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EVALUATION OF THE
AGRICULTURAL DEVELOPMENT ASSISTANCE/
SAHEL DEVELOPMENT FUND PROGRAM
(685-0249)

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Submitted to: Norman Rifkin
Project Officer
USAID/Senegal

Submitted by: David S. Kingsbury
DEVRES, INC.
2426 Ontario Road, N.W.
Washington, D.C
(202)-797-9610
Cable: DEVRES
Telex: 440184

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FOREWORD

This evaluation of the Agricultural Development Assistance/Sahel Development Fund Program (685-0249) - more commonly referred to as the fertilizer import program¹ was funded under AID Contract No. PDC- 1096-I-02-4162-00. Work began on June 14, 1985 and terminated on July 19, 1985.

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LIST OF ABBREVIATIONS AND ACRONYMS

ADA	Agricultural Development Assistance
AID	Agency for International Development
BAME	Bureau d'Analyses Macro-Economiques (Macro-Economic Analysis Unit of ISRA)
BOP	Balance of Payments
CCCE	Caisse Centrale de Cooperation Economique (Central Fund for Economic Cooperation - France)
CDSS	Country Development Strategy Statement
CFA	Monetary unit of Senegal
CIF	Cost, Insurance, and Freight
CIP	Commodity Import Program
CNCAS	Caisse Nationale de Credit Agricole du Senegal (National Agriculture Credit Fund of Senegal)
CPSP	Caisse de Perequation et de Stabilisation des Prix (Price Equalization and Stabilization Fund)
DAP	Diammonium Phosphate
EMC	Entreprises Miniere et Chimique (Mining and Chemical Corporation - France)
ENEA	Ecole Nationale d'Economie Appliquee (National School for Applied Economics)
ESF	Economic Support Fund
GDP	Gross Domestic Product
GOS	Government of Senegal
ICEC	International Commodities Export Corporation
ICS	Industries Chimiques du Senegal (Senegal Chemicals Corporation)
IFDC	International Fertilizer Development Center

IMF	International Monetary Fund
ISRA	Institut Senegalais de Recherches Agricoles (Senegalese Institute for Agriculture Research)
KCL	Potassium Chloride
MOF	Ministry of Finance and Economic Affairs
MPC	Ministry of Planning and Cooperation
MRD	Ministry of Rural Development
MT	Metric Ton
NPK	Nitrogen-Phosphorus-Potassium (Compound Fertilizer)
ODA	Official Development Assistance
ONCAD	Office National De Cooperation et d'Assistance au Developpement (National Office for Cooperation and Development Assistance)
PAAD	Program Assistance Approval Document
PIDAC	Projet Integre pour le Developpement Agricole de la Casamance (Lower Casamance Integrated Agricultural Development Agency)
RDA	Regional Development Agencies
SAED	Societe d'Amenagement et d'Exploitation des Terres du Delta du Fleuve Senegal (Agency for the Improvement and Development of the Delta Lands of the Senegal River)
SDF	Sahel Development Fund
SIES	Societe Industrielle des Engrais du Senegal (Industrial Fertilizer Company of Senegal)
SODEFITEX	Societe de Developpement des Fibres Textiles (Textile Fiber Development Agency)
SODEVA	Societe de Developpement et de Vulgarisation Agricole (Agriculture Extension and Development Agency)
SOGEC	Societe Generale pour le Commerce (General Commerce Corporation)

SOMIVAC Societe pour la Mise en Valeur de la Casamance
 (Casamance Development Agency)

SONAR Societe Nationale d'Approvisionnement du Monde Rural
 (National Agency for Supplying Rural Areas)

SSEPC Societe Senegalaise des Engrais et Produits
 Chimiques
 (Fertilizer and Chemical Products Corporation
 of Senegal)

STN Societe des Terres Neuves
 (New Lands Agency)

TSP Triple Super Phosphate

USG United States Government

WARDA West African Rice Development Association

TABLE OF CONTENTS

	<u>Page</u>
FOREWORD	i
LIST OF ABBREVIATIONS AND ACRONYMS	ii
TABLE OF CONTENTS	iii v
LIST OF TABLES AND FIGURES	iv viii
EXECUTIVE SUMMARY	1
I. OVERVIEW OF ORIGINAL PROGRAM OBJECTIVES	5
II. GOS PROGRESS ON POLICY REFORM	7
A. Overview	7
B. Specific Policy Reforms and Discussion	7
1. Conditions Precedent to First Disbursement	7
2. Conditions Precedent to Disbursement of Local Currency Generated	8
3. Special Covenants	8
C. Conclusion	11
III. IMPLEMENTATION OF THE FERTILIZER IMPORT PROGRAM	12
A. Introduction	12
B. Importation of Sulfur	16
1. The Importer - ICS	16
2. Implementation of the Sulfur Import Program	16
3. General Discussion	23

	<u>Page</u>
C. Importation of Urea	24
1. The Importer - SSEPC	24
2. Implementation of the Urea Import Program	24
SPACE → 3. General Discussion	34
IV. USE OF FUNDS	36
A. Dollar Funds	36
B. Use of Local Currency	38
1. Overview	38
2. Local Currency-Funded Activities	42
a. Literacy Program	42
b. ISRA Fertilizer Marketing Study	42
c. Fertilizer Price Supports	42
d. Renovation of the Dantec Hospital	43
e. SSEPC Urea Inventory and Financial Audit	43
f. Planned Use of Uncommitted Funds	43
IV. BENEFITS, LESSONS LEARNED, AND IMPLICATIONS FOR FUTURE PROGRAM DESIGN	45
A. Actual Versus Foreseen Benefits	45
1. Foreseen Benefits	45
2. Assessment of Actual Benefits	45
a. Agricultural Sector Policy Change	45
b. Increased Fertilizer Use	46
c. Balance of Payments Support	47
d. Local Currency Use and Technical Assistance.....	48 49
B. Lessons Learned	50
C. Implications for Future Program Design	53

	<u>Page</u>
1. Constraints to be addressed	53
2. Competition	54
3. Audits	55
4. Commodity Mix and Timing	55
D. Conclusion	55
ANNEX 1: Evaluation Scope of Work	57
ANNEX 2: Persons Consulted	58

LIST OF TABLES AND FIGURES

	Page
Table 1 : Senegal Agricultural Development Assistance Program (685-0249): Implementation Schedule	14
Figure 1: Senegal Agricultural Development Assistance Program (695-0249): Flow of Fertilizer Imports - - - -	15
Table 2 : ICS Fertilizer Processing Capacity	17
Table 3 : ICS Share Capital	18
Table 4 : Sales of NPK Fertilizer - 1984	20
Table 5 : Price Supports for SENCHIM-Distributed Fertilizer in 1984	22
Table 6 : SSEPC/SOGEC Urea Sales as of September 1984	30
Table 7 : SSEPC Deposits to the Local Currency Account	31
Table 8 : Final SSEPC/SOGEC Urea Sales Situation	32
Table 9 : Urea Losses	33
Table 10: Agricultural Development Assistance Program (685-0249): Dollar Expenditures	37
Table 11: Agricultural Development Assistance Program (685-0249): Illustrative Local Currency Use Budget	37 39
Table 12: Agricultural Development Assistance Program (685-0249): Actual Local Currency Use	40
Table 13: Fertilizer Account Activity	41
Table 14: Senegalese Fertilizer Consumption and Subsidies (1975/76-1985/86).	48

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EXECUTIVE SUMMARY

1. Project Title and Number: Agricultural Development Assistance (685-0249)
2. Project Description and Development Problem:

This commodity import program was a \$5 million ODA-funded program grant financing procurement of 12,200 MT of urea and 4,000 MT of sulphur, valued at \$2.86 million, plus \$1.37 million to cover the US bottoms freight differential at \$85/MT, and \$750,000 for technical assistance studies related to the agricultural sector. Local currency proceeds from the sale of fertilizer were used for literacy training programs to strengthen village level cooperatives and producer groups (\$1.05 million) and several other activities.

Numerous factors such as weak rural cooperative and credit systems and ineffective parastatal institutions had contributed to a drastic decline in Senegalese fertilizer consumption at the time of design of this program. The purpose of this program was to encourage the Government of Senegal to adopt policy reform and undertake rural development activities which would result in more widespread and efficient fertilizer use and increased agricultural production.

3. Purpose of the Evaluation

The purpose of this evaluation is to assess the impact and effectiveness of the Agricultural Development Assistance program with special regard to: privatization of fertilizer sales and distribution in Senegal in 1984; constraints encountered by program participants; and GOS performance with regard to agreed upon policy changes.

The USAID mission classified this report as a lessons learned evaluation. The scope of work can be found in Annex A.

4. Evaluation Methodology

This evaluation was carried out by a rural development specialist who had previous experience with commodity import program implementation in Senegal. Documents were reviewed and GOS officials, private importers, ISRA researchers, auditors, and USAID staff were interviewed. The evaluation began on June 14, 1985 and terminated on July 19, 1985.

5. Findings

- a. Although significant constraints arose to smooth program implementation, private importers were able to effectively import and distribute urea and sulfur procured through this program.

Constraints faced by importers related to: US sulfur prices were higher than world sulfur prices at the time of procurement; the GOS had difficulty in calculating urea allotments for its parastatals and this resulted in considerable delays in program implementation; parastatals had problems paying for fertilizer due to an inability to

obtain irrevocable letters of credit from Senegalese banks. Nevertheless, the importers managed to sell their stock within a reasonable period of time and the types of financial damage which had occurred in the past (considerable GOS arrears in payments to private distributors and banks) were successfully avoided.

- b. Conditions precedent and special covenants identified in the grant agreement were for the most part satisfied by the GOS.

Agreed upon policy changes were in the areas of liberalization of fertilizer marketing and pricing, agricultural credit, reduction of government debt to the banking sector and reduction of the deficit of the Price Equalization and Stabilization Fund (CPSP).

- c. This program directly contributed to greater USAID expertise and influence in the fertilizer sub-sector.

It is fair to say that USAID is now the lead donor in advocating and tracking policy change in the area of fertilizer distribution and this is a direct result of the fertilizer import program. Two factors are responsible for this: implementation of the program obliged USAID personnel to enter into contact with GOS officials and private fertilizer distributors and this increased USAID's influence and knowledge of the sub-sector; and the collaborative effort between ISRA and USAID on the local currency-funded fertilizer marketing studies increased USAID's expertise (and ISRA's) in this complex area. Without the fertilizer import program, none of this would have occurred.

- d. 1984 Senegalese fertilizer consumption at least held steady with 1983 levels (and probably increased somewhat) while the total amount of subsidies was cut by more than two thirds.

While statistical data is not very reliable, 1983/84 fertilizer consumption was on the order of 21,000 MT and rose to somewhere between 25-30,000 MT. At the same time, total subsidy payments were cut from 1.78 billion CFA to 493.9 million CFA. Greater availability of fertilizer as a result of the AID import program was probably a major factor in at least maintaining, and perhaps increasing, consumption levels during a period of significant consumer price hikes.

6. Lessons Learned

- a. Privatization and the lifting of subsidies is best implemented gradually and needs to be accompanied by dialogue and research.

GOS decision makers and donor agencies still lack considerable knowledge as to the effects of policy decisions in the fertilizer sub-sector. Future fertilizer import programs should support research on fertilizer marketing policy and the judicious application of price supports may continue to be necessary over the next several years.

- b. Where a climate of mistrust exists, donors must be willing to play a lead role.

GOS officials and private importers remain wary of each other and future USAID import program managers may continue to be called upon to mediate at key junctures.

- c. The effectiveness of a CIP is closely linked to the commodities chosen for importation.

The choice of a commodity closely linked to the sub-sector for which policy change is targeted greatly enhances the probability of program success.

- d. Local currency and technical assistance activities which relate closely to the relevant sub-sector are generally the most effective activities.

Prudent selection of local currency and technical assistance activities can have significant impact on the ability of local governments and citizens to carry out agreed upon policy change. Activities which key on constraints in the sub-sector where policy change is to occur and imported commodities are to be sent are preferable to an unfocused package of activities.

- e. USG-sponsored CIPs, as presently constituted, are inefficient ways of transferring balance of payments support.

The requirement that US bottoms be used for shipping of ODA-funded commodities not only greatly diminishes the positive balance of payments effects of CIPs but is in contradiction to the free-market policies that AID wishes recipient governments to implement. A rethinking of this provision in the Foreign Assistance Act is in order.

- f. USAID has little formal leverage to directly force private importers to make deposits to the local currency account according to deposit schedules stipulated in the grant agreement.

USAID's only legal leverage is with the recipient government with whom it enters into a grant agreement. The recipient government may either pressure the importer to make the necessary deposits or meet the deposit requirements from its own funds.

7. Recommendations:

- a. It is recommended that USAID continue to support policy dialogue in the fertilizer sub-sector through implementation of a similar program in the future.

This program should be of a multi-year duration in order to address those constraints to privatization of input distribution that only longer term programs can deal with.

- b. It is recommended that accompanying dollar and local currency-funded activities be closely linked to problems related to agricultural inputs.

Priority activities should be in the areas of: agroeconomic research on appropriate fertilizer applications in various regions of Senegal (in collaboration with extension agencies); continued research on alternative scenarios of organization of input distribution in rural areas; judicious application of price supports in areas where fertilizer use is deemed beneficial and potential exists to stimulate demand through slightly lowering prices; and development of improved agricultural statistics gathering capability. Grant agreement language relating to local currency activities should be more specific than it was for this program.

- c. It is recommended that USAID and other donors continue to encourage competition in fertilizer importation and distribution.

Donors should discourage the GOS from taking protectionist measures in favor of ICS. In addition, USAID should explore the idea of a consortium of fertilizer importers in a future urea program.

- d. It is recommended that independent inventories and financial audits of importers be incorporated into future fertilizer import programs as a local currency activity.

Third party audits have the advantages of being quick, relatively inexpensive, and independent. As such they can be effective tools for monitoring importer performance. Results should be quickly reviewed by the Local Currency Management Committee and importers, and remedial actions should be taken if deemed necessary.

- e. It is recommended that future program designers investigate products other than sulfur.

Continued CIP sulfur importation is not feasible as ICS has made all its orders for the next several years. Incorporation of ammonia or potash into a future program may be feasible.

- f. ~~X~~ It is recommended that future urea importers be required to either import urea bagged in the United States or use automatic bagging facilities at the port of Dakar.

Losses due to theft and spoilage during bagging at the Dakar port were too great for bulk delivery to again be attempted. Automatic bagging should lead to more accurate weighing, lower costs, and less loss.

I. OVERVIEW OF ORIGINAL PROGRAM OBJECTIVES

The overall objective of the Agriculture Development Assistance Program (685-0249) was to "encourage the Government of Senegal to undertake reforms and activities in the fertilizer and cooperative sub-sectors aimed at increasing agricultural production" (1). This was to occur with the support of local currency proceeds generated from in-country sales of imported sulfur (used in the production of NPK fertilizer) and urea which would be used to: fund projects to aid village-level producer groups in becoming more self-reliant; lend financial support to the new National Agricultural Credit Bank; and implement a fertilizer marketing study.

Dollar funds were to be used for stateside purchase and shipment of approximately 12,000 metric tons of urea and 5000 tons of sulfur (valued at \$3.05 million), \$1.2 million to cover the differential for using a US flag vessel, and \$750,000 for two technical assistance studies- an agricultural sector assessment and a rural credit and savings study.

USAID intervention in the fertilizer sub-sector was justified on several grounds. Analysis by the International Fertilizer Development Center (IFDC) in the late 1970s concluded that use of fertilizer was economically and financially feasible in large parts of Senegal and could have a favorable balance of payments impact (due to greater agricultural production resulting in increased government revenues from cash crop exports and reduced foreign exchange expenditures for food imports). Moreover there was an awareness on the part of the GOS and donors that the fertilizer marketing system was badly in need of reform due to a number of reasons: the GOS could no longer afford to heavily subsidize fertilizer sales to farmers (2); government fertilizer distribution had been plagued by mismanagement under ONCAD and later SONAR, and transition to a private system of distribution was foreseen; credit for agricultural inputs had not been available in much of the country for several years due to the dissolution of ONCAD in 1980 and this, in combination with rising fertilizer prices to farmers (due to lifting of subsidies), had contributed to greatly reduced fertilizer consumption.

A number of policy reforms were incorporated into the program grant agreement as conditions precedent and special covenants. This conditionality related to liberalization of fertilizer marketing and pricing, agricultural credit, reduction of government debt to the banking sector, and reduction of the CPSP deficit (a detailed discussion of these policy reforms and GOS success in implementing them may be found in Section II.

(1) USAID/Senegal, "Program Assistance Approval Document, Agricultural Development Assistance, Sahel Development Fund" 685-0249 (August 1983), P.9.

(2) Between 1975 and 1983, these subsidies averaged 3.1 billion CFA annually. In 1983, fertilizer subsidies were generally on the order of 60 %.

It was foreseen that a number of benefits to Senegal and to USAID would result from implementation of the fertilizer import program. Gradual adoption of more rational institutional and economic policies in the cooperative and fertilizer sub-sectors would eventually result in greater agricultural productivity, fertilizer imports would directly contribute to increased food production, local currency would be used to strengthen rural institutions (cooperatives and credit), technical assistance studies would provide valuable information for GDS policy-makers and USAID personnel, and significant foreign exchange savings would result from fertilizer imports made available on a grant basis.

USAID would gain policy leverage at the fertilizer sub-sector level as a result of the commodity import program, and would gain additional agricultural sector influence because local currency would be used to support cooperatives and credit. In addition, dollar-funded and CFA funded studies would be carried out which would contribute to the on-going agricultural policy dialogue. Finally, balance of payments support (from this and other program assistance activities - the Economic Support Fund and FL-480 Title III programs) would enhance USAID's position at the macroeconomic policy level.

The grant agreement was signed in August 1983 and arrangements for determining Senegal's fertilizer requirements, choosing importers (the Fertilizer and Chemical Products Company of Senegal) - SSEPC, and the Senegal Chemicals Company - ICS) and preparing invitations for bids for US exporters took place during the latter half of 1983. In early January 1984, the export contract was awarded to the International Commodities Export Corporation (ICEC). In March, 2,200 MT of urea and 4000 MT of sulfur arrived at the port of Dakar. The SSEPC sold urea for the upcoming 1984/85 season and the ICS processed the sulfur into 16,000-20,000 MT of compound fertilizer. The grant agreement stipulated that the importers were to deposit an advance (25% of the value of the fertilizer imported, minus the US cottons shipping differential) into a local currency account upon awarding of contracts in the United States, and the remaining 75% six months after receipt of the shipping documents in Senegal. This local currency was to be used for the activities mentioned above.

II. GOS PROGRESS ON POLICY REFORM

A. Overview

The fertilizer import program grant agreement stipulated a number of policy reforms to be carried out as conditions precedent and special covenants to that agreement. These reforms were in the areas of agricultural credit, liberalization of fertilizer marketing and pricing, reduction of government debt to the banking sector and reduction of the CPSP deficit. In addition, it was stipulated that periodic consultations would occur between USAID and the GOS to discuss implementation of these policy reforms, the general status of the Senegalese economy, and the relationship of the AID program to these matters. For the most part, these reforms have been achieved (conditions precedent and special covenant language from the grant agreement is excerpted below) (3). A discussion of each of these policies and progress in their implementation follows.

B. Specific Policy Reforms and Discussion

1. Conditions Precedent to First Disbursement

Prior to the first disbursement under the Grant, or to the issuance of AID documentation pursuant to which disbursement will be made, the Grantee will, except as the Parties may otherwise agree in writing, furnish to AID, in form and substance satisfactory to AID a written statement that the Grantee has sent a formal letter to the International Monetary Fund (IMF) setting forth its proposals for an IMF Standby Agreement for Senegal's fiscal year 1983/84, and written confirmation that this proposal is acceptable to the IMF. (4)

Discussion: On August 11, 1983, the Senegalese Ministry of Finance sent a formal letter to the IMF which detailed its proposals for a 1983/84 Standby Agreement. This proposal was subsequently approved by the IMF.

Major elements of the reform package included: reductions in the CPSP deficit through consumer price increases for rice, sugar, and edible oils; the establishment of ceilings on government investment, nominal import growth, civil service growth, and subsidies to rural development agencies; reorganization of agricultural marketing and financing of inputs; and implementation of studies of parastatal reorganization and a comprehensive review of agricultural policies in collaboration with donor agencies. It was estimated that this reform package would result in an overall reduction of the government budget deficit by 35 billion CFA for the 1983/84 fiscal year (or roughly 4% of GDP).

(3) USAID/Senegal, "Grant Agreement between the Government of the Republic of Senegal and the United States of America for the Agricultural Development Assistance Commodity Import Project", August 1983, excerpts from Articles 3, 7 and 8.

(4) The Senegalese fiscal year runs from July 1 to June 30 of the following year.

2. Conditions Precedent to Disbursement of Local Currency Generated

a. No funds will be released from the Special Local Currency Account to be established in the Central Bank until the Government certifies that village level cooperatives and producer groups are authorized to have direct access to credit sources.

Discussion: On May 4, 1984, the Senegalese National Assembly adopted a bill to this effect and on May 11, 1984 the President signed it into law.

b. Disbursement of local currency funds from the Special Local Currency Account for the National Agriculture Bank (CNCAS) shall be contingent on a positive finding by the Rural Credit and Savings Study team being financed from dollar technical assistance funds.

Discussion: In early 1984, USAID and the GOS decided not to use local currency generated from fertilizer sales for financing of agricultural credit. USAID also chose not to implement the dollar funded Rural Credit and Savings study. As a result, USAID sent a project implementation letter to the GOS waiving the above condition precedent.

3. Special Covenants Concerning Implementation of the Fertilizer Commodity Import Program.

a. Fertilizer Subsidies:

- (i) Grantee covenants that the average subsidy for fertilizer will not increase above its current 60% level through January 1984.
- (ii) Grantee covenants that the reduction of the fertilizer subsidy will drop from 60% to 40% by January 1985.
- (iii) Grantee covenants that within 12 months of obligation of funds, it will present a plan to the USAID for the reduction of the fertilizer subsidy from the current 60% level to 25% by January 1987.

Discussion: The 1983/84 IMF Standby Agreement stipulated that the GOS would not use any of its own funds for fertilizer subsidies. As a result, the special covenants concerning subsidies were satisfied in a de facto manner.

It should however be mentioned that local currency proceeds of fertilizer sales were used to finance a 20 CFA/kg price support for all fertilizer distribution (with the exception of KCL) during the 1984 agricultural season. This subsidy totalled 493 million CFA and averaged less than 20% of the price paid by fertilizer consumers.

For 1985/86, USAID has proposed that 250 million CFA in local

currency proceeds be used to continue the 20 CFA/kg. price support for fertilizer sales to regional development agencies and a 40 CFA/kg. price support for direct cash sales to producers. The goal of the 40 CFA/kg price support is to encourage private sales (as opposed to parastatal distribution) and to gain information on effective demand for fertilizer at reasonable prices.

An eventual phasing out of fertilizer subsidies in combination with a simultaneous gradual increasing in producer prices is foreseen.

The average price for fertilizer to consumers remained at 50 CFA/kg through January 1984. For the 1984 agricultural season, the average price of fertilizer rose to 80 CFA/kg as a result of the subsidy reduction.

Thus although no written plan has been formulated for subsidy reduction, it is fair to say that the GOS and donors have taken significant steps towards making market prices more in line with actual costs of producing and distributing fertilizer.

b. Fertilizer Marketing:

- (i) Grantee covenants that it will permit the private sector to import urea under this project directly from the U.S. without the Government of Senegal serving as an intermediary. Moreover, the Grantee agrees to reimburse the private sector the amount of the subsidy in a timely manner.

Discussion As indicated in Section III of this evaluation report, the SSEPC and ICS contracted directly with the US exporter (ICEC) for urea and sulfur delivery. Moreover, prompt reimbursement of the subsidy from the local currency account established at Citibank occurred.

- (ii) Within 12 months of project obligation, the Grantee covenants that it will present a plan for reorganizing the fertilizer marketing system including a study of the respective roles of the private and public sectors. This plan will recommend methods of reorganization for maximizing efficiency, minimizing costs and responding to local farmer needs.

Discussion To date, no single plan for reorganization of the fertilizer sector has been enunciated. However it can be stated that the cumulative effect of a number of GOS actions has for the most part produced the intended result (although strictly speaking, not all of these actions occurred within one year of project obligation). Most significantly, SONAR was disbanded in late 1984, abolition of the withholding system (beginning with the 1985/86 agricultural season) was announced in April 1985, and the New Agricultural Policy of April 1984 endorsed cash sales to producers by the private sector as a strategy for financing the supplying of fertilizer.

It would however be erroneous to claim that every element of an

effective distribution and financing network is now in place. Important questions regarding the role of the new agricultural credit institution (the CNCAS) and the specific form of private sector organization in rural areas still need to be addressed.

c. Fertilizer Use:

Grantee covenants to continue its efforts to bring about closer cooperation between the agriculture research stations and the extension services so that results of applied research in the most efficient kind and method of application of fertilizers to specific crops can be made available to the farmer and those responsible for supplying fertilizer to the farmer.

Discussion: The Senegalese Agriculture Research Institute (ISRA) is currently engaged in collaborative research efforts with SOMIVAC in the Casamance, SODEVA in the Groundnut Basin, SAED in the Senegal River Basin (Fleuve Region) and SODEFITEX in Eastern Senegal. Liaison units ("cellules de liaison") and formal research protocols have been formed between ISRA and these rural development agencies. Major research efforts include: farming systems research in the Lower Casamance, Sine Saloum, and Fleuve regions; fertilizer trials using natural phosphates from Matam; research on rice varieties and fertilizer applications with the West Africa Rice Development Association (WARDA); and on-farm fertilizer trials.

While increased collaboration has occurred, much remains to be done. ISRA's experience in the Casamance is a good example. ISRA/SOMIVAC cooperation began in 1982. Since then, PIDAC (the Lower Casamance RDA and theoretically supervised by SOMIVAC) has adopted a number of research recommendations in the areas of crop rotation and accepting ISRA's division of the Lower Casamance into five research domains. However, PIDAC has not yet adopted ISRA's most recent recommendations for fertilizer dosages. While ISRA has developed recommendations emanating from on-farm research trials which incorporate the changing economics of fertilizer use (lower rainfall with resulting higher risk, higher fertilizer prices due to lifting of subsidies), PIDAC continues to advocate dosages developed in the mid-1970s.

d. Periodic Consultation:

Grantee and AID agree to meet periodically, but no less than annually, to discuss the progress of implementation of the aforementioned covenants, to discuss the status of the economy, associated economic issues and the relationship of the AID program to those matters.

Discussion: Since signing of the program grant agreement in August 1983, USAID personnel have met regularly with officials of various GOS ministries. In particular, the Agricultural Development Officer, (ADO), the Assistant Agricultural Development Officer for Non-Project Assistance (A/ADO/LC), the USAID Agricultural Economist, and the Embassy's Economic and Commercial Unit Chief Economist have been in contact with officials from the ministries of Economic and Financial Affairs (MOF), Rural Development (MRD), and Planning and Cooperation

(MPC).

In addition, USAID has participated in the GOS/donor meetings of November 1983 and December 1984, and USAID sponsored a fertilizer conference in May 1985 which grouped together GOS officials, donor representatives, and members of the private sector with an interest in agricultural input marketing.

4. Special Covenants Concerning General Impact of the Agricultural Economic Situation.

a. Grantee covenants the reduction of outstanding seasonal agricultural credits through a reimbursement of 10 billion CFA by December 1984 and according to the priority order and schedule agreed upon by the GOS and IMF.

Discussion: During the 1983/84 Senegalese fiscal year 20.6 billion CFA was reimbursed by the GOS to the banking sector.

b. Grantee covenants the reduction of the deficit of the Price Stabilization Board (CPSP) by 10% by December 1984.

Discussion: At the end of the 1982/83 fiscal year the CPSP deficit stood at 8.7 billion CFA. One year later the deficit had been reduced to 3.5 billion CFA or by roughly 60%. This was accomplished by raising the retail prices for rice by 24% sugar by 50 CFA per kilo, imported edible oils by 22%, and domestically produced groundnut oil by 18% in August 1983.

C. Conclusion

These conditions precedent (not including standard ones) and nine special~~X~~ covenants were stipulated in the grant agreement. Of the three conditions precedent, two were satisfied and one was satisfied in a de facto manner by the decision not to use this program's local currency for rural credit. Of the nine special covenants, eight were either satisfied or surpassed, and one (closer ISRA/RDA collaboration fertilizer research and extension) was only partially met.

III. IMPLEMENTATION OF THE FERTILIZER IMPORT PROGRAM

A. Introduction

The original project design envisaged that Senegalese fertilizer requirements would be determined and the Senegalese importers identified by September 1983, US procurement procedures would be carried out during the remainder of 1983, and urea and sulfur would arrive in Dakar in March 1984 for processing and marketing in time for the 1984/85 agricultural season. A detailed implementation schedule is presented in Table 1.

The grant agreement was signed in August 1983 as scheduled. Concerning designation of importers, USAID sent a letter to the Ministry of Plan & Cooperation requesting designation of importers by no later than September 9. USAID never received a response to this request and was forced to unilaterally identify the importers. On November 19, the MPC finally responded by concurring in the USAID decision naming the SSEPC (as importers of urea and the ICS as importers of sulfur.

There were several reasons for the GOS failure to name importers. The 1983/84 Standby Agreement required the GOS to abolish all fertilizer subsidies for the following agricultural campaign. Whereas subsidized fertilizer had an average price of 50 CFA/kg in 1983, it was estimated that lifting of the subsidy would increase prices to farmers by 100% for the three main fertilizer products for groundnuts and millet (NPK grades 6-20-10 and 14-7-7, and urea) when transportation was included. The GOS was at a loss to determine levels of effective demand due to such a radical price hike, and it was uncertain whether any importer would be willing to import 12,000 MT of urea as it might not be possible to sell most of it.

Secondly, although fertilizer requirements for regions where credit systems still functioned were somewhat predictable (Eastern Senegal and the Fleuve), input provision for groundnut cultivation was to be financed through a system of withholding 20 CFAF for every kilogram of groundnuts marketed through the cooperative system in 1983/84 ("retenue a la source"). These withholdings would then be used to finance purchases of seed and fertilizer for the following year (15 CFAF for seed and 5 CFAF for fertilizer were withheld for every kilogram of groundnuts marketed). Because dependable figures were not yet available for groundnut marketing as of September 1983, it was difficult to determine what quantities of fertilizer purchases the withholding system could finance.

Finally, there was certainly some reticence on the part of the GOS to participate in a program, which if it succeeded, would contribute significantly to the closure of SONAR. SONAR had been created in 1980 to partially fill the vacuum created by the dissolution of ONCAD. Its responsibilities were to distribute agricultural inputs for groundnut cultivation (seed and fertilizer) and marketing groundnut harvests. Its existence was to be only temporary (two or three years), after which inputs would be supplied

privately and the oil crushing firms would purchase groundnuts directly from farmers. Privatization of the fertilizer distribution process would be one more nail in the SONAR coffin and this was an idea that was almost certainly resisted by officials in several ministries.

Due to late identification of the importers, USAID requested that AID Washington waive advertise for formal competitive bidding and instead circulate invitation for bid documents to the 35 fertilizer producers and suppliers listed by the office of Commodity Management (SER/COM), AID/W concurred and the bid opening occurred on December 20. Only one firm placed a bid. The International Commodities Export Corporation (ICEC, and they were subsequently awarded the contract for both sulfur and urea. (5000 MT of sulfur and 12,000 MT of urea, plus or minus 20% of each commodity).

It was not only important that the importers be named but also that the GOS and the urea importer come to a rapid contractual agreement on marketing imagine to be paid to the importer and quotas to be allotted to the various rural development agencies and SONAR. This agreement had to be reached before January 10, 1984 at which time the terms of the stateside export contract expired. GOS/SSEPC contract terms for urea sales will be dealt with more extensively in section III.C. At this point, it suffices to say that USAID officials played a stronger role in the process of importer selection and contract negotiations that they would have preferred. Although ultimate res-ponsibility for designation of importers rested with the GOS, USAID performer most of the liaison work necessary to identify eligible importers, explain AID contractual procedures to private firms, and prod communication between reluctant GOS officials and cautious private sector importers. In discussions with USAID personnel and the head of the SSEPC, there was unanimous consent that the lead role taken by USAID was decisive in the GOS and the SSEPC coming to agreement before the January 10 deadline. While USAID would have preferred to play more of a passive supporting role, the result would almost certainly have been failure to meet the deadline and cancellation of urea imports for 1984.

Once contractual agreements were reached between the GOS and importers, shipment of urea and sulfur went according to schedule. Two ships arrived in Dakar on March 9 and March 19 where they were unloaded and sulfur was transported to the ICS processing factory and urea was bagged and trucked to the SSEPC storage facility just outside of Dakar. sales began soon thereafter. the physical flow of imported sulfur and urea is presented in Figure 1. The actions necessary to facilitate this flow will be discussed in greater detail in the following two sections which deal with the sulfur and urea programs separately.

Table 1: SENEGAL AGRICULTURAL DEVELOPMENT ASSISTANCE PROGRAM (685-0249):

IMPLEMENTATION SCHEDULE

<u>DATE</u>	<u>ACTIVITY</u>
8/83	-Signing of grant agreement between GOS and USG.
9/15/83	-Production schedule finalized by fertilizer plant: requirement determined, GOS designation of importers.
10/15/83	-IFB terms and conditions drafted and approved by GOS and USAID/Dakar.
11/01/83	-Draft IFB transmitted to AID/W.
11/15/83	-IFB finalized by M/SER/COM.
12/01/83	-IFB printed, requirement advertised
01/01/84	-IFB available to potential suppliers
01/15/84	-Bid opening, approval of awards, L/C issued
01/15/84	-Importers deposit advance (25% of value of fertilizer imported) into local currency account.
03/01/84	-Shipment of commodities delivered to U.S. port of exit.
03/20/84	-Shipment from USA to Dakar
04/05/84	-Unloading and distribution (to plant for blending or bagging, to warehouse)
09/07/84	-Importers deposit remaining 75% into local currency account.

Source: USAID/Senegal, Program Assistance Approval Document, Agriculture Development Assistance/Sahel Development Fund (685-0249) August 1983, p.91.

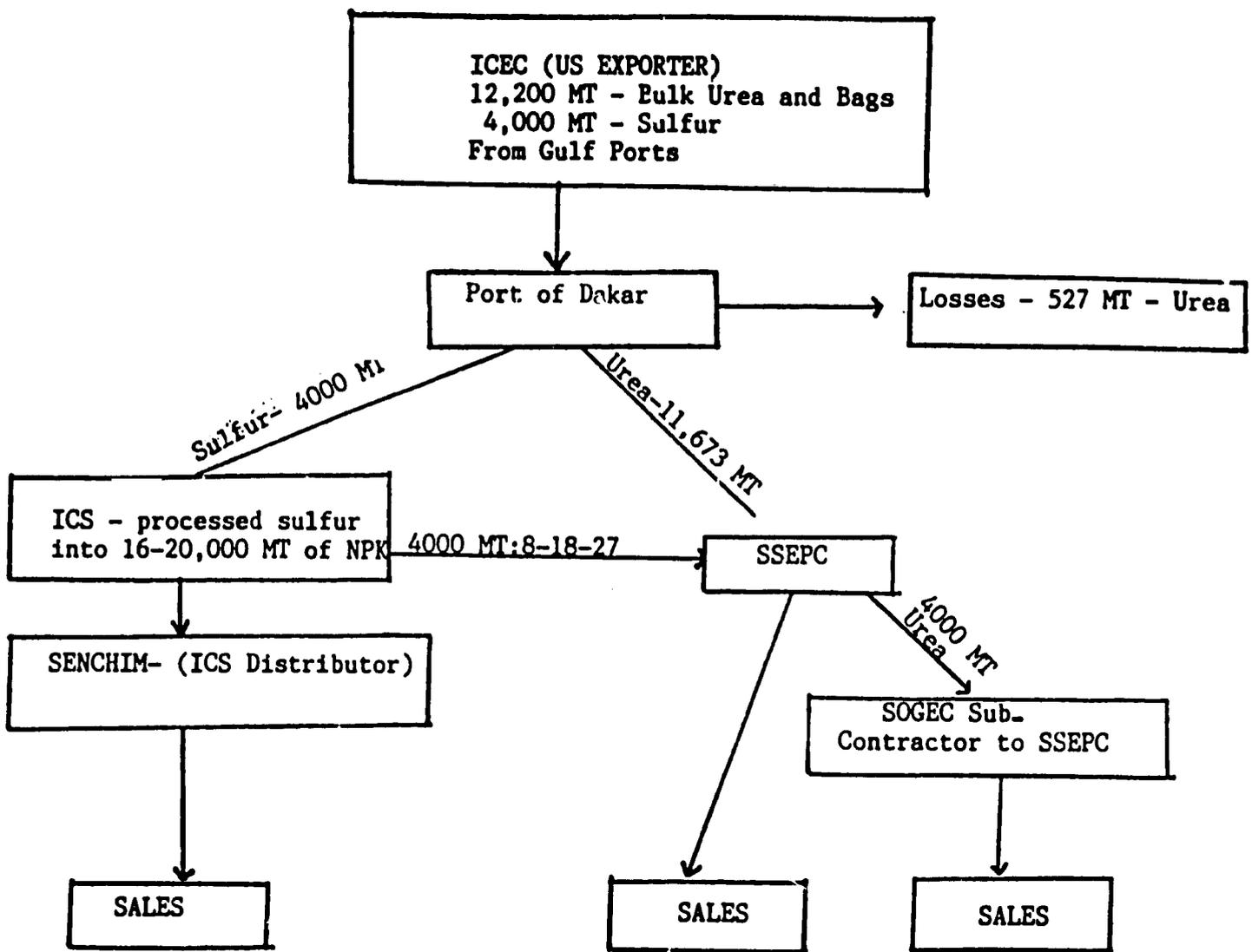


Figure 1: Senegal: Agriculture Development Assistance Program -685-0249):
Flow of Fertilizer Imports

Source: Synthesis by the author

B. Importation of Sulfur

1. The Importer - The Senegal Chemicals Corporation (ICS)

ICS is the only fertilizer processing company in Senegal. In 1984, it began operation of its sulphuric acid and phosphoric acid manufacturing units, and began production of triple super phosphate (TSP) and diammonium phosphate (DAP). TSP and DAP production was incorporated into the NPK processing factory which the ICS inherited from the previous sole Senegalese fertilizer processor, the Industrial Fertilizer Corporation of Senegal (SIES), whose assets were incorporated into ICS. The production capacity for various fertilizer products is detailed in Table 2.

As can be surmised from these figures, ICS will operate at a much larger scale than did SIES. Significant economies of scale are forecast which should lower fertilizer prices in the Senegalese market place and render ICS production competitive in world markets.

Most of ICS production will be exported to nearby West African nations and to India (a long-term contract with two Indian concerns stipulates yearly phosphoric acid exports of 110,000 MT) with domestic Senegalese consumption being more marginal than was the case with SIES which essentially furnished only the Senegalese market. The international nature of the ICS market is reflected by the composition of its shareholders which is presented in Table 3.

Marketing of ICS production is the responsibility of SENCHIM (50% share to a French Government owned firm, the Mining and Chemicals Corporation -EMC, 50% to ICS) which was created in March 1984 and was in charge of selling NPK in Senegal which was produced using sulfur provided by this commodity import program.

2. Implementation of the Sulfur Import Program:

The FAAD originally foresaw the importation of 5000 MT of sulfur which would enable ICS to produce between 20-25,000 MT of compound fertilizer (depending on actual NPK grades produced). The contract agreed to by ICEC and ICS allowed for adjustments of plus or minus 20% and after tabulating Senegalese demand projections, ICS chose to import the minimum amount, 4000 MT.

For the most part, importation of sulfur and marketing of NPK fertilizers in Senegal ran smoothly. As previously mentioned, ICEC was awarded the contract to deliver sulfur to Dakar.

Table 2: ICS Fertilizer Processing Capacity

<u>Product</u>	<u>Capacity (MT)</u>
NPK (old SIES unit)	60-120,000 (a)
Sulfuric Acid	627,000
Phosphoric Acid	257,000
Triple Super Phosphate	170,000
Diammonium Phosphate	80,000

(a) The variation in NPK capacity is a function of the different combinations of NPK grades produced.

Source: From the ADA PAAD and an ICS publicity flyer.

Table 3: ICS Share Capital

<u>Entity</u>	<u>Capital Stock Held</u> <u>(CFA 000)</u>	<u>%</u>
Government of Senegal	5,695,800	23,34
Government of Ivory Coast	2,300,000	9,43
Federal Government of Nigeria	2,300,000	9,43
Government of Cameroun	2,300,000	9,43
Islamic Development Bank	2,298,000	9,42
India Farmers Fertilizers Coop. Ltd	2,044,450	8,38
Government of India	2,044,440	8,38
Southern Petrochemical Industries Corps Ltd	511,130	2,09
Societe Commerciale des Potasses et de l'Azote (a)	2,130,050	8,73
Societe Senegalaise d'Engrais et de Produits chimiques (a)	218,880	0,90
Compagnie Senegalaise des Phosphates de Taiba	1,600,000	6,56
Senegalese Banks	879,200	3,60
Other	78,050	.31
	<u>24,400,000 (b)</u>	<u>100</u>

(a). Subsidiaries of Entreprises Miniere et Chimique (EMC) of France.

(b). Approximately \$53 million at a \$1=460 CFA exchange rate.

Source: ICS publicity flyer, 1984.

Only one significant problem was encountered and that concerned the price of sulfur. When the program was designed in early 1983, sulfur prices in the US were roughly equal to those in Poland - SIES's traditional source. However in late 1983, a substantial differential developed. Whereas SIES was able to obtain Polish sulfur at \$113 per MT, the terms of the US export contract were fixed at \$131.90 per MT. As a result, USAID agreed to support the difference between the US and the European price. 4000 MT of sulfur was imported by ICS and, in effect, a total price support of \$75,600 (\$18.90 per MT) was received by the US exporter.

In addition to the price adjustment to the sulfur exporter, a shipping differential to US shippers was paid out of Official Development Assistance funds (ODA) in order to compensate for the higher cost of U.S. bottoms whose selection was required by law. This subsidy amounted to \$85.00 per MT or a total of \$340,000. Thus for 4000 MT of sulfur with a Dakar CIF price of \$452,000 when valued using competitive world shipping and commodity prices, a total of \$415,000 was paid to US shippers and suppliers. Thus of the \$867,600 disbursed for sulfur procurement only 52 % of it can be properly termed balance of payments support to Senegal.

The Del Oro arrived in Dakar on March 9, 1984 and the 4000 MT of sulfur was unloaded by March 12. The sulfur was then transported by train to the ICS' acids plant at Darou Khoudoss where it was processed into sulfuric acid for subsequent mixing into NPK at the Mbao fertilizer plant.

Sales of NPK fertilizer for 1984 are broken down in Table 4.

Sales to SONAR were financed through the withholding system (5 CFA withheld for every kilogram of groundnuts marketed) and SENCHIM was responsible for these sales. The 4000 MT sold to SODEFITEX was financed by the credit program which was in place in the cotton growing zones and was actually sold to the SSEPC who then resold the fertilizer to SODEFITEX.

According to the terms of the grant agreement, ICS was required to deposit into a local currency bank account an advance of 25% of the CIF value of the imported sulfur (assessed at the competitive price for sulfur and shipping and using the exchange rate in effect on the day loading began at the US port) at the time of opening of bids and awarding of contract in the US. The remaining 75% was to be deposited no later than six months after arrival of shipping documents in Dakar. The exchange rate for the 75% was fixed on the date of establishment of the bill of lading.

Table 4: Sales of NPK Fertilizer - 1984

<u>Client</u>	<u>Quantity (MT)</u>
SONAR	7825.15
SODEFITEX	4000.00
SSEPC	446.50
Other	20.00
TOTAL	----- 12,291.65

Source: SENCHIM

The CIF dollar value of 4000 MT of sulfur was assessed at \$452,000 (\$113 per MT). An allowance for humidity loss (1.53%) lowered the dollar value to \$444,991. Using the two exchange rates (25% at 427 CFA and 75% at 405 CFA) the ICS local currency deposit requirement amounted to 182,807,146 CFA.

Payment of the 25% advance was delayed one month due to the lengthy contract negotiations between the SSEPC and the GOS. Because failure to reach agreement on SSEPC/GOS contract terms would have effectively cancelled the entire program, the ICS deposit was also withheld until the contract was finalized. The first payment to the Ministry of Finance bank account at Citibank was made on January 19, 1984 and totalled 48,251,000 CFA. The 75% payment was due on September 17, 1984 and was deposited slightly late on October 4, 1984. This deposit amounted to 134,456,156 CFA.

In order to encourage fertilizer utilization in rural Senegal, USAID and the GOS jointly agreed to use local currency proceeds as a price support to fertilizer consumption. This reduced the price to consumers by 20 CFA per kilogram of NPK, DAP, and TSP from the actual cost of producing it. However it must also be noted that this raised the average factory gate price of fertilizer from 50 CFA/kg in 1983 to 80 CFA/kg in 1984. After some debate in the USAID mission, it was decided that the most administratively efficient procedure for applying this price support would be to instruct SENCHIM to bill clients the subsidized price and upon presentation of receipts, SENCHIM would be reimbursed the 20 CFA/kg difference between the price to consumers and the actual cost to SENCHIM.

ICS, SENCHIM and the SSEPC requested that a USAID-controlled escrow account be established at Citibank where deposits would be made and subsidy reimbursements would be paid from. Apparently the private firms did not trust the GOS to promptly reimburse subsidy payments and as such they wished the account to be controlled by a third party.

Because a given quantity of sulfur is used to produce three to four times as much NPK (and some products not requiring sulfur were subsidized), SENCHIM received reimbursements on over 13,000 MT of fertilizer products. These reimbursements to SENCHIM are broken down by fertilizer product in Table 5.

Table 5: Price Supports for SENCHIM-Distributed Fertilizer in 1984

Product	Quantity (MT)	Price Support (CEA)
NPK	12,291.65	245,833,000
DAP	730	14,600,000
TSP	2	40,000
TOTAL	13,023.65	260,473,000

Source: Table furnished by SENCHIM.

3. General Discussion

The ICS Secretary General, Mr. Baizeau, expressed dissatisfaction with the sulfur import program. His main source of dissatisfaction related to the heavy workload associated with importing this relatively small order of sulfur. In 1984, ICS imported approximately 60,000 MT of sulfur of which 4000 MT was provided by this commodity import program. At one point during our meeting Mr. Baizeau showed this author the file containing the paperwork necessary to import the AID 4000 MT and files for the other 56,000 MT. The file for the AID sulfur was roughly twice as thick as all the other files combined.

Mr. Baizeau also claimed that the long-term contracts ICS had signed with other suppliers were more flexible in their terms as prices and quantities could be revised every six months. Moreover, shipping costs were less expensive with other suppliers as individual shipments were done on a much larger scale (25-30,000 MT).

Concerning ICS participation in future import programs, Mr. Baizeau stated that he was uninterested in importing more sulfur as ICS was tied into long-term contracts over the next several years that would satisfy its sulfur requirements. Thus, no spot market purchases are envisaged in the near future.

Purchase of US ammonia (used in production of DAP) instead of sulfur may be possible in the future. However, several questions would require further study by program designers. Obviously, the competitiveness of US as opposed to world prices would need to be examined. Secondly, although ICS foresees import of roughly 8000 MT per year of ammonia, demand is highly volatile and subject to fluctuation. Third, of this quantity only a small proportion of DAP is currently sold in the Senegalese market. Demand for DAP would need to expand somewhat before ammonia imports would become attractive for a future commodity import program.

Mr. Baizeau also mentioned the possibility of importing potash. He estimated ICS annual requirements at approximately \$1 million.

If it was found that neither ammonia nor potash importation were feasible, a program based uniquely on urea imports would be the best alternative. However, it should also be noted that this analysis does not take into account the issue of price supports. If ICS refusal to participate in future fertilizer import programs greatly reduced the possibility of implementing future fertilizer import programs, ICS might still decide to participate in order to benefit from local currency price supports. In any event, designers of a subsequent fertilizer import program need to closely examine the issue of ICS participation and the various import options.

C. Importation of Urea

1. The Importer - The Fertilizer and Chemical Products Corporation of Senegal (SSEPC)

The SSEPC is by far the largest and most experienced distributor of fertilizer in Senegal and is 90 % owned by EMC. During the existence of SIES, SSEPC was responsible for the marketing of all SIES-produced compound fertilizers as well as a large proportion of imported fertilizer (urea and KCL). In 1984, the SSEPC continued to dominate distribution of imported fertilizer.

With the creation of ICS in 1984, SENCHIM became the privileged distributor of domestically produced NPKs and DAP. However in 1984, the SSEPC distributed 4000 MT of ICS produced 8-18-27 to SODEFITEX and purchased 446.5 MT of NPK and 730 MT of DAP for resale elsewhere in Senegal (1700 MT of the DAP was resold to SAED).

It should also be noted that the Ministry of Rural Development insisted that the SSEPC sub-contract part of its urea distribution to a Senegalese-owned firm. The Societe Generale pour le Commerce (SOGEC) was subsequently chosen as a sub-contractor. As a result, responsibility for sale of 4000 MT of urea was ceded to SOGEC by the SSEPC.

2. Implementation of the Urea Import Program

The FAAD envisaged the importation of 12,000 MT of urea which would completely satisfy Senegal's effective demand for urea in 1984/85. Urea was to arrive in bulk in Dakar where it would be bagged in 25 and 50 kilogram sacks provided by the exporter. As with the ICS/ICEC contract, the SSEPC contract allowed for adjustments of plus or minus 20% and the SSEPC chose to import 12,200 MT of urea. Once again, ICEC was the sole bidder and was awarded the export contract on December 20, 1983 at the Senegalese Embassy in Washington, D.C. The CIF value of urea delivered to Dakar (minus the US shipping differential) was calculated as follows:

3000 MT (25 kg bags) X \$194.27/MT =	\$ 582,810
9200 MT (50 kg bags) X \$190.85/MT =	\$1,755,820

TOTAL CIF value	= \$2,338,630

The subsidy paid to US shippers totalled \$1,037,000 (12,200 MT X \$85/MT). US and world urea prices were comparable so no compensatory differential was necessary as was the case with sulfur.

The urea program proved more difficult to implement than the

sulfur program due to lengthy SSEPC/GOS contract negotiations, the requirement for a large 25% advance, and the risk borne by the SSEPC resulting from the uncertain nature of the Senegalese market in 1984.

Mr. Francois Dallet, the director general of the SSEPC, estimated that five months was required to negotiate the contract between the GOS (primarily the Ministry of Rural Development) and the SSEPC for urea sales to SONAR and the rural development agencies (RDAs). He was of the opinion that a comparable contract between private concerns would have taken only one or two months to negotiate. Moreover, in attempting to get the GOS and the SSEPC to agree to terms before the January 10 deadline, USAID officials found themselves playing a more prominent role in facilitating this process than they would have preferred.

The reasons why contract negotiations took so long are similar to those for why the GOS failed to name importers. Uncertainty over future subsidy levels, withholding system revenues, and reticence over dealing with the private sector all played a role in prolonging negotiations.

In formulating the contract, one of the principal problems was determining the quantities of urea to be purchased by each of the RDA's and SONAR. As previously mentioned, this was to have been determined by September 1983.

In principle, the MDR was to have officially requested this information from the various parastatals who were then to have transmitted their respective urea requirements to the MDR. The MDR was then to have tabulated the overall urea requirement so that negotiations with the importer could begin.

In reality, the MDR failed to transmit instructions to a number of parastatals. As late as December 26, 1983, the Director General of SONAR telexed the SSEPC that he had not yet received any official communication from the MDR relative to the USAID urea program. An aide-memoire and a follow-up letter from the USAID director, in addition to considerable USAID staff legwork, were necessary to finally resolve the situation before the terms of the invitation for bids expired.

The contract stipulated that the 12,200 MT of urea would be distributed as follows:

SAED	4300 MT
SODEVA	1000 MT
STN	200 MT
SODAGRI	700 MT
SONAR	6000 MT

The SSEPC and its sub-contractor for 4000 MT (SOGEC) were

responsible for unloading bulk urea at the Dakar port, bagging, transport to warehouse sites, and proper storage (storing sacks on on raised pallets and covering them with canvas). An allowance of 2% for losses suffered between the points of bagging and actual delivery to clients was also stipulated. Losses below 2% would not have to be reimbursed to the local currency account. Evacuation of bulk urea from the ship to bagging areas was to occur at a rate of 500 MT per day and bagging at a rate of 300 MT per day. SSEPC margins were also fixed (per MT) for transit, storage at the port, canvas covering, bagging, a net commercial margin, and financial charges. These margins could be adjusted upwards or downwards to to reflect actual price changes upon presentation of receipts to the Local Currency Management Committee. The importer was to make the bagged urea available to its clients at its Dakar storage facility at the subsidized price of 76,875 CFA/MT. It was also stipulated that the SSEPC was to be exonerated of all taxes and customs duties relative to importation and distribution of urea in Senegal.

Payment to the SSEPC by the parastatals was to be effected by the SSEPC drawing on irrevocable letters of credit that the parastatals had established at Senegalese banks. If the parastatals failed to establish letters of credit, or were only partially able to do so, it was stipulated that the SSEPC would become rightful owner of the unsold urea and would be free to sell it as it wished, subject to USAID approval.

According to the contract, the SSEPC was to deposit a 25% advance into the Citibank account upon ordering urea from the US exporter. The remaining 75% would be deposited into the local currency account within one month after the parastatals had removed their urea quantities and the SSEPC had drawn on the parastatals' letters of credit.

It is important to note that these terms for deposit schedules to the local currency account were different than those in the grant agreement which stipulated that the remaining 75% would be deposited no later than six months after receipt of shipping documents in Dakar. This created a problem. The grant agreement was between the GOS and the USG, so presumably it was the responsibility of the GOS to assure prompt payment to the local currency account. However the contract was between the GOS and the SSEPC and the GOS could not force the SSEPC to deposit funds within this timeframe if the parastatals failed to purchase the agreed upon amounts of urea, and and in effect broke the contract.

Thus, USAID had no legal leverage to require the SSEPC to adhere to the grant agreement deposit schedule if the GOS failed to adhere to its contract with the SSEPC. The only legal leverage that the USG had was with the GOS. However the urea was in the hands of the SSEPC.

As previously stated, the CIF dollar value of the urea was

\$2,338,630. The exchange rate in effect on the day of the signing of the SSEPC/GOS contract (\$1=427 FCFA) was used to calculate the local currency deposit requirement which totalled 998,595,000 CFA. 25% of this amount (249,648,750 CFA) was deposited into the USAID escrow account on January 20, 1984 (one day after signature of the contract).

The urea was transported in two ships. The Del Oro arrived on March 9, 1984 and contained 3976 MT of urea, as well as the 4000 MT of sulfur. Unloading of urea began on March 13 (after sulfur unloading was completed) and was completed by March 16. The second ship arrived on March 19, contained 8,228 MT, and was unloaded over five days. Thus a total of 12,206 MT arrived in Dakar.

According to insurance company reports, losses of 527 MT occurred at the port or approximately 4.3 % of the total urea shipment. Insurance covered the CIF value of the urea (at US shipping rates) minus a 1% deductible. Thus, the insurance company was to reimburse the SSEPC the CIF value of 405 MT which the SSEPC would then deposit into the local currency account at the exchange rate at the time of payment. In addition, the SSEPC was to deposit to the local currency account the sum necessary to make up the difference between the insurance payment and the overall CIF value of the 527 MT (evaluated at the non-US shipping rate). To date, this insurance payment has not been made.

Once the urea was bagged, the SSEPC had serious problems selling it as GOS parastatals were not able to obtain letters of credit from their banks and SONAR had bureaucratic difficulties mobilizing funds generated from the withholding system.

Past GOS practice had been to pressure national banks to extend credit to parastatals regardless of the financial standing of those parastatals. The result had been considerable arrears owed to agricultural input suppliers and the national banks by the national treasury which was called on to guarantee these loans.

One of the goals of the fertilizer import programs was to encourage the GOS to follow prudent business procedures in its dealings with banks and agricultural input suppliers. This was the reason behind USAID backing the SSEPC, ICS, and Citibank's demand that letters of credit be established as a prerequisite to the parastatals receiving fertilizer. However, none of the parastatals were able to obtain letters of credit and were forced to resort to either paying by check or to a system of unguaranteed IOUs to be paid in monthly installments to the SSEPC after receipt of the urea.

In principle, 1.75 billion CFA was available in 1984 from the previous years's withholdings to finance fertilizer purchases by SONAR. This sum was to be reimbursed by the oil crushing firms to the National Cooperative Union who was then to request SONAR to

purchase fertilizer for the cooperatives. However because the GOS owed considerable amounts of money to oil refineries, the oil refineries stalled on reimbursement to the cooperatives. The end result was that SONAR was late in purchasing and distributing fertilizer to the cooperatives. This situation was not resolved until late April 1984 at which time SONAR received instructions from the MDR to pick up fertilizer at the SSEPC warehouse.

As a result of these problems farmers complained of late delivery of fertilizer in 1984. Late delivery of groundnut seed also occurred. The problem was compounded by unusually early rains. In much of the Groundnut Basin the first rains were in early June whereas late June/early July is the norm. In addition, 1984 was the first year of input distribution financed by the withholding system and GOS administrators in rural areas, cooperative officials, and village section members were unfamiliar with procedures to be followed.

SSEPC/SOGEC urea sales as of September 1984 reflect the inability of parastatals to obtain credit sufficient to finance purchase of the quantities originally identified in the GOS/SSEPC contract. These sales are listed in Table 6.

As Table 6 shows, only 62% of the urea had been sold by September 1984. SAED's inability to pay for over 3000 MT was of particular concern. This situation led to serious cash flow problems for the SSEPC. As a result, the SSEPC was unable to meet repayment schedules outlined in the PAAD and the grant agreement.

According to the terms of the grant agreement, the remaining 75% of local currency was to have been deposited no later than September 17, 1984 (shipping documents arrived in Dakar on March 17, 1984). Actually, it was later decided that due to the SSEPC cash flow problem, the SSEPC only had to deposit into the local currency account the CFA equivalent of the CIF value of the urea minus the 20 CFA/kg price support (as opposed to the reimbursement procedure followed by ICS). A breakdown of SSEPC deposits to the local currency account and their dates is presented in Table 7.

To date, the final payment on fertilizer sales (38,249,897 CFA) and insurance payments for the 527 MT loss (totalling roughly 40 million CFA depending on the exchange rate at the time of payment) have not yet been received. Assuming it arrives soon and the SSEPC deposits it into the local currency account, SSEPC deposits should total approximately 760 million CFA.

The final sales situation was tabulated during the July 1985 financial audit of the SSEPC urea accounts and is presented in Table 8.

As Table 8 illustrates, participants in the GOS/SSEPC contract purchased a combined total of only 8621 MT or 71% of their

allotments. In late 1984, SODEFITEX ordered 2000 MT for the 1985/86 agricultural season and the SSEPC and SOGEC also decided to purchase a total of 859 MT for eventual resale elsewhere. Of the 10,686 MT, only the 859 MT purchased by the SSEPC and SOGEC were sold at the unsubsidized price of 96,875 CFA/MT.

As can be surmised from Table 8, losses from the point of unloading to delivery to clients are significant (5.8%). In addition to losses suffered at the port, unexplained losses occurred at the SSEPC storage site, and between the storage site and parastatal delivery points. Losses and where they occurred are broken down in Table 9.

A number of reasons can be cited for these losses: theft; faulty weighing at the port, by the SSEPC, SOGEC, or clients; faulty bagging, poor storage; or damage in loading and unloading of sacks. In particular, Mr. Dallet cited manual bagging and poor security resulting in waste and theft as the reasons for the 527 MT loss at the port. In addition, complaints were expressed by a number of parties concerning poor performance by SOGEC who sold 4000 MT to SAED and SONAR. Slow bagging, poor stitching of bags, and inadequate storage and covering during transport led to considerable breakage of bags, and damage due to humidity.

An inventory of SSEPC urea stocks and a financial audit of SSEPC urea accounts were done in October 1984 and July 1985 respectively. The inventory was performed by Arthur Andersen and the audit by Gaye and Associates.

Included in the inventory was a weighing of a small number of sacks among the approximately 3000 MT of urea which remained at the SSEPC storage site. 34 50 kg sacks were weighed and an average weight of 48.7 kg per sack was registered. Although such a small sample has little statistical significance, it does indicate that bagging of bulk urea was not always as accurate as it might have been.

At the time of this evaluation, the financial audit was in progress and nearing completion. The auditors were to: account for the exact quantities and values of urea imported and distributed by the SSEPC and SOGEC; assess how closely the terms of the GOS/SSEPC contract had been followed and whether SSEPC margins were reasonable; and present the final sales situation. Quantities sold separated out by client, and losses in transit have been indicated in Tables 8 and 9 respectively.

Table 6: SSEPC/SOGEC Urea Sales~~X~~ as of September 1984

Client	Quantity Purchased (MT)	Value (a) (in CFA)	% (b) of Allotment
Maize Project (SODEVA)	300	23,062,500	30
SODAGRI	70	5,381,250	10
SONAR	6000	461,250,000	100
SAED	1220	93,787,500	28.4
STN	0	0	0
Other	6.15	472,781	-
Total	7596.15	583,954,031	62.2 (c)

(a) Calculated at the subsidized price of 76,875 CFA/MT to consumers.

(b) Allotments as stipulated in the GOS/SSEPC contract. See page 25.

(c) Total quantity purchased as a percentage of 12,206 MT.

Source: Correspondence from the SSEPC to USAID, September 10, 1984 and calculations by the author.

Table 7: SSEPC Deposits to the Local Currency Account

<u>Date</u>	<u>Amount (CFA)</u>
01/20/84	249,648,750 (25% Advance)
10/09/84	145,049,750
12/12/84	132,610,540
03/01/85	50,000,000
03/07/85	106,000,000
TOTAL	----- 683,309,043

Source: Information furnished by the USAID Non-Project Assistance Office.

Table 8: Final SSEPC/SOGEC Urea Sales Situation

<u>Client</u>	<u>Quantity Purchased (MT)</u>	<u>% of Allotment</u>
SODEFITEX	2000	-
Maize project (SODEVA)	300	30
SODAGRI	70	10
SAED	2270 (a)	52.8
SONAR	5981 (b)	99.7
STN	0	0
SOGEC	50	-
SSEPC	814	-
Other	15	-
Total	11,500	94.2 (c)

(a) 2000 MT were sold to SAED by SOGEC.

(b) 2000 MT were sold to SONAR by SOGEC.

(c) Quantity purchased as a percentage of total tonnage delivered to Dakar (12,206 MT).

Source: Table furnished by Gaye and Associates (auditors) and author's calculations, July 1985.

Table 9: Urea Losses

<u>Location</u>	<u>Urea (MT)</u>
Delivered to Port of Dakar	12,206 .
Losses at Port	(527)
Tonnage Weighed at Port	11,679
Losses at Storage Site	(70)
Tonnage Bagged and Weighed at Storage site	11,609
Losses Recorded During Sales	(109)
Tonnage Received by Clients	11,500
Total Losses	706

Source: Table furnished by Gaye and Associates.

Concerning how closely the terms of the contract were followed, we have already seen that several GOS parastatals were unable to purchase the amounts of urea stipulated in the contract. Moreover, none of the parastatals were unable to obtain letters of credit and were forced to resort to payment by check, or in one case (SODAGRI) an unguaranteed IOU to be paid on monthly installments. Before accepting these arrangements, the SSEPC sought authorization from its guarantor, Citibank.

The audit also found that the SSEPC's actual costs for transit may have been excessive by as much as 1000 CFA/MT and the margin for bagging stipulated in the contract was greatly inflated in comparison with actual costs (by more than 3000 CFA/MT). However, this was largely offset by higher costs than originally anticipated for some other line items. In addition, the auditors were of the opinion that SOGEC's margin was probably excessive, although it was not possible to determine which operations were responsible for this as SOGEC only transmitted bills with total amounts, and not broken down by line item. They were also of the opinion that the 2% loss allowance was overly generous in comparison with common business procedure in Dakar.

3. General Discussion

Despite the financial problems of the GOS parastatals which led to considerable renegeing on purchasing their allotments, the SSEPC was able to sell its urea. SONAR purchased the entire 6000 MT that it had been originally allotted, and SODEFITEX largely filled the gap created by SAED's inability to purchase its entire allotment.

Despite the failure of the letter of credit system of payment, the parastatals did pay for their urea, and the types of financial damage suffered in the past by input distributors and national banks was avoided.

The principal problems with the urea import program related to timing. The GOS was slow in naming importers and specifying quantities of urea to be allocated to the parastatals. This slowed contract negotiations, stateside procurement, and shipment. Future programs should seek to advance the contracting and procurement calendar somewhat. There is evidence that urea and sulfur could have been purchased more cheaply if stateside contracting had been done two or three months earlier. This is due to the cyclical nature of US fertilizer prices.

Hopefully, lessons learned from implementing this one year import program will facilitate more rapid contract negotiations between the GOS and importers in the future. It will also be necessary for all parties concerned to have a clearer idea of policy related to fertilizer price supports before contract negotiations begin.

Without this information, estimates of demand for the following agricultural season will be very difficult to calculate. Thus the GOS and donors should agree very early as to what level of price supports (if any) are to be applied to various fertilizer products. Ideally, this should occur before GOS/importer contract negotiations begin.

Finally, fertilizer should arrive at Dakar no later than mid-February so that processing and distribution can take place well in advance of the rainy season.

Although the SSEPC performed fairly well in light of the serious sales constraints it was faced with, the problem of losses remains troubling. Independent stock inventories and financial audits are a good first step for dealing with this problem and should become standard procedure in future import programs. USAID may also wish to investigate the idea of either shipping bagged urea to Dakar or requiring Senegalese importers to use automatic bagging facilities recently installed at the Dakar port. This would presumably reduce losses due to theft and spoilage, lead to more accurate weighing, and be less costly.

IV. USE OF FUNDS

A. Dollar Funds

The PAAD and grant agreement originally foresaw that approximately \$3.05 million would be used for importation of fertilizer, \$1.2 million for financing of a Section 640 C shipping differential for using US vessels, and \$750,000 for technical assistance. A breakdown of actual dollar expenditures is presented in Table 10.

The \$3.05 million was to be used for procurement of 12,000 MT of urea and 5000 MT of sulfur. As has been noted previously, the actual quantities imported were 12,200 MT of urea (or 11,653 MT when losses are taken into account) and 4000 MT of sulfur. The actual purchase price of these commodities including the US shipping differential totalled \$4,229,692.37 or approximately \$20,000 below the originally foreseen \$4.25 million procurement price.

The PAAD called for two dollar-funded technical assistance studies totalling \$750,000. \$450,000 was set aside for an Agricultural Sector Assessment and \$300,000 for a Rural Credit and Savings Study. As was mentioned in Section II on policy reform, USAID decided not to do the credit study after it was decided to use local currency funds for activities other than financing of the National Agricultural Credit Bank of Senegal (CNCAS).

The Agricultural Sector Assessment was to serve USAID as a base document for preparation of a multi-year agricultural sector assistance program. Moreover it was foreseen that this study would be of use to other donors and Senegalese policy-makers. The 27 man-month study was to: identify and analyze constraints to agricultural sector development; analyze resource availability, setting out resources available or potentially available from all sources - GOS, USAID and other donors; and conclude with a rank ordering of priorities for USAID assistance.

The report was to have been finished by October 1984. Several delays occurred which resulted in the final version being unavailable for use in preparation of the Senegal Country Development Strategy Statement (CDSS) which was reviewed in Washington in March 1985. USAID requested substantial revisions after reviewing the first draft, one of the team members wrote her segment in French and translation delays occurred, and some documents were misplaced during study preparation.

Funds were also used to finance three personal services contracts. The ADU Chief Agricultural Economist had as his primary responsibility to: assist the agricultural sector assessment team on economic policy issues; incorporate team findings into the Senegal CDSS; and advise USAID on agricultural policy. An additional agricultural economist was hired for six months to prepare agricultural sector economic indicators which were to serve as the

**Table 10: Agricultural Development Assistance
Program (685-0249): Dollar Expenditures**

<u>Activity</u>	<u>Expenditures (in Dollars)</u>
Procurement of Urea	3,375,385.87
Procurement of Sulfur	854,306.50
Ag. Sector Assessment	330,000.00
3 Personal Services Contracts	291,194.72
Water Buffalo Feasibility Study	12,582.12
SONAR inventory	56,660.00
SUB-TOTAL	4,920,128.21
REMAINING (a)	79,871.79
TOTAL	5,000,000.00

(a) This sum represents funds that were either never earmarked or funds that have been returned to the grant agreement from closed-out PIO/Ts and the letter of commitment for fertilizer procurement.

Source: USAID Senegal Comptroller's Office.

statistical basis for the agricultural sector assessment. In addition, this person was expected to prepare a bibliography of studies on the Senegalese agricultural sector. Finally, an assistant to the A/ADO for Non-Project Assistance was hired to advise USAID, the Local Currency Management Committee, and the Local Currency Secretariat on administrative and financial matters related to carrying out the fertilizer import program.

In February and March 1985, funds were used to carry out an inventory by Price Waterhouse of SONAR buildings and equipment. This inventory had been requested by the MDR because SONAR had been recently dissolved and an inventory was required to identify and value SONAR property which was to be either sold to the oil refineries or ceded to farmer cooperatives. The final report, in English and French, was submitted to USAID in May 1985.

In addition to the above expenditures, dollar funds were used to finance a two-month water buffalo importation feasibility study. The contractor was responsible for preparing a pilot project proposal and laying the initial groundwork for water buffalo importation and experimentation. The study began in May 1984 and was completed in July 1984.

B. Use of Local Currency

1. Overview

The total local currency CIF values of urea and sulfur were calculated as 1,181,302,146 CFA. This was the total amount that was to be deposited into the local currency bank accounts by the SSEPC and ICS. The PAAD identified an illustrative local currency use budget which is presented in Table 11.

In contrast to the PAAD, the grant agreement only stipulated that "Funds in the Special Account may be used for agricultural credit or such purposes as are mutually agreed upon by AID and the Grantee" (Section 6.1).

In order to approve local currency activities a joint USAID/GOS Local Currency Management Committee was set up which included representatives from the ministries of Plan and Cooperation, Finance, Commerce, and a representative of USAID. Tracking of funds and financial management was to be carried out by a Secretariat working in collaboration with the USAID Non-Project Assistance Office. The Management Committee and Secretariat were already in place as a result of their management of the PL 480 Title III program.

Actual local currency use and deposits and expenditures to the local currency accounts are detailed in Tables 12 and 13 respectively.

As can be readily observed, the only activities carried out which correspond to activities identified in the PAAD are the literacy program (support to village-level producer groups) and the marketing study. Brief descriptions of the local currency activities actually carried out and their progress to date are

**Table 11: Agricultural Development Assistance Program (685-0249):
Illustrative Local Currency Use Budget.**

Activity	Budget in CFA)
Strengthening village level producer groups	350,000,000
Support of CNCA (Ag. Credit)	630,000,000
Fertilizer Marketing Study and Contingencies	70,000,000
Support for Local Currency Management Committee	17,500,000
Land Regeneration Fund (back-up activity if Ag. Credit not approved - 630 million CFA).	

TOTAL	1,068,000,000

Source: USAID/Senegal, ADA PAAD (685-0249), August 1983.

**Table 12: Agricultural Development Assistance Program (685-0249):
Actual Local Currency Use**

Activity	Budget (in CFA)
- Literacy Program	324,000,000
- Marketing study (ISRA)	18,860,000
- Subsidy for Urea- (12,200 -527 tons loss)= 11,673 X 20 CFA/K= (233,460,000)	
- Subsidy for NPK	260,473,000
- Total Subsidy	493,933,000
- Dantec Renovations	40,000,000
- Urea Inventory	800,000
- Financial Audit of SSEPC	1,500,000
- CFA Projected Balance (a)	302,209,146

Total	1,181,302,146

(a) The projected balance does not take into account the 25% ceiling on losses which can be deducted from the local currency deposit requirement according to the GOS/SSEPC contract.

Source: USAID Non-Project Assistance Office.

Table 13: Fertilizer Account Activity

Explanation	Deposits (CFA)	!	Explanation	Expenditures (CFA)
SSEPC 25% Advance	249,648,750	!	ISRA Marketing Study	18,860,000
2nd SSEPC payment	145,049,750	!	Dantec Renovation	40,000,000
ICS 25% Advance 	48,251,000	!	NPK Subsidy	80,000,000
ICS 75% Payment	134,456,146	!	" "	162,884,755
SSEPC 3rd payment	132,610,540	!	" "	16,660,000
SSEPC 4th payment	50,000,000	!	Literacy project	70,000,000
SSEPC 5th payment	106,000,000	!	Urea Inventory	800,000

Total Deposits to date (July 1985): 866,016,186 CFA

Total Expenditures to date : 398,634,755 CFA

UPCOMING ACTIVITIES

SSEPC Final payment	38,691,906	!	NPK Subsidy	930,000
Insurance payment	43,135,809	!	SSEPC Audit	1,500,000
-----		!	Literacy Project	254,000,000
Sub-Total	81,827,715	!	Sub-Total	256,430,000

Total to be Deposited: 947,843,901 CFA

Total Earmarked : 645,634,755 CFA

Uncommitted : 302,209,146 CFA

Source: USAID Non-Project Assistance Office and Calculations by the author. 

presented below.

2. Local Currency Funded Activities

a. Literacy Program

The purpose of this program is to extend functional literacy activities to village-level groups in the regions of Ziguinchor, Kolda, the Fleuve, and the department of Bakel. This to be accomplished through the training of 40 supervisors from the Senegalese Cooperative Service (Direction de la Cooperation) who will in turn train and oversee an additional 400 village-level literacy trainers ("moniteurs"). In addition, funds are to be made available for mobylettes for trainers and copying of functional literacy materials.

To date, 38 supervisors have been trained and some literacy materials have been printed. A two week training session was held at the National School for Applied Economics (ENEA) in May 1985 and training of village-level trainers is to begin shortly. It is foreseen that the project will have a two-year duration.

b. Isra Fertilizer Marketing Study

During the 1984 agricultural season, researchers from ISRA's Production Systems Department and Macro-Economic Analysis Unit (BAME) carried out a comprehensive survey of fertilizer distribution in the Sine Saloum, Fleuve, and Casamance regions. Special attention was focused on the functioning of the withholding system ("retenue a la source") as a means to pre-finance purchase of inputs. This report was finished in December 1984.

A separate but related study was carried out by the USAID Agricultural Economics Unit which examined the principal constraints facing the fertilizer sector and identified and commented on several potential scenarios for fertilizer distribution in the future. This study was completed in March 1985.

A discussion of the principal findings of these two studies is contained in Section V.A.

c. Fertilizer Price Supports

As mentioned in Section III relating to implementation of the fertilizer import program, price supports were applied to all fertilizer sold in Senegal for the 1984 agricultural season (with the single exception of KCL) in an effort to encourage fertilizer consumption by Senegalese farmers and stabilize agricultural input prices. Use of local currencies for a 20 CFA per kilogram price support was agreed to by USAID and the GOS in late 1983. This represented an average reduction in fertilizer subsidies from 60% in 1983 to roughly 25% in 1984. The subsidy for NFK, DAP and TSP amounted to 260,473,000 CFA and that for urea totalled 233,460,000 CFA. Thus an overall subsidy of 493,933,000 CFA was financed by fertilizer import program local currencies.

The administrative procedure for receiving price supports differed for ICS and the SSEPC. ICS (via SENCHIM) charged its customers the subsidized price for its fertilizer. Upon presentation of receipts to USAID, reimbursement of the additional 20 CFA/kg was authorized and funds were released to SENCHIM from the Citibank escrow account. The SSEPC was simply required to deposit local currency equivalent to the total subsidized value of the 11,673 MT of urea into the escrow account. As such, no reimbursement procedure was implemented. Further discussion of the fertilizer subsidy is presented in the following Section.

d. Renovation of the Dantec Hospital

40 million CFA was used to renovate the maternity at Dantec Hospital - one of the largest hospitals in Dakar. The work was carried out over a four week period in October and November 1984. Labor was provided free of charge as a public service by the Seabees, an expert construction unit of the United States Marine Corps. Local currency was used for construction material purchases and hiring of several Senegalese construction firms. Work plans were formulated by the USAID Engineering Office and administrative support was provided by the GOS Ministry of Health.

e. SSEPC Urea Inventory and Financial Audit

In October 1984, the Arthur Andersen audit firm was contracted to do an inventory of remaining urea stocks at the SSEPC storage facility just outside of Dakar. Roughly 3000 MT of urea remained at the storage site (SODEFITEX had recently purchased 2000 MT but was not going to remove this quantity until May 1985). A small number of sacks (34 50 kg sacks) was weighed and an average weight of 48.7 kg per sack (roughly 2.6% loss) was recorded. The final report was completed in November 1984.

At the time of this evaluation, Gaye and Associates (the Senegal branch office of Arthur Andersen) was conducting a financial audit. The terms of reference of this audit included: an accounting of the exact value of urea imported by the SSEPC; a determination as to whether the terms of the GOS/SSEPC contract had been followed; and preparation of a list of SSEPC and SOGEC clients who had purchased urea from the USAID fertilizer import program. The audit began on July 5, 1985 and was to terminate ten work days later.

f. Planned Use of Uncommitted Funds

As can be seen in Table 13, 302.2 million CFA remain uncommitted. On March 18, 1985, USAID proposed to the Ministry of Plan and Cooperation that approximately 250 million CFA of this sum be used to continue fertilizer price supports for the 1985/86 agricultural season. 150 million CFA would be used for a 20 CFA/kg subsidy to fertilizer distributed by SAED, SODEVA, and SOMIVAC/SODAGRI. Fertilizer distributed through the SODIFITEX cotton program and the withholding system would not receive subsidies. The remaining 100 million CFA was to finance a 40 CFA/kg price support for direct cash sales by the private sector. This was to serve as a test to gain information on Senegalese demand for fertilizer sold on a cash basis at reasonable prices. The MPC sub-

sequently approved this proposal. Activities to be financed with the remaining 52 million CFA ~~was~~ not yet been identified.
have

V. BENEFITS, LESSONS LEARNED, AND IMPLICATIONS FOR FUTURE PROGRAM DESIGN

A. Actual Versus Foreseen Benefits

1. Foreseen Benefits

The PAAD envisaged a number of benefits that would accrue to Senegal and USAID as a result of implementation of this fertilizer import program. Senegal would benefit from gradual adoption of policies in the fertilizer and cooperative sub-sectors which would result in increased productivity. Fertilizer imports would lead to increased food production, and a corresponding reduction in food imports resulting in foreign exchange savings. Local currency generations would be used in activities which would contribute to greater food self-reliance. Technical assistance studies would aid Senegalese decision-makers in the formulation of agricultural policies. Finally, fertilizer imports provided on a grant basis would represent balance of payments support totalling \$4.25 million.

USAID was to benefit by obtaining greater agricultural sector influence and expertise as a result of supplying fertilizer and local currency for reinforcing rural institutions (namely village-level producer groups and credit systems), and implementing the technical assistance studies. Provision of balance of payments support from this activity, in combination with other USAID program assistance (Economic Support Fund and PL-480 Title III), would further enhance USAID's capacity to engage in macroeconomic policy dialogue.

2. Assessment of Actual Benefits

a. Agricultural Sector Policy Change

Significant agricultural sector policy reform has occurred since efforts began to implement this program in 1983. As was mentioned in Section II, virtually all policy changes stipulated in the fertilizer import program grant agreement were fulfilled.

In April 1984, the GOS announced a New Agricultural Policy which identified a number of significant reforms which were to be implemented. These reforms were in the areas of streamlining of parastatals, liberalization of input and production marketing channels, strengthened village level producer groups, provision of credit, and raising of producer prices.

Since enunciation of the New Agricultural Policy, a number of these reforms have been enacted. Among the most important: SONAR and the New Lands Agency (STN) were abolished in early 1985; SODEVA staffing levels have been cut by 55%; subsidies to the peanut oil-crushing firms have been reduced; the withholding system was abolished in April 1985; SAED signed a performance contract in December 1984 which called for transfer of commercial operations to farmers and private sector farm service companies; and across-the-board producer price increases have been authorized.

While it would be presumptuous to state that this array of policy reform directly resulted from this relatively small fertilizer import program, it is justified to say that this program facilitated policy change and greatly increased USAID's influence in the fertilizer sub-sector.

It is fair to say that USAID is now the lead donor in advocating and tracking policy change in the area of fertilizer distribution and this is a direct result of the fertilizer import program. Two factors are responsible for this: implementation of the program obliged USAID personnel to enter into contact with GOS officials and private fertilizer distributors and this increased USAID's influence and knowledge of the sub-sector; and the collaborative effort between ISRA and USAID on the local currency-funded fertilizer marketing studies increased USAID's expertise (and ISRA's) in this complex area⁽⁵⁾. Without the fertilizer import program, none of this would have occurred.

The fertilizer marketing study found the following: the withholding system was riddled with problems that would probably recur as long as the system was in place; if a system of cash sales were to be established, farmers would prefer fertilizer to be available at the time of marketing of crops, and the timing of fertilizer distribution was of vital importance. This study and the related USAID study on proposals for private sector organization in fertilizer distribution provided USAID and other donors with concrete evidence on the mal-functioning of the withholding system and was partly responsible for the GOS decision to abolish the withholding system and move to greater reliance on the private sector for fertilizer and seed distribution in the coming years.

The USAID Agricultural Economics Unit is continuing to track progress on privatization of fertilizer marketing channels, use and sales of fertilizer, and effects of price supports. With the aid of PL-480 Title III funds, ISRA is currently engaged in research on cooperative and village-level organization of fertilizer distribution and the economic feasibility of fertilizer use in different agro-climatic zones of Senegal.

b. Increased Fertilizer Use

The PAAD foresaw that implementation of the fertilizer import program would lead to increased use of fertilizer by Senegalese farmers. The New Agricultural Policy set a fertilizer consumption goal of 40,000 MT for 1984/85 and a 1985/86 goal of 70,000 MT.

(5) ISRA/BAME "A Field Study of Fertilizer Distribution and Use in Senegal, 1984: Final Report" December 1984 and USAID/Senegal "Le Marche de l'Engrais au Senegal: Propositions d'Organisation", March 1985.

(6) Mr. Dallet of the SSEPC estimated 1984 consumption to be in the 25-30,000 MT range.

Table 14 presents fertilizer distribution and subsidies since 1975. Figures on quantities distributed through the 1983/84 season are for the most part reliable. Whereas the 1984/85 subsidy figure is reliable, the official GOS figure of 39,200 MT of fertilizer distributed is probably not (6). The SSEPC and SENCHIM recorded sales of only 23,791.65 MT of urea, NPK, DAP, and TSP in 1984. At least the 2000 MT of urea sold to SODIFITEX was not to be used until 1985. If one adds KCL consumption (roughly 2000 MT/year), holdover stocks from 1983 and minor sales by other suppliers, it would be difficult to believe that consumption could have totalled as much as 39,200 MT.

The 1985/86 consumption figure is a projection and the actual subsidy would be calculated as a function of fertilizer consumed. While it would be tempting to state that fertilizer consumption rose significantly in 1984/85, the statistical data is not yet reliable enough to make such a claim with any certainty. However there is solid evidence to conclude that fertilizer consumption at least held steady with 1983 levels while subsidies were cut by more than two thirds. This is no small achievement when one considers that factory gate fertilizer prices rose an average of 30 CFA/kg to the farmer with the lifting of subsidies. Greater availability of fertilizer as a result of the AID import program was certainly a major factor in at least maintaining, and perhaps increasing, consumption levels in the face of significant consumer price hikes.

While tentatively concluding that more fertilizer was made available than would otherwise have been the case without the import program, the question of whether greater productivity resulted is a separate issue. The fertilizer marketing study found that much of the fertilizer arrived too late to be of much use to farmers in 1984. Thus, while one can perhaps conclude that the USAID program resulted in greater fertilizer availability, the organizational problems associated with the withholding system and the financial problems of the parastatals impeded this increased availability from translating into greater agricultural productivity in 1984. However fertilizer that was not used in 1984 will be used this year and productivity increases may result.

c. Balance of Payments Support

The FAAD foresaw that importation of fertilizer on grant terms would directly generate 14.25 million in balance of payments support. Moreover, indirect savings of foreign exchange would occur as greater agricultural productivity would result in increased cereals production with a corresponding decrease in food imports.

Although balance of payments support did directly result from this import program, the figure of 14.25 million is inflated. When one discounts the subsidy to the US shipping industry (\$1,377,000) and a compensating differential for sulfur (\$75,000) the CIF price that importers would have actually been obliged to pay for equivalent quantities of urea and sulfur is only \$2,791,000 or approximately 66% of the amount identified in the FAAD.

(6) Mr. Dallo... .

Table 14: Senegalese Fertilizer Consumption and Subsidies: 1975/76-1985-86

Agricultural Year	Fertilizer Distributed (metric tons)	Amount of Subsidies (Millions of CFA)
75/76	105,365	4,906.4
76/77	116,317	3,827.8
77/78	74,573	2,143.2
78/79	110,540	2,811.5
79/80	57,848	1,679.1
80/81	102,351	4,028.5
81/82	51,120	3,349.6
82/83	38,700	3,246.6
83/84	21,359	1,780.1
84/85 (est.)	39,200 (a)	493.9 (b)
85/86 (est.)	27,500	250.0 (b)

(a) From a report by the Ministry of Rural Development. It should be noted that unofficial estimates are in the 25-30,000 MT range.

(b) Financed by local currency proceeds of the AID fertilizer import program.

Source: Excerpted from the Senegal Agricultural Policy Analysis, Abt Associates, April 1985, with modifications from the USAID USAID Agricultural Economics Unit.

As for indirect foreign exchange savings, we have seen that greater agricultural productivity probably did not occur due to late distribution of fertilizer, so it would be hard to make a case for the import program having had an effect in this area.

d. Local Currency Use and Technical Assistance

It would be difficult to accurately measure the benefits resulting from a number of the local currency and technical assistance activities as some of them have only just begun to be implemented or expected benefits are long-term in nature.

Those activities whose short-term effects are most immediately visible happen to be the same activities which are most clearly related to the fertilizer sub-sector - namely consumer price supports for domestically-sold fertilizer and the fertilizer studies.

Application of the price supports almost certainly led to some increase in quantity demanded, if for no other reason than that SONAR and several of the RDAs had fixed sums of money to work with, and applying a price support enabled them to purchase more fertilizer than would have been the case if they had been forced to pay the full price. Some increase in effective demand may also have resulted from lower consumer prices, but there is really no accurate way to measure this.

As has been previously mentioned, the ISRA and USAID studies provided concrete evidence of the failings of the withholding system and contributed directly to the policy dialogue on fertilizer sub-sector reorganization.

Concerning activities such as the agricultural sector assessment and the literacy program, it is perhaps too early to gauge their impact. The agricultural sector assessment has only recently been finalized in English and French, and to the extent that it increases GOS, AID and other donor appreciation of Senegal's agricultural sector constraints and leads to appropriate remedies, it can be viewed as beneficial. Of course, such benefits are very difficult to isolate and quantify. The literacy program has not yet begun to train villagers so it would be premature to attempt any assessment of its benefits.

Finally, one local currency activity - the Dantec Hospital renovations - while efficiently implemented, is difficult to justify as development aid to the agricultural sector.

B. Lessons Learned

Another type of benefit which may result concerns lessons learned by those responsible for design, implementation, and evaluation of a program. This is especially true for programs which are among the first of their kind which is the case with the Senegal fertilizer import program. These lessons can be of value to those charged with design of future programs of a similar nature or to decision makers who need information on the effects of existing policies.

This section will identify and discuss a number of the most important lessons learned as a result of this program.

1. Privatization and the lifting of subsidies is best implemented gradually and needs to be accompanied by dialogue and research.

All those interviewed were of the firm conviction that a lifting of all price supports in 1984 would have been too abrupt a shock for the agricultural sector to bear. The long-term effects of lowered yields and declining soil fertility need to be balanced against the immediate desire to reduce public deficits. Planning of subsidy reduction schedules needs to be accompanied by research on which agro-climatic areas of Senegal can most benefit from fertilizer use.

2. Where a climate of mistrust exists between government and the private sector, donors must be willing to play a lead role.

Although the GOS is officially committed to increased privatization of agricultural input marketing, a certain mistrust still exists regarding the private sector. Likewise, the private sector is understandably cautious about entering into agreement with GOS agencies which have substantial financial difficulties. Given such a situation, USAID appears justified in taking a lead role in getting both parties to sit down and agree on how to implement this import program. This becomes even more appropriate when one takes into account that this was the first time that such a program had been attempted. Hopefully, future program implementation will be facilitated by this program as procedural details become more familiar to participants. However USAID should continue to expect some resistance and hesitancy on the part of government and private sector participants and a strong facilitating role may continue to be appropriate for some time.

3. The effectiveness of a commodity import program is closely linked to the commodities chosen for importation.

In this case, the commodity chosen was appropriate for a number of reasons.

First, a specific area was identified where policy reform was needed (the fertilizer sub-sector) and the commodity offered was obviously of interest to participants in that sub-sector. Moreover, monitoring of the program enabled USAID personnel to gain

considerable knowledge of the sub-sector and a number of its participants.

Secondly, US urea was attractive because it was competitive in world markets and the quantity offered by the USG was able to cover 100% of Senegalese urea needs for 1984. US sulfur was less competitive at the time of procurement but is generally competitive in world markets and was so at the time of program design.

Thus, choice of a relatively attractive commodity allowed USAID to gain policy leverage and expertise in the sub-sector to which the commodity was being supplied.

4. Local currency and technical assistance activities which relate closely to the relevant sub-sector are generally the most effective activities.

This should perhaps be termed a "tentative lesson learned" as it would be unfair to judge activities whose benefits are long-term in nature against those with short-term benefits. Nevertheless, technical assistance and local currency activities can play a vital role in the rational development of the sector for which policy change is targeted and it would appear that the most immediate impact from local currency activities were supplied by two activities which were most closely linked with the fertilizer sub-sector - the price support and the ISRA/USAID studies.

To the extent possible, any future commodity import program should be designed as a coherent package with dollar-funded and local currency activities directly supporting reform and strengthening of institutions related to the provision of agricultural inputs. Grant agreement language should reflect this by being more specific as to criteria for selection of local currency activities.

5. USG-sponsored commodity import programs as presently constituted, are inefficient ways of transferring balance of payments support.

As has been shown above, only 66% of funds destined for fertilizer procurement were translated into balance of payments support. This is mostly due to USG regulations which require that US bottoms be used for shipping of commodities.

Perhaps a corollary to this lesson is that the exigencies of domestic United States political practice do not always lead to policies which are consistent with what US development agencies preach abroad. In other words, there is considerable irony in the fact that while USAID used this program to advocate market liberalization and lifting of price supports for agricultural imports, USAID was also forced to earmark nearly one third of the Official Development Assistance funds for the subsidization of the American shipping industry.

If the United States Government wishes to continue to take the lead role in advocating market liberalization and economic efficiency in developing nations, its credibility would be enhanced

by modifying sections of the Foreign Assistance Act which are in direct contradiction to the policies that AID desires recipient governments to implement.

6. USAID has little formal leverage to directly force private importers to make deposits to the local currency account according to deposit schedules stipulated in the grant agreement.

As mentioned in section III.C. USAID's only legal leverage is with the recipient government with whom it enters into a grant agreement. USAID can only pressure the recipient government to meet the local currency deposit requirement. The recipient government has the choice of either pressuring the importer to make the necessary deposits or meeting the deposit requirements with funds from its own treasury.

The best solution to this problem is for the GOS and USG to jointly agree on reliable importers and for the importers and the GOS to then make realistic assessments of actual demand. If this occurs, in principle the importer should not experience cash flow problems as was the case with the SSEPC in this program.

C. Implications for Future Program Design

1. Constraints to be addressed

Serious constraints exist to a broad-based privatization of fertilizer distribution and any future multi-year fertilizer import program must address them in some way.

First and foremost, weak effective demand is currently the most serious constraint to greater private participation in fertilizer marketing in Senegal. Although many farmers are convinced that fertilizer use is beneficial, years of government credit programs and heavy subsidies have conditioned most farmers not to use their own cash or seek informal credit for acquiring agricultural inputs. Thus, not only increases in rural income are in order, but also a changing of mentalities is required.

A lack of working capital and access to credit is a second important constraint to Senegalese firms participating in fertilizer distribution.

A third constraint concerns the fact that few if any Senegalese firms have sufficient experience in agricultural input supply to small farmers. Since independence this has been the exclusive domain of the government. The acquisition of expertise and building of private distribution networks may take years to develop. This lack of experience, in combination with the weak effective demand which exists at present for fertilizer make these firms unattractive risks for commercial bank loans.

A fourth constraint relates to the lack of up-to-date technical packages concerning fertilizer applications which are relevant to small farmers. Extension agencies continue to counsel farmers to apply amounts of fertilizer which reflect the higher rainfall patterns of the mid-1970s and lower fertilizer prices of that period. While ISRA has implemented a limited amount of on-farm research which has resulted in dosage recommendations which better reflect the realities of the 1980's, no extension agency has yet acted on those recommendations. Continued research is needed to determine which zones Senegal are most economically attractive for fertilizer use and donors must continue to insist on greater collaboration between research and extension workers so that the results of research do not go ignored.

A final major constraint relates to a lack of reliable and up-to-date agricultural statistics. It often takes as long as two years to obtain reasonably firm statistics on input distribution and yields. This makes it very difficult for government decision makers and donor agencies to reach conclusions about the effects of policy changes within a reasonable timeframe. As was mentioned earlier, it is not really possible to make any responsible judgment as to the effects of this import program on fertilizer use as figures for 1984 are not yet dependable.

In the future, USAID could attempt to address these constraints through dollar and local currency-funded activities linked to a multiyear fertilizer import program or activities linked

to bilateral projects. Priority activities are: agro-economic research on appropriate fertilizer applications in different regions of Senegal (in collaboration with extension agencies) which take into account the economic and climatic realities of the 1980's; continued research on alternative scenarios of organization of private agricultural input distribution in rural areas; and judicious application of price supports in areas where fertilizer use is deemed beneficial and potential exists to stimulate demand through slightly lowering prices.

Other possible activities are: development of improved agricultural statistics gathering capability; small pilot programs for extending credit and training to small rural businesses engaged in agricultural input marketing, possibly as a component of the future Agricultural Production Support project (685-0269) or of the current FVO Community Enterprise Development project (685-0260); and promotion of fertilizer use on rural radio.

Formulation of the actual composition of activities related to stimulating participation in fertilizer marketing and demand are of course the responsibility of project design teams. What is important to note here is that the effectiveness of future fertilizer import programs (or more generally agricultural input import programs) can be greatly enhanced by a well-focussed selection of accompanying dollar-funded and local currency activities.

2. Competition

Competition in fertilizer importation and distribution needs to be further encouraged. This can be achieved in a number of ways.

Donors should discourage the GOS from taking protectionist measures in favor of ICS. Specifically, ICS has requested that the GOS prohibit importation of fertilizer products that ICS is capable of producing. Moreover ICS would like a guaranteed cut of the the domestic Senegalese market for marketing of its products. Donors such as the World Bank and the French Caisse Centrale (CCCE) should take lead roles in this area as they have contributed substantial sums to ICS' long-term financing.

The issue of encouraging competition in urea importation in the context of an AID-sponsored commodity import program is more complicated. If urea is imported in the future on the same scale as in 1984, the importer(s) must be able to obtain substantial amounts of commercial bank credit, have sufficient storage capacity, and also have sufficient expertise and market information to realistically determine potential demand. At present, the only importer able to meet all of these requirements is the SSEPC and it would be difficult to envisage future programs without the SSEPC in a lead role as importer.

USAID and the GOS should investigate the possibility of forming a consortium of urea importers with the SSEPC as a leading member. This consortium would constitute a single legal entity with which American exporters and the GOS would contract. Membership in such a consortium would be contingent on the ability of firms to

secure a line of commercial credit; a requirement that each participating firm had storage capacity commensurate with their respective import volumes; and having had some previous experience in fertilizer importation. USAID should attempt to monitor the performance of firms which have been given import contracts by the GOS for this year in order to get a better idea of their capabilities.

3. Audits

Two independent investigations of the SSEFC were done in the course of the fertilizer import program. The first was an inventory of urea stock at the SSEFC storage facility and the second was a comprehensive financial audit of SSEFC urea accounts. Investigations such as these have the advantages of being quick, relatively inexpensive, and independent. As such, they can be effective tools for monitoring importer performance and should be incorporated into future import programs as a local currency activity. Results should quickly be reviewed by Local Currency Management Committee members and importers, and appropriate remedial actions should be taken if necessary. Knowledge that audits are to occur may serve to effectively deter importers from pursuing questionable lines of conduct.

4. Commodity Mix and Timing

As was pointed out in Section III B, inclusion of sulfur in future import programs may not be possible. USAID should investigate other products (such as ammonia) or consider a program with urea as the sole commodity imported.

Timing of GOS/importer contract negotiations, procurement, and delivery are of critical importance to program success. If possible, the implementation calendar should be advanced so that fertilizer arrives at the Dakar port no later than mid-February. To the extent possible, this entire process should take place in a relatively stable policy environment. Future fertilizer subsidy levels should be known in advance of contract negotiations to facilitate estimation of effective demand.

D. Conclusion

A final lesson learned might be that "you can not get everything done that you would like to with a one year commodity import program". The fertilizer import programs achievements should be viewed within this context. Although this may seem obvious, bilateral and international development agency patience is not always in abundant supply. Concerning the desire for privatization, it is often assumed that wiping out the heavy hand of government will automatically result in greater efficiency in resource allocation and a private sector will readily present itself to fill the vacuum created. In countries like Senegal, where the private sector is relatively inexperienced in providing agricultural inputs to small farmers and where a twenty-year legacy of cheap credit and heavily subsidized inputs exists, the reality is far more complex and this program has contributed to a greater awareness of those complexities. In order to create a favorable policy climate whose benefits will

reach the small farmer (and the small businessman), a multi-year effort which addresses the constraints discussed earlier is called for. It is clear that the GOS can no longer bear the financial burden of past agricultural policy and the transfer of certain responsibilities in that sector to private concerns is inevitable and in progress. Donors such as USAID have a role to play in facilitating as smooth a transition as possible. Programs such as the 1984 fertilizer import program appear to be effective ways of providing badly needed resources while simultaneously building the expertise required to engage in meaningful policy dialogue.

ANNEX 1: SCOPE OF WORK

A. Objective

To evaluate the impact and effectiveness of the Agriculture Development Assistance Project (ADA) with special regard to: a) privatization of fertilizer sales and distribution in Senegal in 1984; b) GOS performance with regard to agreed upon policy changes.

B. Scope of Work

The contractor will assume prime responsibility for conduction of an evaluation of the Agricultural Development Assistance Program (FAAD 685-0249) with the collaboration of USAID and GOS staff. The evaluation will examine whether the objectives as stated in the Program Assistance Approval Document (FAAD) have been achieved.

The evaluation will generally address the targeted privatization of the fertilizer sales and distribution sector in 1984 with specific emphasis upon the following:

1. Constraints in implementation of the Commodity Import Program
 - a. Price constraints;
 - b. Shipping constraints;
 - c. Sales constraints;
2. Contractual issues among GOS and private importers with reference to the role of banking sector and USAID;
3. Performance of the private sector in sales and distribution of fertilizer;
4. GOS progress with regard to agreed upon policy reform as covenants to financing of this program. These reforms include access to credit, reduction of fertilizer subsidies, re-organization of the fertilizer marketing sector, reduction of CPSP deficits and reduction of outstanding debt to the banking sector for seasonal agricultural credits.

ANNEX 2: PERSONS CONTACTED

Denis Fizeau - ICS
John Balis - USAID/ADO
Mr. Barry - Gaye and Associates
Mr. Camara - MDR
Antoine Chaibar - Chemicals International
Seydou Cisse - USAID/PRM
Dr. Eric Crawford - ISRA
Francois Dallet - SSEPC
Jacqueline Damon - USAID/ECU
Jean Francois Damon - USAID/ADO
Macadou Dieng - SENCHIM
Moussa Diop - Gaye and Associates
Gabriel Fall - CITIBANK
Dr. Josh Posner - ISRA
Don Rassekh - USAID/ADO/LC
Norman Rifkin - USAID/ADO/LC
Ndeve Fatou Rigoulot - USAID/PDO
Leopold Sarr - ISRA
Joel Schlesinger - USAID/PDO
Abdoukarim Sidibe - MDR