. Wudil	Danmaraya Farm
2	Alh. Ahmed Danmaraya	"
3	Abba Ali	Tagwaye Farms, Kano
4	Abdullahi Yahaya	Maigawado Cowpea Farm
5	Alh. A. Abdulsalam	Fertilizers & Chemicals Kaduna
6	Aina A.F.	Ekiti State Agric. Input Supply Agency Ado-Ekiti.
7	Alafumere M.O.	"
8	S.A. Adekola	S.A. Adekola & Sons, Ibadan
9	Isa Musa Bukwu	
10	Adekola Adeyemi Ahmed	Ahmed Enterprises
11	Dr. A.M. Falaki	Sasakawa Global 2000
12	Dr. A. Joshua	Premier Seed Nig. Ltd., Zaria.
13	Dseacon F.A. Fayinka	Fayinka Food Farms, Oyo.
14	B.L. Bumb	IFDC
15	Dr. E.F. Fasanmi	FMA&RD
16	A.O. Osho	FFD
17	L.C. Akudinobi (Mrs.)	FFD
18	Abdulkadir Gudugi	USAID/NIGERIA, LAGOS
19	Dr. Victor M. Manyong	I.I.T.A., PMB 5320, Ibadan
20	Dr. Pat. M. Kormawa	"
21	Dr. A.M. Babandi	P.C.U. Abuja
22	Dr. A.A. Oredipe	"
23	Mr. Esinulo B. Kennedy	"
24	Abubakar Yabagi Kolo	"
25	Muazu Y. Hadejia	"
26	H.N.O. Ezenwa	FMA&RD, Abuja
27	E.J. Oklobia	P.C.U. Abuja
28	Ralph Cummines (Consultant)	USAID, Washington D.C.
29	O. Ogunfowora	ACIS
30	G.R. Gardner	USAID Washington
31	Dr. Ramalau J. Giwa	National Food Security
32	Dr. Rano Aulakh	USAID
33	Engr. Mojiaba A. Khaleel	Legend Ventures Ltd.
34	Prof. E.A. Salako	F.U.T. Minna
35	Sunday Olugboye	Chemimex Nig. Ltd., Lagos
36	Prof. A.O. Ogungbile	IAR, ABU, Zaria
37	P. Abba Auchan	Daa-Hydro Co. Ltd., Kano
38	Eng.r. E.O. Okeke	FDRD, FMA&RD
39	Dr. Sheriff O. Sanni	DALR F.M.A.
40	Mrs. Habiba Howacidy	Chairperson Wuinna, Kano
41	A. Howeidy	F.A.L. RANO, Kano

42	J.Z. Musa	Fed. Dsept. Coops.
43	Paul Gbededo	Golden Fertilizer, Lagos.
44	A. Saleh	“
45	Alh. Ahmed Danmaraya	Danmaraya Farms Ltd., Kano
46	Abdullahi Yahaya	Maigwado Cowpea Farm, Kano
47	Alh. A. Abdulsalam	Fertilizer & Chem. Ltd. Kaduna
48	Abba Ali	Tagwaye Farm Kano
49	Israel N. Ikeji	P.C.U. Sheda, Abuja
50	Paulina Deinne	“
51	Sabiu Auwal	“
52	O.A. Osiname	WARDA/IITA
53	Emman. K.M. Alognikou	IFDC Africa
54	Nath. O. Utoh	NSS/FDA
55	Yakubu G. Sakadah	Farmers Association
56	Sanusi Usman	KNARDA, Kano
57	Aaron Kaase	United Press Newspaper
58	C.O. Ezendu	Fed. Min. of Agric.
59	Chief C. Agbobu HMS	“
60	Austin Ijahere DA/HMS	“
61	Alh. R.A. Saleh	Golden Fert. Co. Ltd.
62	L.O. Fajana	NSS, FDA, Abuja
63	O.J. Shokowale	“
64	Dr. Shattima Mustafa	NAV/P Alfaan Abuja
65	Prince Ike Ubaka	VNP Alfaan (Tech. S.S.)
66	Ayodele A. Adeniyi	PCU, Abuja
67	Dr. K.K. Akapa	World Bank
68	Prof. B.L.A. Fetuga	Evan Farms.
69	Mrs. Mary Mokunye	FDA Abuja
70	M.I. Ejemba	“
71	B.A. Awesu, Mrs.	PCU, Abuja
72	Bala O. Sukenri	BSADP Bauchi
73	A.S. Akanji	PCU, Abuja
74	Audu Isa	Trade News (Press)
75	Ngusha Iti	The Target Mag.
76	S.A. Makanjuola	Samie Holdings Ltd. Ibadan
77	E.Y. Ajanya	Chemimex Nig. Ltd. Lagos
78	Dr. K.B. Kolawole	PCU, Abuja
79	Dr. O.O. Oyebanji	“ Benin
80	Prof. V.O. Chude	Soil Science Dept. ABU Zaria
81	J.O. Gillis-Harry	FMA&RD (PRSD)
82	B. Ladan	“
83	S.A. Aliyu	PCU, Abuja
84	S.C. Okoli	“
85	Bala A. Maisamari	“
86	Ahmed Garba Bichi	KASCO, Kano
87	Danjuma Wandu	BASAC Bauchi
88	Prince Pat Iwhiwhu	PCU, Abuja
89	A. Salajo Muh	SAS.SAN Ltd.
90	Nuhu Abuberi	“

91	Mrs. Z.O. Towobola	FPDD
92	Engr. B.L. Kankri	FMARD-DRD
93	Engr. U. Maranu	Rural Dev. Dept.
94	A. Babalola	Fertilizer Dem.
95	P.B. Okoroafor	FDA
96	M.A. Achor	Novartis Nig. Ltd.
97	Omotoso Gbemiga O.	NASTES FEDP, Offa.
98	Mohammed Habib	Borno Fert. Co. Ltd.
99	Chief Onyebuchi Denis	Enugu State Fert. Co. (G.M.)
100	A.D. Esso	FAO/UN
101	G.N. Asala	PCU
102	Bappah Salihu	C.F.A. Gombe
103	Uche, A.	Oak Allied Nig. Ltd.
104	Emma Ogu	Agrovoice, Lagos
105	Dr. A.A. Majasan	DLPCS
106	Engr. R.C. Okoro	PCU Abuja
107	Mal. Baba Fada	FDA
108	Dr. S. Mu'azu	PCU Abuja
109	Dr. O.J. Ayodele	NAFCON Ltd.
110	P.N. Ikemefuna	NOVARTIS Nig. Ltd.
111	O.A. Edache	FMA&RD/FDA
112	Dr. P.S.O. Okoli	PCU Abuja

WORK GROUP - SEEDS

1	Abdulumuni A. Wudil	Danmaraya Farm, Tsibiri
2	Deacon F.A. Fayinka	Fayonka Food Farms, Oyo
3	Dr. A. Joshua	Premier Seed Nig Ltd.
4	Dr. Patrick Kormawa	IITA, Ibadan
5	Dr. A.M. Babandi	P.C.U. Abuja
6	H.N.O. Ezenwa	FMA&RD abuja
7	Nath. O. Utol	NSS/FDA
8	A. O. Ogungbile	IAR/ABU
9	J.Z. Musa	Fed. Dept. Coops
10	Sanusi Usman	KNARDA
11	Shobowale, O.J.	NSS
12	L.O. Fajana	NSS/FDA, Abuja
13	Dr. K.B. Kolawole	PCU Abuja
14	B.A. Maisamari	"
15	B.L. Kankin	FMARD DRD
16	Majiaba A. Khaleel	O. PEC Engr. Serv.Ltd., Kaduna
17	Mal. Baba Fada	D/Director
18	E.Y. Ajaya	Chemimex Nig. Ltd.

WORK GROUP – FERTILIZER

1	Abba Ali	Tagwaye Farms, Kano
2	Alh. Ahmed Danmaraya	Danmaraya Farms Ltd.
3	Alh. A. Abdulsalam	Fertilizer X Chemicals
4	Abdullahi Yahaya	Maigwado Cowpea farm
5	Isa Musa Kuluro	Danwuri, Kano

6	Shofe U Amechi	Calenb RD, Kano
7	Dada Adamu	FM Agric Abuja
8	Abdulummini A. Wudil	Danmaraya Farm
9	Alatunse M.O.	Ekiti Agric. Inp. Supply Agency
10	Osho, A.O.	FFD
11	Akudinobi, L.C. (Mrs.)	FFD
12	Dr. Victor M. Manyong	IITA- Ibadan
13	Esinulo B. Kennedy	PCU Abuja
14	O.A. Osiname	WARDA, Ibadan
15	Ralph Cumuincs, J.A.	USAID, Washington
16	B.L. Bumb	IFDC,
17	Sunday Olugboye	Chemimex Nig. Ltd.
18	Abba Auchan	Dan-Hydro Co. Ltd.
19	Engr. E.O. Okeke	FDRD FMARD
20	Dr. Sheriff O. Dann	DAWR
21	Mrs. Habbe Hamed	Himma As. Kano
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