200793 (4)

PD-AAB-206-A1

AID 1025-1 (7-71) (FACE SHEET)

NONCAPITAL PROJECT PAPER (PROP)

I. PROJECT IDENTIFICATION

52p.

1. PROJECT TITLE

Rice/Maize Production

APPENDIX ATTACHED [X] YES [ ] NO

2. PROJECT NO. (M.O. 1095.2) 620-11-130-798

3. RECIPIENT (specify)

[X] COUNTRY Nigeria

[ ] REGIONAL _____ [ ] INTERREGIONAL _____

4. LIFE OF PROJECT

BEGINS FY 71

ENDS FY 75

5. SUBMISSION

[ ] ORIGINAL

[X] REV. NO. 3/8/73 DATE

CONTR. ~~XXXX~~ NO. Afr 836

II. FUNDING ($000) AND MAN MONTHS (MM) REQUIREMENTS

A. FUNDING BY FISCAL YEAR	B. TOTAL $	C. PERSONNEL (1) $	C. PERSONNEL (2) MM	D. PARTICIPANTS (1) $	D. PARTICIPANTS (2) MM	E. COMMODITIES $	F. OTHER COSTS $	G. PASA/CONTR. (1) $	G. PASA/CONTR. (2) MM	H. LOCAL EXCHANGE CURRENCY RATE: $ US ____ (U.S. OWNED) (1) U.S. GRANT LOAN	(2) COOP COUNTRY (A) JOINT	(2) COOP COUNTRY (B) BUDGET
1. PRIOR THRU ACTUAL FY	343	278	61	12	18	22	31	-	-			($ equiv.)
2. OPRN FY 73	272	256	56	8	12	-	8	83	-			
3. BUDGET FY 74	1,352	1,064	230	132	196	25	131	1,308	218			23,000*
4. BUDGET +1 FY 75	576	455	99	52	75	15	54	532	87			
5. BUDGET +2 FY	-	-	-	-	-	-	-	-	-			
6. BUDGET +3 FY	-	-	-	-	-	-	-	-	-			
7. ALL SUBS FY	-	-	-	-	-	-	-	-	-			
8. GRAND TOTAL	2,543	2,053	446	204	301	62	224	1,923	305			

9. OTHER DONOR CONTRIBUTIONS *

(A) NAME OF DONOR	(B) KIND OF GOODS/SERVICES	(C) AMOUNT
N.A.	N.A.	N.A.

III. ORIGINATING OFFICE CLEARANCE

1. DRAFTER	TITLE	DATE
2. CLEARANCE OFFICER	TITLE	DATE

IV. PROJECT AUTHORIZATION

CONDITIONS OF APPROVAL

This PROP embodies a long-term effort in planning food production activities in Nigeria which AID agrees to finance for two years at the indicated levels. Beyond that two-year period it is expected that new funding would be provided through (1) A Sector Loan, (2) The Bloc Grant or, (3) Nigeria's own resources.

Specific determination of the method for additional funding would be contingent on an evaluation of the project prior to the end of the two-year period.

2. CLEARANCES

BUR/OFF.	SIGNATURE	DATE	BUR/OFF.	SIGNATURE	DATE
	2BH	5/14/73			

3. APPROVAL AAs OR OFFICE DIRECTORS

SIGNATURE _____ DATE _____

TITLE _____

4. APPROVAL A/AID (See M.O. 1025.1 VI C)

SIGNATURE [signature] DATE MAY 25 1973

TITLE ADMINISTRATOR, AGENCY FOR INTERNATIONAL DEVELOPMENT

CONTENT OF PROP PER M.O. 1025.1

PROJECT TITLE: FOOD CROP PRODUCTION

PROJECT NUMBER 620-11-130-798

I. Introduction

For the past two years USAID has been cooperating with the Western State in a limited scale project for introducing improved rice and maize production technology. A pilot program was developed for each crop which included (1) designing improved packages of technology; (2) organizing a structure for coordinating advisory services through district and circle level field staff, (3) establishing or improving supporting services, such as machinery hire units, fertilizer distribution services and seed production and processing facilities, and (4) creating linkages with private and public agencies for improved marketing and credit arrangements.

Certain deficiencies in the package of technical inputs and inadequacies in supporting services were identified as part of the evaluation process during the first year of the pilot programs. The packages were improved for the second year programs (yields per unit of land increased significantly). Credit and marketing arrangements also showed improvement and innovation (e.g., a private bank loaned a public credit corporation monies to sub-loan to participating farmers). Constraints in distribution of fertilizer, production of seeds/provision of mechanization services prompted major changes in attitudes and policies toward mobilizing the private sector to provide such services. Small starts were made toward having the private sector produce seed and to provide tractor-hire services.

The two year pilot programs have been a useful experience in that (1) a number of constraints at the state level have been identified and were resolved in some cases at the present scale of operation; (2) Nigerian farmers demonstrated a willingness to adopt new technology, and (3) some guidelines for future programs now exist and more will come out of the intensive evaluation now being carried out by the State planning unit. The program indicated the

need for a long range view in introducing new technology, clarified at least some of the increasingly complex problems that will emerge as larger scale production programs are undertaken, and established an appreciation for the need to carefully plan larger scale programs using a comprehensive systems approach.

Over the past few years the Federal Military Government (FMG) has become increasingly concerned about stagnant agricultural production, declining agricultural exports, and rising food prices. The FMG is undertaking several major programs to deal with these problems. One is a National Accelerated Food Production Program (NAFPP), which will be a long range effort related to projected rapid increases in population and affecting the poorer segments of the Nigerian society, both producers and consumers.

U.S. excellence in producing most of the crops which will be involved in Nigeria's food production program is recognized, as is AID's success in starting to transfer "Green Revolution" technology to the developing world. The Federal Ministry of Agriculture and Natural Resources (FMANR) has contemplated USAID assistance to their food production program for some time and recently formulated a specific request for assistance. In view of the above, it was decided to modify the rice-maize project (1) to make it national in scope, (2) broader in terms of including other important food crops, and (3) specifically tied to assisting the FMANR plan and carry out the long range NAFPP. In effect, the project would be the major emphasis of U.S. assistance effort in Nigeria over the next two to three years, and if successful would constitute the payoff from previous AID institutional building efforts, both bilateral and regional.

A. Background

Food production has remained static in Nigeria in contrast to major improvements in the developed countries during the past four decades and significant recent advances in several "Green Revolution" countries. Consequently, food prices have risen relative to world levels and an unduly large proportion of Nigeria's resources are tied up producing her own food, which is a serious constraint on overall economic growth. Despite relatively high prices, the very large proportion of the population involved in food production realize pitifully low incomes (incomes below Nigeria's U.S. $97 per capita level) because of low productivity.

Yields per acre are low because farmers use unimproved seed varieties having low production potentials and use very little of yield-increasing inputs such as fertilizers and plant protection materials. Output per worker is further restricted by the lack of animal or mechanical power and the almost complete reliance on human power and crude hand tools.

The basic remedy for the problems of high food prices and low farm income is to increase productivity in food production and improve efficiency in marketing of food as well as in distribution of improved production inputs. Production technologies are now available which give very substantial increase over conventional practices. Further significant improvements are on the research horizon.

Nigerian officials have explicitly recognized in the National Development Plan that the country faces a long term problem in meeting food requirements, lessening costs and improving quality of diets. They have also recognized that the food sector has been neglected, with research and services focused mainly on export crops. In addition, they recognize that merely increasing the amount of land devoted to production of food crops would tend to take land out of export production and would not have the result of improving farm incomes and reducing food prices.

Against this background, the FMG has taken, or proposes to take, the following steps

1. A National Agricultural Development Seminar (NADS) was held late in July-early August 1971. Preparations for this seminar extended over a period of several months, involving 23 ad hoc committees, a major one concerned food and forage crops. The report of this committee projected some rather dire consequences for the country unless technological advances were developed and implemented.

2. The FMG assembled a group of seven Federal and State Nigerian agricultural leaders who in September 1971 toured several countries in which the Green Revolution has been successful, as well as leaging research institutions around the world.

3. Out of the world tour emerged a request from the FMG for a team of technical international experts to advise Nigeria on a long term food production program. This team, under the leadership of CIMMYT, developed a

detailed program for producing and/or assembling and disseminating new knowledge which would permit a substantial improvement in farm productivity. It presented a system for telescoping the time required, from creation of a new variety to its adaptation, testing and release for widespread adoption, from the usual 8-10 years to a mere three or four years. (See Appendix I for a summary of the CIMMYT recommendations and Appendix II for the seed introduction plan.) It also suggested in outline form some of the changes needed in various supporting services.

4. Meanwhile, the FMANR has supported a sustained effort to synthesize the deliberations at the NADS and to articulate this consensus in the sections of the "National Agricultural Perspective Plan, 1973-85" dealing with food production.

5. Six Nigerians were dispatched for training in mid 1972 in accordance with the CIMMYT team's proposals and as they return are being assigned to key Federal posts in the NAFPP. One has been appointed Executive Secretary and the other five will be appointed to lead National Programs on individual crops.

6. To effectively coordinate its food and other programs with the States, the FMANR has appointed one representative to each State Ministry of Agriculture and Natural Resources. In this way the sensitivities of State Governments to general farm population needs and opportunities can be transmitted quickly to the Federal level and, on the other hand, State programs can be modified rapidly to accommodate Federal Government policies.

7. FMANR has budgeted the Nigerian equivalent of $23 million to implement the first five years of the NAFPP beginning April 1, 1973. These funds will be used primarily for planning and liaison arrangements and to establish a research/extension network. The FMANR contemplates that additional Federal funds would be used to make transfers to the States to support specific production programs. Such funds would be derived from expanding oil revenues and would be allocated to the States as part of the national planning process.

8. The FMANR has planned that the NAFPP effort would involve taking advantage of the substantial progress which has already been made in developing some of the essential institutions and programs needed to support and

sustain modernization of the food producing sector. The FMANR specifically contemplates establishing appropriate linkages and working arrangements with institutions and programs such as (a) international crop research institutes, (b) Nigerian university research and extension liaison services, and (c) existing State extension services and production programs. Highlights of the institutional base which will be integrated into FMANR's efforts under the NAFPP program as well as previous AID involvement are as follows

a. International Efforts

The various AID supported international crop research institutes, particularly IRRI, CIMMYT and IITA (located in Ibadan, Nigeria) have made available vastly improved seed varieties and continue to generate improvement in varieties and cultural practices which are the foundation for modernization. Also, the AID supported Regional Major Cereals program carries out most of its work in Nigeria and has produced several adapted, high-yielding varieties of maize and sorghum that are well suited to the NAFPP efforts.

b. Nigerian Universities

Nigerian universities are now starting to play crucial roles in training personnel for staffing agricultural development programs and in doing the adaptive research necessary for defining the appropriate combinations of varieties and cultivation practices for different ecological areas. Liaison arrangements have also developed with the States for conveying the results of research to the extension services of the individual States and for getting feed-back from the field on problems of implementation. The USAID has programs for development of the agriculture faculties, and agriculture research and extension training programs of Ahmadu Bello University and the University of Ife. Other universities have received various types of U. S. assistance in the past.

c. State Extension Programs

USAID, over a period of several years, provided assistance to the former Regions, and later to the new States, in developing

extension organizations. Recently most of the States have adopted an extension approach involving bundles of complementary practices. A net work of extension workers for demonstrating and propagating packages of improvements now exists in most of the States.

d. Agricultural Credit

Western State has a State Agricultural Credit Corporation which has developed effective arrangements for providing credit to groups of small farmers. It could serve as a useful model for other states. A Federal Agricultural Credit Bank has recently been established. The IBRD and UNDP are assisting in organizing its program and operating procedures.

e. Plant Introduction and Quarantine

Modern facilities and improved procedures for screening of plant materials from abroad are being established at Moor Plantation, Ibadan. UNDP/FAO is providing technical assistance in expanding this facility to handle the large volume of plant breeding materials needed for development of improved varieties necessary for sound crop improvement program.

f. State Production Programs

1. Western State

The pilot Rice/Maize project in Western State evolved as a more comprehensive and more integrated approach to introduction of improved technology, taking account of the need for development and coordination of supporting services, such as input distribution, marketing and credit. In the second year of operation a quite successful effort was made to integrate the USAID supported Agriculture planning project and the Agricultural credit project with the Rice/Maize project. The planning unit assisted in

planning the program and in evaluating the results. The credit agency worked out credit arrangements suitable for groups of farmers cooperating in the Rice/Maize program. The Rice/Maize program in Western State has provided that State with a substantial base for an expanded statewide program. Largely because of this the FMANR plans to initiate the National programs for Rice and Maize in Western State.

2. Kano State

The Sorghum/Millet program will be initiated in Kano State, which was selected because it is the most intensively cultivated State in the Federation and because that State has had good, relevant experience in successfully introducing improved varieties and practices for ground nut production. USAID has also assisted Kano State in developing an effective extension organization. In addition, the State has made good progress in defining a coherent agricultural policy and planning framework.

B. Recommendation

The USAID concludes on the basis of the above (1) that Nigeria is willing to make a substantial effort to carry out its National Accelerated Food Production Program and (2) that it is definitely in our interest to participate as requested by the FMANR because the potential pay off in terms of quality of life and equity considerations is extraordinarily high, with the prospects for success considerably enhanced by the program linkages to other AID supported projects. The USAID recommends that the request for AID assistance to support the program be considered within the above framework and that the PROP for a revised project be approved on the basis of the presentation which follows.

II. Sector Goals

A. Statement of Goal

Nigeria's goals for the food sector are closely related to the desire to improve the well-being of its people, both urban

and rural. The ultimate objective is to increase the productivity of the Nigerian farmer so that food supplies will increase with population and meet expanding total demands at prices more in line with world levels. As productivity increases, less land and labor resources will be needed for food production thus freeing resources for other productive ends, rural incomes will rise and there will be improvements in nutritional levels.

To achieve these goals, Nigeria has resolved to introduce a new technology involving all the ingredients of the "Green Revolution": high yielding seeds, increased fertilizer and other inputs, improved cultural practices and, where feasible, better water control. The process will also involve providing the farmers with the necessary supporting services such as credit, marketing, transport and storage as well as a wide spectrum of public infrastructure. All of these will require large public investments.

B. Measurement of Goal Achievement

Achievement can be measured by Nigeria's ability to meet increased demand for the specific food crops concerned, price levels, and studies related to productivity, farm income and diet.

C. Basic Assumptions for Goal Achievement

The essential condition for introducing the new technology and achieving increased productivity is a willingness on the part of the Nigerian governments, both State and Federal, to take certain actions. Government authorities must allocate the necessary resources and talent to develop and disseminate a viable new technology applicable to Nigeria and must promulgate policies to assure that the economic environment in which the small farmer operates is conducive to his adopting that technology.

Nigerian farmers have demonstrated in several instances that if they are presented with a technology that is workable and sufficiently remunerative, and if the necessary supporting services are available, they will adopt that technology and increase their productivity.

Nigeria should be able to finance the bulk of the basic investments involved from growing domestic resources and through borrowing from international and bilateral lending institutions.

III. Project Purpose

A. Statement of Project Purpose

1. Phase I

This project will be undertaken in two phases. The purpose of Phase I will be to formulate a comprehensive national program for accelerated food production. This program will involve (1) the preparation of a national plan, (2) related state production plans, and (3) enhancing the Nigerian planning capability in food production at both levels. An integrated systems approach (see Appendix IV for some of the considerations involved in the systems approach) will be used in the program planning effort and will provide for the development and dissemination of new technologies for the major crops and for the availability of adequate physical inputs, credit, marketing and other supporting services required to make the new technology effective.

Phase I also involves preparing state plans that mesh with the national program and contain all the provisions necessary for carrying it out. As, in the present Nigerian context, the state governments are the action units, the state plans will largely determine whether or not the national program will succeed. Initially, state planning assistance will focus on Western and Kano States where the Federal Ministry in cooperation with the states will initiate limited production programs.

2. Phase II

The purpose of Phase II will be to organize and implement production programs for each of the selected crops. This will involve (1) establishing the national research/extension/seed multiplication network for each crop as explicitly described in the CIMMYT report, (2) developing supporting infrastructure, including public and private institutions and facilities for marketing, credit, distribution of inputs and stabilization of prices, for example, (3) initiating the Federal/State food production programs in Western and Kano States, (which in the case of Western State will constitute primarily an expansion of their Rice/Maize program), and (4) initiating Federal/State programs in other states at a pace consistent with Phase I efforts to plan and develop programs. The effort will also involve enhancement of implementation capability at both levels.

B. Conditions Expected at End of Project

This is essentially a five year project for which AID will provide two and one-half years of funding. Both phases of this project will begin concurrently. Phase I, the planning phase, will cover a two year period while implementation of Phase II, the production phase, will require the full five year period.

1. Phase I

At the end of Phase I a comprehensive national food production program will have been articulated. It will specify personnel requirements with clear terms of reference and training requirements; it will give due consideration to input requirements and essential governmental policy and administrative adjustments. In addition, it is expected that several comprehensive integrated state plans will have been finalized with some (Western State and Kano State) well along with implementation.

The planning process, however, will not have been entirely finished. The national program will require adjustments as additional data become available and response factors of various action agents become better established. Also, not all States will have formulated their plans. The less advanced

states will clearly not be able to assemble all the necessary agronomic, economic, sociological and administrative information required to mold a meaningful and implementable plan. Enough planning will have been done, however, to give the FMG and the State governments a clear idea of what needs to be done to assure a successful accelerated food production program and the FMANR will have acquired the planning capability to effectively assist the remaining states, patterned after those states for which implementable plans have been completed.

2. Phase II

The basic research/extension network will be installed within the first two years of the project and will be in full operation by the end of the project with capability of continuing to develop and introduce new technology. Some of the new technology will have already been developed, tested and disseminated and widely adopted for each of the major crops. Some of these new technologies will have more dramatic results than others since some crops will require considerably more research, and new technologies will be harder to adapt to some parts of the country than to others.

Also, public and private infrastructure sectors serving the small farmer will be effectively modified and expanded to insure adequate credit, access to fertilizers and other inputs and efficient and orderly marketing arrangements. Here again, progress in ironing out implementation problems will be uneven among states. Production programs should be underway for at least one of the specific crops in almost all of the states.

In terms of sector goals, productivity will be on the increase, and production costs and consumer prices will have begun to adjust downward. Definitive micro and macro studies will have been completed which confirm the existence of the foregoing conditions and point the way to further effective development in the sector, including the promotion of appropriate geographical specialization. Studies will also have been carried out to quantify the effects of the programs on farm income and diet.

C. Basic Assumptions.

1. Phase I

The prime condition for achieving the purposes of Phase I is a firm commitment by the FMG and each State to the merits of developing a comprehensive, integrated operational plan covering a program such as they presently contemplate for improving productivity in the food sector. Nigerians have voiced general approval for increased planning efforts. There are indications, that in preparing the next five year plan, soon to commence, considerably more emphasis will be given to development of complete plans and project/programs. The Federal Ministry of Finance and the Federal Ministry of Economic Development and Reconstruction are becoming more insistent on such plans as a condition for funding.

2. Phase II

It appears the FMG will give adequate emphasis to installing the research/extension network recommended by the CIMMYT team which is the nucleus of Phase II. Nigerian institutions are turning out graduates with the agricultural skills that will be required and staffing is therefore not considered a major constraint.

Success of the more comprehensive, integrated production program may hinge on the FMG's and States' acceptance of the merits of transferring commercial type activities out of their Ministries, nurturing and developing firms/individuals in the private or cooperative agri-business sector and appointing highly qualified people to positions important to the program.

Since many adjustments in policies and programs extend beyond the normal jurisdictions of Agriculture Ministries,

success will also depend on the willingness of the other Ministries concerned to cooperate with each other in order to achieve an integrated approach.

One of the most important assumptions underlying the entire project and the FMANR request for assistance is that the critical constraints are key manpower gaps in planning and implementation which must be resolved by use of foreign experts initially and toward the end of the project by Nigerian counterparts who would receive on-the-job and foreign training. If true, the assumption underscores the need for very high standards in selecting foreign experts and in monitoring their performance.

IV. Project Outputs

A. Phase I

1. A National Food Production Plan

This will include among other things:

a) Comprehensive programs for the development and distribution of new technologies for each of the major crops including all needed supporting services and infrastructure;

b) Production targets and supply/demand projections for each of the major crops;

c) Projected input requirement based on whatever data is available regarding response ratios of the various inputs;

d) Relationships between food crops and other agricultural products particularly the export crops; and

e) Policy changes with respect to price supports, input subsidies, credit institutions, and marketing that are needed to assure the successful implementation of the Plan.

f) The National Plan will also spell out Federal/State and inter-ministry coordination mechanisms and a system for evaluating the program and feeding back information to continually improve it.

2. State Food Production Plans in several States

These will include:

a) Supply/demand and price projections;

b) input requirements;

c) Provision for seed multiplication, extension services, distribution of inputs and produce, and credit facilities;

d) Appropriate policies regarding input subsidies and marketing boards, etc.

e) Relationship between the State-level program and the National Plan.

[redacted]

3. Strong Planning Capacity at National and State levels,

with personnel trained and experienced in the systems approach to integrated planning of various public and private activities involved in production and marketing of food crops.

Relevant background data on the food sector will be assembled. The amount of data will be meager but, to the extent that outside experts influence the data gathering process and increased efforts are made by the Ministries concerned, the quality/and reliability will be improved. Also, the groundwork will have been laid for future data gathering activities to become more relevant and problem oriented.

These outputs are based on the assumption that the Federal and State governments are committed to an integrated, comprehensive, long-term approach to increasing food productivity. Efforts to introduce new technologies have thus far been hampered by inadequate consideration of all the various constraints and as a consequence have often broken down at the implementation stage. Where proper planning was done and all constraints considered, as in the case of the cocoa scheme in Western State, program objectives were achieved.

B. Phase II

Phase II will have two sets of output. The first set involves setting up the structure to implement the research/extension network detailed in the CIMMYT team report. Work on this will start at the outset, be operational within two years, and largely completed by the end of the Phase five years hence. At that time three Coordination Centers will have been established and staffed up; one for rice and maize; one for wheat, sorghum and millet; and one for cassava.

The Centers will have crop specialists in charge of developing new technologies for their respective crops and 33 zonal sub-stations will have been expanded to carry out programs developed by the national crops centers. The staffs of the Coordination Centers and zonal stations will have received training at CIMMYT, IRRI and IITA. Also, work will have progressed on developing new high yielding varieties suitable for Nigeria and a system of field-trials will have been established. In addition, high yielding seeds currently available will have been multiplied and made available to farmers. The second set of outputs will be more directly related to productivity increases and will be derived from the National/State production programs.

In summary, at the end of the first two years of the project, the outputs of Phase I and the progress made on Phase II will provide Nigeria with the basic ingredients required to begin implementing the broad, long-term accelerated food production program. The project will provide for an evaluation at this time to determine whether these conditions do, in fact, prevail and any needed program adjustments will be identified.

By the end of the second year of Phase II a start will also have been made in establishing the public and private infrastructure needed for expanded and more efficient food production but the major change will occur in the last three years of the project. This would include seed inspection and certification services, input distribution, extension, credit, marketing, storage, transportation, an effective market news system, and a price stabilization program. These needs will have been identified in the planning phase but effective implementation will also require meaningful outside assistance.

It is expected that for the last three years of Phase II, advisors and consultants under this project or from other donor agencies will help set up viable public sector institutions for such services as credit, seed inspections and price and supply stabilization, and will have helped the states foster efficient systems of seed multiplication, input distribution tractor services, etc., in the private or cooperative sectors. It will be possible to better define the second set of outputs when the national program and state plans are completed and we have a better picture of what directions the FMG and State governments want to take and how far they are prepared to go. (Appendix II shows a number of programs which would probably become outputs toward the end of the project.)

A third set of outputs could be postulated which would be estimated productivity increases. This has not been done as much of the actual progress in increased productivity will not take place until after termination of this project as this will of necessity be a long range effort.

V. Project Inputs

A. USAID

The following inputs will be supplied, all via contract except project manager. (See Appendix III for project staffing and organization.)

1. Project Manager 24 man-months beginning July 1, 1973 (Direct Hire).

2. One Agricultural Economist/Water Planner 28 man-months beginning September 1, 1973.

3. Three Program Coordinators.

a) one to serve as coordinator for the Rice and Maize programs, operating out of the Maize and Rice Coordination center, Moor Plantation, Ibadan. 28 months beginning September 1, 1973.

b) one to serve as coordinator for the Sorghum/Millet and Wheat program, operating out of the coordination center at the Agricultural Research Institute, Samaru. 28 months, beginning September 1, 1973.

c) one to serve as coordinator for the Cassava program, operating from the Cassava coordination center, Umudike, 18 months beginning July 1, 1974.

4. Five Crop Specialists

One Rice production specialist. 28 man months, beginning September 1, 1973.

One Maize production specialist, 28 man months, beginning September 1, 1973.

One Sorghum/Millet production specialist, 28 man months, beginning September 1, 1973.

One Wheat production specialist. 18 man months, beginning July 1, 1974.

One Cassava production specialist, 18 man months, beginning July 1, 1974.

5. Consultancies:

It is estimated that 83 man months will be required in the planning and production areas over the two and a half year period. Skills and timing will be determined in response to the problems encountered.

a) to assist on production problems requiring higher specialized competence. The requirements depend in part on the implementation problems encountered, which cannot now be entirely anticipated, and in part on the skills of the crop specialist assigned. Some of these will be concerned with problems encountered in the technology itself, such as unanticipated disease problems. It is expected that most of them will be required to help solve problems of implementation in or organizing the various supporting services, such as the various elements of the seed industry, an input distribution system, state credit agencies and price and supply stabilization mechanisms. Phase I activities will identify more precisely the kinds of expertise required.

b) to assist in planning. This will include specialists or teams to advise on various aspects of the plan requiring specialized knowledge and experience. Some of the areas that will require special attention in planning an integrated system include mechanization, credit, transport, marketing and storage, seed multiplication, input distribution, price and supply stabilization and rural institution development. Some of these areas are being studied in connection with the Perspective Plan; it is not now known how much supplemental study is required. Some of these areas are being addressed through assistance from other donor agencies. For example, the UNDP and IBRD are assisting in development of a National Agricultural Credit Bank. UNDP/FAO is assisting in developing plans for a seed industry. The FMANR is expecting assistance from UNDP for developing plans for development of cooperatives. The requirements for consultancy services can therefore, at this time, be indicated only in a general way. USAID should be in a position to provide experts or teams in response to needs as those involved in planning identify areas for which such additional planning assistance is required. The precise timing and areas of specialization for the consultants will be determined by those developing the plans.

6. Participant training, short-term training abroad. Key staff personnel at each coordination center, each sound station and each state Ministry of Agriculture will be sent for training at one of the International Institutions. The training programs will for 6-8 months duration as follows:

8 - training in Wheat production - CIMMYT
10 - training in Sorghum/Millet production - ICRISAT
11 - training in Maize production - CIMMYT
15 - training in Rice production - IRRI
18 - training in Cassava production - probably CIAT

Total 52 participants for a total of 364 man months to begin immediately.

7. Attendance at International Conferences. Key personnel at the coordination centers will be given support for attendance at international conferences relevant to the project. A total of $20,000 is provided for this purpose.

8. Vehicles for 9 US personnel $45,000

B. U. S. Contribution by Fiscal Year for Proposed Contract

Funding: Table I shows the estimated yearly cost of the contract and rate at which the USAID expects to obligate funds.

Table I - Expenditure & Obligations Schedule

Item	FY73	FY74	FY75	FY 76
Personnel	[illegible]	466	745	282
Participants	13	75	76	20
Commodities		25	[illegible]	15
Other costs	1	57	92	35
Total expenditures	19	623	913	352
Obligations Schedule	67*	1308	532	

*Excludes $16,000 for Goodman Contract, O & M Specialist

C. Nigeria

The FMG and State Governments will commit a sizable combined staff to the project. Existing Agricultural research stations at Ibadan, Samaru, and Ilorin will be utilized for the project. Thirty three existing zonal sub-stations will be involved in the program. Also, much of the existing staff of the state Ministries of Agriculture, at headquarters as well as at district and local levels, will be associated with the program. These existing facilities will be augmented by the FMG to provide 156 additional agricultural scientists and supporting staff at the three coordination centers and thirty three zonal stations. These centers and zonal stations will be provided with additional project facilities and necessary vehicles and equipment. The FMG estimated budget for this project for 5 years, starting April, 1973 is as follows:

1. Capital costs for additional land, buildings, vehicles, tractors and machinery = $14,647,500

2. Recurrent costs
   - Project scientists and supporting staff = $ 3,750,000
   - Kits (seeds and fertilizer) 15,000
   - Fertilizer subsidies (production kits) 52,000

In addition, each state is expected to provide the services of five agricultural assistants and one agricultural superintendant for each of the crops in which it is involved. The total cost to the states is estimated at $455,000.

BEST AVAILABLE COPY

The above costs are premised on fully staffed stations at all project levels but there is no allowance for extension staff and other cadres to be provided by the states. Full project staffing is not likely to be realised even by the end of USAID's 5-year involvement. On the other hand, as more comprehensive plans are made very substantial needs will be identified for funds for development of the supporting infrastructure of credit, marketing, transport and other services which will be identified in phase I and provided for in the integrated national and state crop plans. It is quite reasonable to expect the FMG will have allocated between $40 million and $50 million by the end of the project.

VI. Rationale

A. The Problem

Food production technology in Nigeria has been nearly static, in contrast to vast strides over more than four decades in the advanced countries and substantial recent developments under the "Green Revolution" in some of the developing countries. These diverse situations have the following serious consequences for Nigeria:

1. Prices of food energy have tended to increase secularly relative to world levels thereby worsening Nigeria's competetive position in international markets (although, overall, Nigeria continues self-sufficient in food production). Prior to the recent spurt in world prices, Nigerian prices were double the U.S. farm price for coarse grains and three times the world level for rice.

2. The relatively high proportion of farmers' resources devoted to producing their own food lessens productive resources devoted to other products, especially cash generating exports or raw materials for industry.

3. With consumers spending a relatively large proportion of their incomes on food, the share of income they can direct to other domestically produced consumer items and to savings is substantially depressed.

4. In a very real sense, high food costs contribute to quality deficient diets and adversely affect the population's aggregate productivity and general welfare.

5. The prospective sharp increase in the working population of Nigeria poses a complex problem which this project could help solve. It is anticipated the total work force will increase by at least 15 million by the mid-1990s and that, at most, 4 million may find non farm employment. The planners of this project should be very careful to: 1) choose mechanization and other modernization which will be as "employment generating" as possible and 2) coordinate planning for this sector with other sectors, both agricultural and non-farm. If all workers, farm and non-farm, are required to devote less of their productive time to feeding themselves, increased purchasing power can be diverted to other products for which income elasticities are greater, thus generating economic growth, particularly in the non-farm sector.

B. Measures to Cope with above Problems:

The basic long term remedy for the problems cited is improvement of productivity in farming and of efficiency and effectiveness in marketing both foods and inputs for producing them.

Technologies are now available which, it has been shown, can economically double or triple per acre yields in Nigeria. Additional varietal improvements will be available within 2-3 years for sorghum, rice and maize. Significant varietal improvements for millet may be 3-5 years away. In the case of cassava somewhat improved varieties are now available. Research points the way to substantial increase with fertilizer applied to existing varieties, and there are good possibilities for developing adapted varieties with higher protein content.

Substantial immediate increases in productivity can be obtained by disseminating knowledge on the merits of existing varieties and recommended cultural practices and assuring availabilities to farmers of physical inputs along with public and commercial services, including ready outlets for marketable surpluses.

For the long term, a sector system must be established encompassing broader physical and biological research under Nigerian conditions for generation of relevant new technologies, improving dissemination of these knowledge advances and enhancing the performance of the public and private infrastructure to improve the economic environment in which small farmers operate.

To actually prescribe the complex program for effectively achieving the desired results will require intricate and comprehensive planning which takes account of, among other things, all relevant resources and constraints in both the public and private sectors. Some of the information for the planning must be gained by observing on-going programs (also proposed in this project) but some additional short term socio-economic research also will be needed.

C. USAID Assistance

In our judgment there is no close alternative to participation in the proposed NAFPP in terms of potential impact compared with cost. Moreover, AID should be in the best position to provide the required assistance.

1. The Agency has had much experience in different areas of the world in recent years which amply supplement the experience in increasing food productivity within the United States, extending back over several decades.

2. There will be an excellent opportunity to draw on past AID assistance in building Nigerian institutions and training people which can be directly beneficial to the assistance in food production. There are the continued USAID contractual involvements with two Universities, IITA and the Regional Major Cereals Project. There is also the recent experience with the pilot rice/maize project in Western State.

3. Other donors are focusing attention on cash (export and industrial) crops, thereby minimizing the possibilities of overlapping efforts.

4. Concentrating on food fits well within the AID guidelines for application in Nigeria, as well as world wide, with respect to improving quality and expanding quantity of foods in the face of continued population expansion.

5. The project should assist in bringing about a significant shift in income distribution toward the poorer elements in Nigerian society and some significant improvements in the quality of their diets.

6. FMAEE has requested USAID to provide the national program coordinators, who will serve in line positions for the first few years until the Nigerian counterparts have gained some experience, as well as the other experts required.

D. Other Donor Activities

The IBRD and UNDP are providing assistance in establishing a Federal Agricultural Credit Bank in Nigeria. The UNDP and FAO are providing assistance for the development of the seed industry, primarily through technical assistance for expansion and improvement of procedures for introduction of new plant breeding materials. However, aside from these activities, other donors are largely concentrating their activities in the export crops, with some involvement in livestock. The IBRD is becoming particularly heavily involved in export crops, although their approach, in some cases at least, will be on a geographic basis covering palm oil, cotton and groundnut in addition to the existing cocoa program. As these programs gain momentum, increased income will be generated, thereby expanding the demand for food products and strengthening the derived demand for resources which may be used in either food or the export cash crops. The end result is that USAID involvement in enhancing productivity in the food sector will be an excellent complement to the effort by IBRD and other donors.

8. Other Considerations

The program will help transform and modernize the food sector and shrink the proportion of resources used in it. One mark of the rate of economic progress of a country is the rate of contraction in relative volume of its resources devoted to producing her own food. In Nigeria the gap between present and new, or soon-to-be-available, improved practices is so great that there can be an absolute decline in at least the land factor in the case of coarse grains and a substantial relative decrease in over all resource use for cereals and cassava, the target items for this particular project. Since Nigeria is basically not far out of balance between production and consumption for food care will need to be taken to insure that prices decline only gradually toward export parity levels.

Price effects from increases in production, other things being equal, are several times the relative expansion in output. This arises for two reasons: First, a small proportion of normal output is marketed, so most of the increase tends to end up in the market. For example, in the case of sorghum no more than 20 percent of production is marketed. A one percent increase in production can lead to a 5 percent increase in market supplies. Second, with relatively low price elasticities, say - 0.33, the price decline is magnified. In this illustration a 1 percent increase in production could well lead to a 15 percent drop in price. Clearly, it will be heavily incumbent upon the planners and implementers of this program to try to minimize adverse price effects and to cope with other second generation problems.

One way of tempering the price effects in the northern cash crops area (mainly groundnuts and cotton) is to employ a package program for the entire farm, i.e. one that encompasses groundnuts, for example, as well as the cereals and use groundnuts to the maximum practical extent as the "vent" for surplus. At present a typical groundnut farmer employs about four fifths of his total resources to produce his own family's food and only one fifth for groundnuts. And he gives food absolute priority as a simple matter of survival. With firm prospects for doubling his cereal yields he could shift 40 percent of his land to groundnuts without diminishing his food supply. In the process the farmer would be tripling his acreage of groundnuts. And, incidentally, improved groundnut technology results in about 40 percent increase in yield over the traditional. In the long run, of course, land and other resources will be allocated by farmers on the basis of price/cost considerations, so the farmers who choose not to follow an direct allocation approach would eventually come out at the same point, but the transformation or adjustment problems would [illegible] much.

The groundnut example illustrates how farmers could benefit from cereals modernization. Non-farm people also would benefit substantially. The normal urban middle income consumer spends about half his income on food at present. A good share of this is cereals and cassava products. A 25 percent reduction in retail costs for these items could save such a person the equivalent of 10 percent of his income.

The present acreages and outputs of cereals in Nigeria are not known precisely. The following, however, reflects reasonable orders of magnitude:

Crop	Area	Production
	1000 acres	1000 tons
Sorghum	13,450	3,000
Millet	11,720	2,285
Rice	652	295
Maize	1,800	850
Wheat	7.5	6

As a basis to project levels and shifts of resource use, it is necessary first of all to estimate probable rates of increases in demands, initially at constant prices. One relatively certain factor is a 3 percent annual increase in population. It may be assumed that per capita income will expand about 4 percent per year. Income elasticities are not known precisely but may be assumed to be approximately as follows: sorghum and millet .25; maize .40; rice .60 and wheat 1.1. These apply to direct use as food. The derived demand for livestock feed tends to increase the overall income elasticity, particularly for maize. At present it is estimated only about 90,000 tons of coarse grains are fed commercially to livestock (mostly maize to poultry). This use is expanding about 35 percent annually, reflecting the tapping of new geographical consuming areas and the relatively high income elasticity. This rate of increase will undoubtedly taper off rapidly, probably to no more than 20% by 1980 and decline further thereafter for the feed concentrate consuming (non-ruminant) animals. By 1980, or shortly thereafter, the costs of cereal production probably will have declined to the point where profitable uses would emerge for the whole cereal plant in intensively operated, relatively small-scale production of cattle and possibly other ruminants. The resulting annual composite percentage increases in use of grains probably will be on the order of the following: maize 5.0; rice 6.0; sorghum 4.0; millet 3.75 and wheat 7.4. These increases are large enough to allow for some gradual price reductions. See Appendix V for projections of demand and corresponding required rates of modernization to meet this demand.

With moderate rates of modernizing production for each crop, it is believed the aggregate area needed to produce cereals will be smaller than at present, even for the (50) percent larger population and with some substitution of cereals for tubers. In the North, the drop will probably be particularly pronounced for sorghum up to 1985. In the case of maize there will probably be substantial shifts between states but overall acreage will decline less than sorghum because of the non-ruminant livestock factor. Rice acreage will show only a slight reduction and if modernization progresses more rapidly in Nigeria, an export flow may emerge and cause acreage to expand. Wheat production will be confined to irrigation in the Northern States and domestic prices probably will continue well above world levels. Substantial imports probably will continue. See Appendix V for a projection of modernization rates for Rice, Maize, and sorghum, along with a review of the consideration on which these projections are based.

Taken as a whole, the proposed cereal modernization program will have a very high pay off for Nigeria. The projected Nigerian cost of $23 million for the first 5 years is equivalent to less than 10 U.S. cents per capita, per year. This needs only to be contrasted with the benefits to the non-farm salaried person cited above or to the Northern groundnut farmer. The crucial problem will be to bring about changes fast enough to be significant but not so fast as to generate serious price and other second generation problems. Inevitably, the new technologies cannot be applied uniformly, so there is certain to be dislocation in employment and income distribution. And price support cannot be viewed as the whole answer. Price support can cushion against short-term, possibly localized, gluts but to try to prevent downward adjustments in keeping with the downward drift in new equilibria will tend to incur heavy government expenditures and deprive major segments of the population the fruits of technological advances.

VII. Course of Action

A. Implementation plans for first two years

March 1, 1973	-	Federal involvement in Western State and Kano State Food production program begins.
April 1, 1973	-	Nigerian staff now in training return to work at Coordination Centers.
	-	Participants for 1973 crop year training selected.
April 15, 1973	-	PROP approved.
May 15, 1973	-	First of 1973 participants sent for foreign training.
June 1, 1973	-	Contract negotiations with IITA for implementation of project completed.
	-	Project Manager arrives.
September 1, 1973	-	The Coordinator for the Rice/Maize Center at Ibadan and the Coordinator for the Sorghum/Millet and Wheat Center at Samaru arrives.
	-	The Agricultural Economist arrives.
	-	Sorghum specialist for sorghum/millet and wheat center at Samaru arrives.
	-	USAID short-term planning consultants begin to arrive.
	-	The Rice specialist for the Rice/Maize center at Ibadan arrives.

October 1, 1973	- Preliminary plans completed for Kano State sorghum program for 1974 crop season.
	- Preliminary plans completed for Western State Rice and Maize programs for 1974 crop season.
March 1974	- Nigerians returning from training assigned to coordination centers and zonal sub-stations.
	- Participants for training in 1974 selected.
April 1974	- Coordinators and crop teams begin implementation of integrated crop production program using mini-kits and production kits in cooperation with zonal sub-stations and members of agriculture extension staffs in Western and Kano States.
July 1, 1974	- Arrival of coordinator cassava center, Umudike.
	- Arrival of wheat specialist, Samaru.
	- Arrival of cassava specialist, Umudike.
October 1974	- Plans completed for 1975 production programs for Maize, Rice and Sorghum for Western and Kano States and for four additional states.
April 1975	- Integrated state plans for rice, maize and sorghum in operation in six states.
	- 25% of Federal staff for research/extension organization of project on board.
June 30, 1975	- End of Phase I.
	- Comprehensive, integrated plan completed for NAFPP and key policy decisions made.

June 30, 1975 cont. - Evaluation of Phase I and first two years of Phase II completed.

Discussions with FMG regarding funding for the remainder of the project should begin once the evaluation results are received.

Dec. 31, 1975 - AID funding ends.

B. Narrative Statement

The NAFPP will super-impose an organization and staffing structure recommended by the CIMMYT team on an already existing net-work of agricultural experiment stations, zonal sub-stations, and state extension services. The existing staff and facilities will be augmented with additional staff and resources, organized to give interdisciplinary support to the production of the 5 selected food crops: wheat, rice, maize, sorghum/millet and cassava.

The FMANR will set up a special secretariat for this project under the director of agriculture. An executive secretary has been appointed. His function will be to marshall support from other ministries, agencies and agro-industries, handle disbursing of federal funds for the project and act as liaison between FMANR and USAID and other donors involved.

Three coordination centers have been designated: (1) The Federal Department of Agricultural Research, Moor Plantation, Ibadan, for Rice and Maize. (2) The Institute for Agricultural Research, Ahmadu Bello University, Samaru, for Sorghum/Millet and Wheat, (3) The Federal Department of Agricultural Research Institute, Umudike, for Cassava.

For each center a coordinator will be provided by USAID under a contract with IITA to serve in a "line" position for three years, until trained Nigerians can take over the duties. He will be responsible for coordination of all aspects of planning and implementation of the program for the crops assigned; he will specify all the various elements crucial to an integrated national production program for these crops, and insure that they are adequately considered in the national and state plans. He will be responsible for seeing that arrangements are made for scheduling and synchronizing the activities of the various public and private agencies at Federal, State and local levels. He will be responsible for monitoring the operation of the program and assuring compliance with the plans.

The coordinators for each of the centers will be assisted by a staff of Agricultural Scientists working as an inter-disciplinary team on each crop. Each team will consist of an assistant coordinator and 5 to 7 specialists. These teams will design all experiments for adaptive research and testing of plant breeding materials brought from abroad. They will organize and supervise experiments and field tests at the center and at the zonal sub-stations. They will determine the appropriate varieties and practices and design the "Mini-kit" program for variety observation and testing on farmers' fields and the "production-kits" package demonstration program. They will advise the staffs of the zonal sub-stations and state agriculture ministries and help them plan and execute their extension activities with farmers. See appendix II for description of the "Mini-kit" and "production-kit" programs.

USAID will provide an advisor under the IITA contract to each of these crop teams. He will advise and assist on the implementation of the program, at all levels.

The project will be organized into two phases which will be carried out concurrently and involve some of the same personnel. Phase I will be concerned with development of a comprehensive, integrated national plan, using a systems approach in identifying, describing and scheduling the various activities that are essential to meeting program objectives.

The national plan will obviously include and set the policies for state plans for each crop. State plans will be designed to help meet national objectives. Of course, certain elements of the plans will be beyond the jurisdiction of state responsibilities or competence. For example, price and supply stabilization program will necessarily have to be national in scopes. The planning unit in the FMAWR has recently produced the Agricultural Perspective Plan 1972-85 which provides the basic planning framework, specifies planning objectives and the government position on important agricultural development policy issues. The chapter on Food provides data on many of the food demand parameters relevant for the planning. The planning unit will provide planning assistance to the coordinators and the states in developing the individual crop plans and in putting together the comprehensive, integrated food crop plan and will arrange for special studies required to find solutions to some of the planning problems. (See appendix IV, some considerations in implementation of an Integrated System for Accelerating Food Production).

USAID will provide an agricultural economist experienced in systems analysis to work closely with the planning unit and with the coordinators to insure that all essential elements of the plan are identified, studied and appropriately integrated into the plan.

It is expected that the planning process will quickly identify areas in which changes in the supporting infrastructure are required to provide an economic environment that will induce development. These areas include agriculture credit, prices, marketing and storage facilities, cooperatives, transport and roads, seed and fertilizer distribution arrangements, and input subsidies. It will be useful to provide expert consultants to advise on appropriate ways to deal with some of these problem areas in the plan. As the planners identify such areas, USAID will provide, where possible, the required consultant expertise.

BEST AVAILABLE COPY

This planning process, which should get underway as soon as possible, is expected to yield a detailed, integrated food production plan by July 1, 1975. It will serve as the master plan for a long-term food production program in Nigeria. Obviously it will thereafter need to be revised and updated as better data become available, as feed-back from program operations and experience indicate opportunities for improvements. One by-product of the phase I planning exercise will be development of Nigerian experience in systems planning to maintain a continuing planning and evaluation component in the program.

Phase II will be concerned with the implementation of a food production program for each crop. It is to commence from April, 1975, based on the recommendations of the CIMMYT team report, supported by plans for providing credit, fertilizer and marketing facilities. Implementation will begin on a limited scale at two of the centers; the rice and maize center in Ibadan and the sorghum/millet-wheat center in Samaru. The FMAN will appoint an assistant coordinator for each of the two crops to be coordinated at the rice and maize coordination centers and one assistant coordinator for sorghum at the sorghum/millet and wheat center in Samaru. These assistant coordinators are now in training in these crop specialties at IRRI and CIMMYT. The wheat program will be deferred until 1974.

The FMAN will also assign a team of agricultural scientists, including specialists in plant breeding, entomology, soil science, plant pathology and agricultural engineering and production economics, to work under the immediate supervision of the assistant coordinators for each of the crops. USAID will assign a crop specialist under the contract to work with each assistant coordinator and his team.

The rice/maize coordinator will initially concentrate on the rice and maize program activities in Western State to help that state plan and execute its production program. Western State has a statewide agricultural extension service, staffed with trained personnel at state, district and circle levels, that have been carrying out a limited scale rice/maize program for the past two years. Western State also has a state agricultural credit agency with an extensive staff of trained field personnel working with farmers. The credit agency has been working with the agricultural extension service in providing agricultural credit for improved farming practices. The production program undertaken in 1973 and 1974 will employ the research/extension/seed multiplication concepts outlined in the CIMMYT report and introduce whatever improvements in supporting services possible based on the experience from the pilot program. After completion of the plan being undertaken in phase I, there will be further modification in the state institutions and services that make up the supporting infrastructure. Meanwhile, there will be feed-back from the phase II operations in Western State of value in construction of the plan.

BEST AVAILABLE COPY

A similar advance start will be made at the Sorghum/Millet-Wheat Coordination Center. The Coordinator and his Sorghum/Millet team will focus initially on Kano State in carrying out a sorghum production program. New high-yield potential varieties of sorghum are becoming available from the joint IAR and Regional Major Cereals program. These will be subjected to adaptive research and testing and demonstrated through the "Mini-kit" and "Production-kit" procedures recommended by the CIMMYT team. The best available, tested and accepted sorghum varieties and fertility and cultivation practices will be determined by the coordination center and be made available for distribution through the two zonal sub-stations and the state agricultural extension service. Production kits will be assembled and distributed widely in the sorghum growing districts of the state. Arrangements will be made for collection of seeds produced from the production kit demonstration areas for dissemination to farmers in the area.

Meanwhile, superior sorghum varieties are now available in limited supply which will be tested and evaluated by the sorghum team at the center and at zonal sub-station. Mini-kits will be provided for testing on farmers fields and for rapid multiplication to make sufficient seed available for mass distribution in a short time, if tests confirm their outstanding potential.

Kano state does not now have a state credit system. The fertilizer distribution system is also inadequate. Initial operations are expected to reveal these as potential constraints to production but implementation of the partial plan will permit the coordination center to get the program established in a state with a well developed extension service, and a state alert to the need for improved agricultural policies and predisposed to reforms in agricultural institutions. The experience with a program for introducing high yielding sorghum will also provide useful insights for the phase I, planning aspect, of the project on the relationship between increases in productivity of sorghum as shifts in land and other resources devoted to each crop, primarily groundnuts and cotton.

It will take several years to develop all of the additional facilities and recruit a full staff for each of the coordination centers and zonal stations on a satisfactory basis. The limited start with one state in each of the centers will be possible with existing facilities and with personnel who are now available for assignment. Facilities and staff will be built up gradually over the next five years. And the program will be expanded to involve additional states only as the states become ready to support production plans consistent with the national objectives. The Phase I exercise will involve work with all the states in developing state and national production plans. Meanwhile some of the states will carrying out production programs for their important food crops without direct assistance from this project. Eventually, within three to five years, it is expected that almost all states will be participating in the program with one or more crops.

APPENDIX I

SUMMARY OF RECOMMENDATIONS OF INTERNATIONAL TEAM
FOR A NATIONAL ACCELERATED CEREAL PRODUCTION PROGRAM

1. Immediately launch a "National Accelerated Cereals Production Project" sponsored and administered by the Federal Department of Agriculture (FDA) in all interested states. Begin program on Rice, Maize, Wheat, Sorghum and Millet where the biggest technological gap exists between current yields and potentially possible yields. Although Nigeria has traditionally been self sufficient in all these cereals, except wheat, shortages are beginning to develop. Projections indicate that Nigeria's cereal requirements will double by 1985. Currently over 90% of wheat is imported and maize imports for poultry feed are rising rapidly.

2. Increase National Cereal Production primarily through Increasing Yields per Acre of the Small Farmers. Large scale privately operated farms which are normally capital intensive, could be considered, where desirable, but should receive second priority to work with the bulk of the small scale farmers.

3. Concentrate initially on putting together a package of improved technology that can triple or quadruple traditional yields of cooperating farmers. This will involve identifying very high yield potential varieties (resistant to major diseases), use of much higher levels of fertilizer, higher plant populations and changes in cultural practices. Producing such dramatic increases in yields sells itself to farmers without a massive extension effort.

4. Organize research and extension efforts on a commodity basis. Appoint a separate team of research and extension officers to work together on each commodity (rice, maize, wheat and sorghum/millet) at national, zonal and state levels. State MANR's appoint full time extension specialists for each of the cereal crops they are promoting.

5. Mount a massive training effort to train all staff involved. Send key technicians away to CIMMYT, IRRI and selected third countries to learn: (1) the latest technology needed to secure dramatic increase in yields, and (2) the "Green Revolution" techniques for dissemination of this technology. After returning to Nigeria these technicians should conduct in-service training for all other staff assigned to the project.

6. Speed up transfer of research results to farmers (farmer involvement in research). Test promising new varieties on farmers' fields and let farmers help select varieties to be released. This allows farmers to benefit from new varieties about 3-4 years sooner than conventional methods and allows researchers to get farmer and consumer reaction in advance of official release of varieties.

7. Multiply most of the improved seed in farmers' fields. Budget limitations, formal administrative procedures, and limitations on availability of machinery and transport facilities tend to reduce effectiveness of government's efforts to produce and distribute seed. The team proposes that large numbers of farmers be given a small start on a fraction of an acre and multiply their own seed, distributing seed farmer to farmer.

8. Confine government seed production to small scale production of high quality foundation seed to start the process outlined in recommendation 7 above. Seed should sell at about double market prices (rather than at subsidized prices) so farmers will appreciate its value, take better care of their crop and have incentive to produce improved seed.

9. Organize Accelerated Cereal Production Committees at national, state and local levels to involve all government agencies and agro-businesses that can contribute to the success of the project. They should have sufficient executive authority and funds to effectively implement the action program. In addition to supporting the research and extension efforts, these councils should tackle problems of supply of inputs (fertilizer, chemicals, tractors, and machinery), credit needs, storage, transportation and marketing.

10. Transfer supply of inputs to the private sector as soon as possible. Fertilizer distribution has already become an almost unmanageable burden to the state extension personnel. Government tractor hire services have had serious difficulties in providing reliable service. Government credit could be used effectively to support agro-businesses in supplying inputs.

11. Phase Out subsidies. Modern improved technology should be sufficiently profitable to attract adoption without subsidy. Limited government financial resources could reap greater benefits invested in support of other phases of program. Government subsidies tend to stifle initiative of private sector, and would soon become an unbearable financial burden if the project succeeds.

12. Cut transportation costs through expansion of river transport, improved rail service and expanded road networks. Current transport costs now exceed £12 per ton to some parts of Nigeria, adding tremendously to the cost of inputs (such as fertilizer) as well as to the cost of marketing produce in the major population centers. Use of high analysis fertilizer should be encouraged since a large portion of the cost of fertilizer at its point of use is due to transport. Most fertilizers currently sold in Nigeria are only 20% active ingredients, while fertilizers are available with 45% to 70% active ingredients.

13. Mount intensive economic studies of production, storage, marketing problems to determine desired courses of action. The team feels that as the population increases, a shift to greater consumption of cereals and a rapid increase in demand for cereals for poultry and livestock feed can absorb the projected increases in production without a disastrous drop in cereal prices. Nigerian expertise in this field should study these subjects further. If marketing appears to be a potentially serious problem a government guaranteed floor price (at near world market prices) may be required. This would involve related storage and transport problems.

14. Promote cereal processing industries. Modern multi-stage rice mills should be installed. They would produce higher quality rice for the consumer as well as salvage by-products useful as livestock feed, (which are lost in current milling methods). Maize starch industries are recommended as well as other industries that utilize cereals.

15. Arrange for support from donor agencies. Through a consortium of CIMMYT, IRRI and IITA secure the services of an expert for each of the four national crop programmes. Also solicit donor support for the foreign training and some of the commodity requirements.

APPENDIX II FLOW CHART FOR SEED INTRODUCTION

Year 1

From sources outside Nigeria FAO, CIMMYT, IRRI, OAU, IRAT, WARDA and foreign countries. Set up system for rapid exchange of latest seed materials.

From sources in Nigeria - IITA Universities, Federal and State Breeding Programs. Full exchange of all seed materials available to each.

Pass Nigerian Plant Quarantine

NATIONAL CROP STATIONS

Testing of large numbers of breeding materials under high levels of fertility and optimum cultural practices.

Year 2

Fed. Dept. Ag. Res. Moor Plantation		I.R. ABU, Samaru	
National Rice Station	National Maize Station	National Wheat Station	National Sorghum/ Millet Station

ZONAL SUBSTATIONS FOR RICE, MAIZE, WHEAT & SORGHUM/MILLET

Year 1 Testing of breeding materials sent by National Crop Stations at each substation for each crop (with prompt feed back of results). Supervised by National Station staff.

"MINI-KIT" VARIETY OBSERVATION TRIALS ON FARMERS' FIELDS

Year 2 Test 4 to 8 of the most promising varieties or lines with carefully selected and supervised farmers. 25 foot square plot for each variety using optimum levels of fertilizer and cultural practices. Administered jointly by Zonal Substation and State MANR staff. Seed and fertilizer provided free to cooperating farmers. Farmers choose varieties they like and save seed (except maize). Each substation multiplies one acre seed each variety contained in the "Mini-kit".

Year 3

Foundation Seed Production By Govt. and private growers for sale to farmers to supplement the farmer to farmer seed distribution. Seed priced about double market price.

"Production-Kit" Package Demonstrations with farmers. Administered by State MANR. Farmers buy "Production-Kits" containing seed (of varieties chosen above) and fertilizer sufficient for 100 foot square plots. Pass seed produced from farmer to farmer. Plots serve as both demonstration and seed multiplication.

MASS PROMOTION OF IMPROVED VARIETIES

Year 4 Recommended with a "package" of improved practices for fertilizer and cultural methods. Promoted by State MANR extension staff and agro-business. Extension agents help farmers secure inputs and market their produce.

Note: This is a continuous process resulting in new varieties flowing into system annually.

The "MINI KIT" and "PRODUCTION KIT" PROGRAM

The International Team advising on the National Accelerated Cereal production program proposed the use of "mini kits" and "Production kits" as steps in achieving broad acceptance and use of modern food crop production techniques. The concepts and suggested application are detailed below.

A. "Mini-Kits"

The "Mini-Kit" is simply a package containing sufficient seed of new improved varieties; sufficient fertilizer, insecticide and herbicide to permit them to perform to maximum and a set of small varietal sign boards and instructions. The proposed area to be planted is 25 feet square for each variety or each treatment.

It is recommended that two types of mini kits programs be carried out one for variety observations and selection and the other for fertilizer observation trials. The kits for the varietal trials will contain seeds of 4 to 8 new improved varieties. Each farmer having a "Mini-kit" will decide for himself which variety he prefers to grow thereafter. The farmer is expected to save seed of the variety he prefers for planting next year.

The mini kits for fertilizer trials will contain seeds of the variety which the coordination center crop team expects to be best for the area. The package will contain fertilizers, and instructions for use, for four levels of fertilizer near none, low medium and high applications of NPK.

The "Mini-kits" will be designed and packaged at a central location, either the zonal sub station or state headquarters, and distributed free to participating farmers. The local Agricultural assistants of the State MANR extension services will be responsible for selection of cooperating farmers. He will also be responsible for insuring that each farmer understands the instructions and follows them carefully. He will visit each participating farmer at least once a week and will arrange for neighbouring farmer to observe the trials at harvest time.

B. "Production Kits"

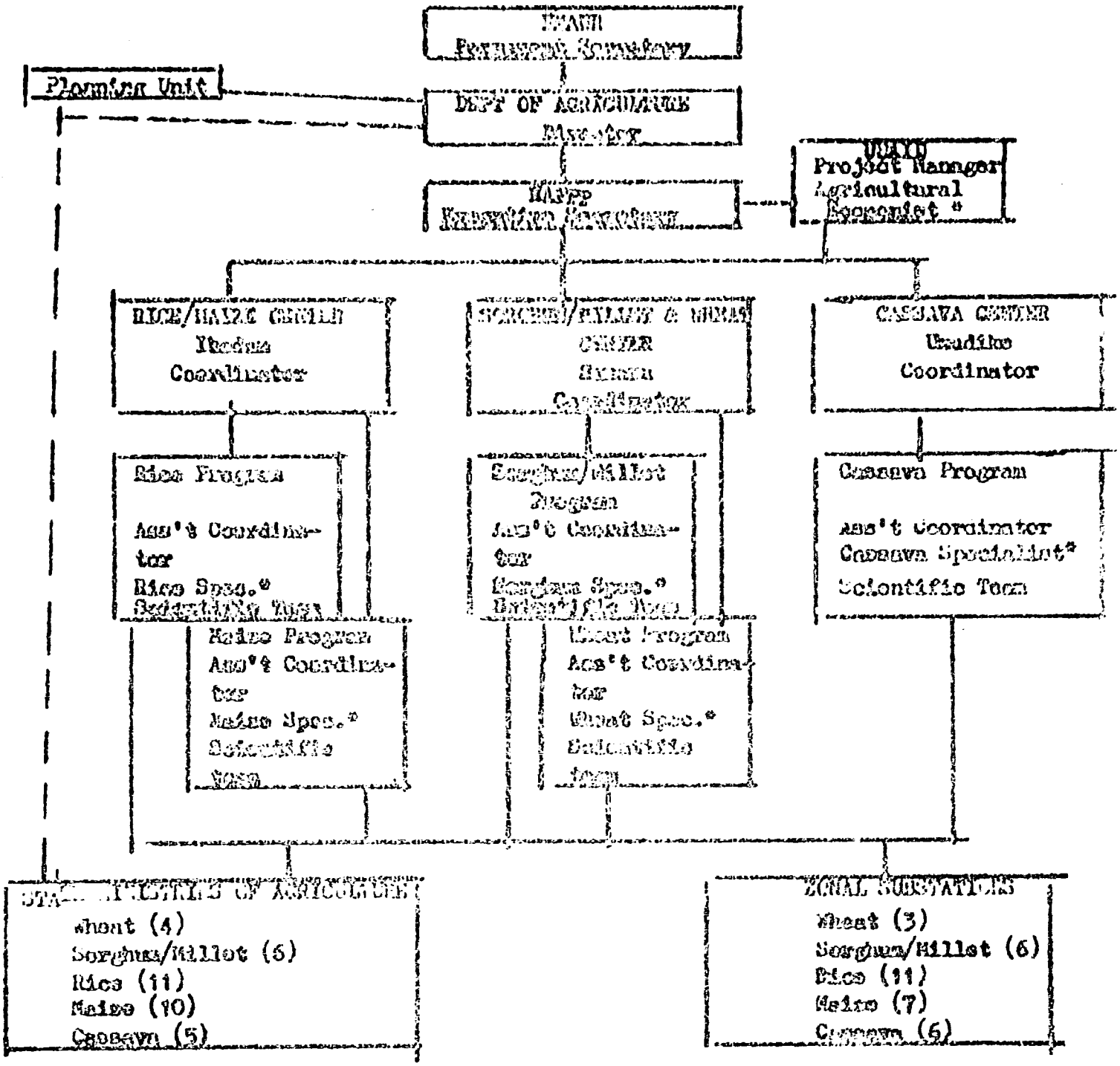
The "Production kit" is a package containing sufficient seed of the new selections accepted by local farmers as a result of the "Mini kit" program, plus adequate fertilizer and instructions, to plant 100 feet square (about 1/4 acre). Farmers will be charged for the cost of the inputs at usual rates. The production kits will be designed by the crop team at the coordination center and assembled at a convenient central point, at the zonal sub station or state headquarters. It will be distributed to farmers through the normal extension channels. The local Agricultural assistant is responsible for selecting the cooperating farmers. He will visit the farmers regularly and insure that instructions are followed.

The main purpose of the "Mini-kits" is to get farmers involved in the selection of new varieties and fertilizer levels to be used. The main purpose of the "production kits" is to demonstrate possible yield levels and to get farmers started with the use of the best varieties. These programs also provide excellent opportunities for evaluation. The Agricultural extension staff should collect yield data on performances of varieties and fertilizer levels from both the "mini-kit" and "production-kit" programs, which will permit comparisons and economic evaluation of new varieties and practices within a very short time span.

The kit program also is an effective way of speeding up the process of introducing and multiplying new improved seeds, first of all by shortening the time required for adequate evaluation and, secondly, by involving farmers throughout each state in the production of seed for distribution in their communities. At the same time that farmers are given "Mini-kits" for evaluation purposes, each seed station will plant one acre of seed for increasing each of the varieties included in the "mini kit". In this way sufficient seed, of whichever variety farmers indicate a preference for, will be available for the production kit program. The production kit program will serve as the first step in phasing the foundation seed program into a farmer to farmer seed distribution system.

APPENDIX III

PROJECT ORGANIZATION AND STAFFING

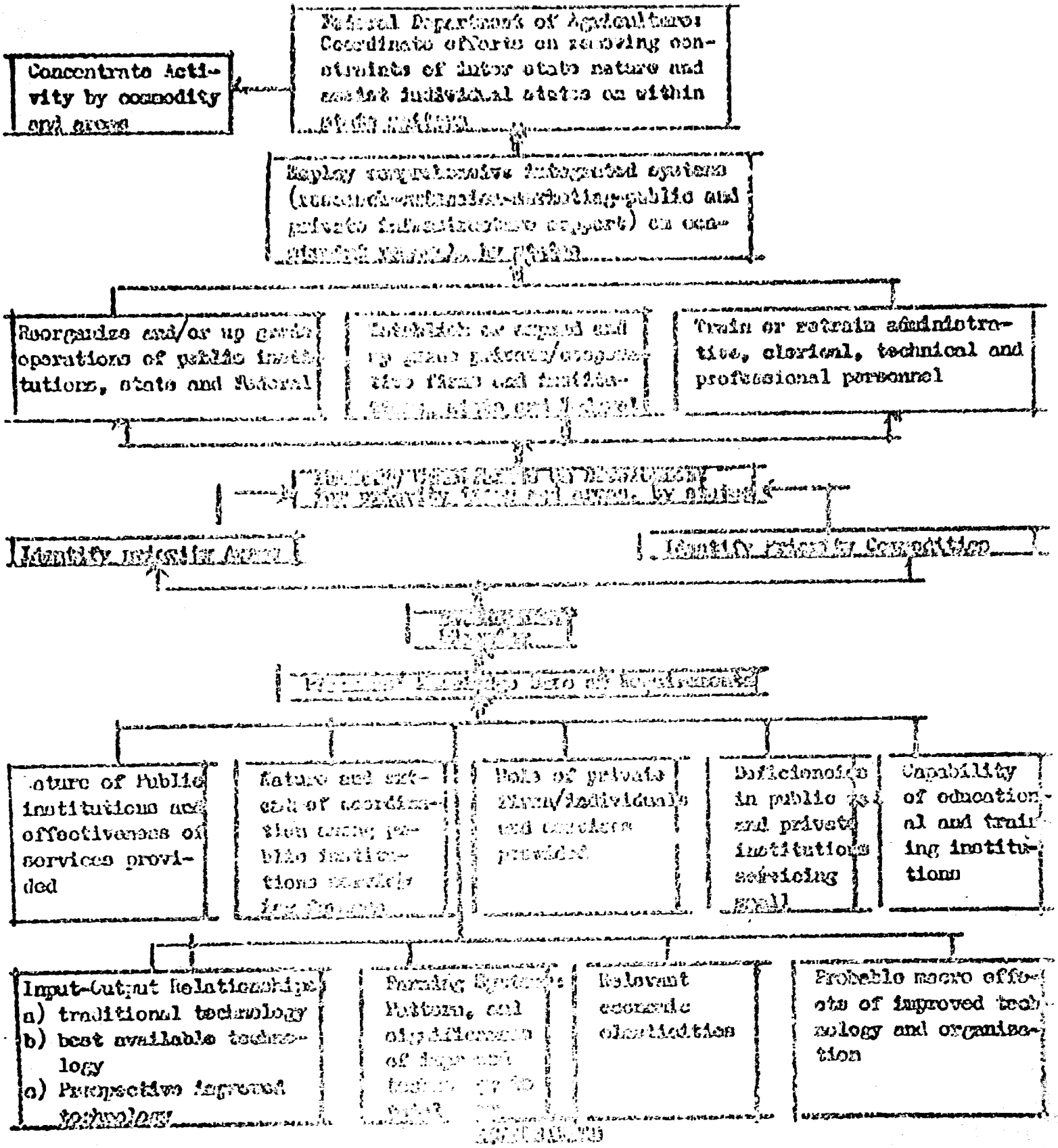


* Provided by USAID under IITA contract.

Note: Numbers in brackets indicate number of States and Zonal substation participating in the program for the respective crop.

APPENDIX IV

SOME CONSIDERATIONS IN IMPLEMENTATION OF AN INTEGRATED SYSTEM FOR ACCELERATING FOOD PRODUCTION



BEST AVAILABLE COPY

APPENDIX V

PROJECTED DEMAND FOR SELECTED CEREALS AND RATES OF MODERNIZATION REQUIRED TO MEET DEMAND 1971-85

The following tables present estimates of the expanding requirements for the major cereal crops in Nigeria through 1985. The tables also indicate the rates at which improved practices will need to be adopted to keep pace with the rising demand.

Basis for Projections of Demand

While there have been no comprehensive studies to determine parameters relevant to a project/or demand for food cereals the coefficients used here are based on estimates assembled from various sources ~~[illegible]~~ for the National Agricultural Development Seminar in 1971 1/. An increase in population of 3% per annum throughout the period was assumed. It was further assumed that per capita income would increase at the rate of 4% per year. Different income elasticities were assumed for each of the three selected cereals. It is expected that as incomes rise people will eat more cereals but the increase will be particularly large for rice and wheat; much less for maize and sorghum. However, maize and sorghum have great potential as livestock feeds and it is expected that as grain prices decline and demand for livestock products increases considerable amounts of these cereals will be consumed by livestock. The considerations used in developing the requirements projections are presented below for each crop.

a) Rice - an increase of 6% per year in requirements was estimated. This was based on an assumed 3% growth in population, a 4% increase in per capita incomes, and income elasticity for rice of 0.60. The composite of these factors would give an overall increase of 5.4 per cent. This was raised to 6.0 per cent to allow for a gradual decline in price toward export parity, for some shift in tastes and preferences toward rice and substitution for present imports.

b) Maize

In projecting demand for maize, requirements for direct human consumption and for animal feed were estimated separately.

1/ See OLAYIDE, S.O. et al. A Quantitative Analysis of Food Requirements, Supplies and Demands in Nigeria, 1968-1985.

A 5% growth rate in demand for maize for food was estimated. This assumed a 3% growth rate in population, 4% per year growth in per capita income and an income elasticity for maize of 0.40. This gives an annual rate of 4.6 per cent per year; it was raised to 5.0 per cent to allow for the effects of a decline in domestic price toward export parities and some shift in consumers tastes and preferences in favor of maize.

The demand for maize for livestock feed was based largely on information provided by the Pfizer Company, principal manufacturer of livestock feeds in Nigeria. A base of 45,000 tons was estimated for 1971. The annual compound rates of increase from that base were assumed to be as follows: 1971-74, 33.3 per cent; 1975-79, 25 per cent; and 1980-85, 20 per cent.

c) Sorghum

The demand for sorghum for direct consumption is estimated to increase at the rate of 4.0 per cent per year. This assumes an income elasticity of 0.25 for sorghums. It is estimated that perhaps 15,000 tons of sorghum are now fed to livestock annually. This is expected to increase substatially but maize will remain the principal cereal in livestock feeds.

Projection of Modernization Rates

Estimates of the rates of adoption of improved varieties and production practices take into account the economics attractiveness of the available improved packages, judgments as to capacity to provide the improved seeds and other inputs and services, and requirements to meet the expected demands. The acres applying improved practices was established by applying gradually increasing percentages to the estimated acreage in the base year 1971. In the case of maize, for example, the rates used were 0.1, 0.5, 1.0 and 5 per cent, respectively, for the years 1971 to 1974. Thereafter the percentages were increased by 5 points each year. By 1985, it is estimated that 54% of the maize acreage will be employing improved practices.

The acreage devoted to production of each crop using traditional practices is calculated as a residual, after subtracting production of the improved area from total requirements. It will be noticed that in the case of sorghum there may be a substantial reduction in total acreage devoted to this crop as modern technology is employed on a significant part of the area, even though total demand for the cereal is expanding.

Projections of Fertilizer Requirements

In Table 2 are shown estimates of fertilizer requirements for maize, to illustrate the rapid expansion in requirements as farmers adopt the new technology. Whereas the amounts of commercial fertilizer used on food crops is now negligible, by 1985 it is estimated that 25,600 tons of nitrogen and 14,400 tons each of P_2O_5 and potassium will be required.

These first approximations were premised on application of 200 pounds of 15-15-15 mixed fertilizer at planting time and another 20 pounds of nitrogen as a second application later in the growing season. Over-all this implies a ratio of 10 to 1 between additional dry grain harvested and nutrients applied. Clearly this can be considered only a rough approximation. The utilization of available nutrients must be field tested and minor nutrients may be required in addition.

LAGOS TOAID A 33 46 48 UNCLASSIFIED

Appendix V: Table I

Projections of Demand for Rice and Rates of Modernization Rice Production, Nigeria 1971-85

	Traditional Practices			Improved Practices				Required Output	
	Acres 1000	Yield Tons/A	Production 1000 Tons	Acres 1000	% Total Acreage	Yield Tons/A	Production 1000s Tons	Acres 1000	Production 1000 Tons
1971	650	.45	293	2	0.3	1.25	2.5	652	295
72	680	.45	306	5	0.8	1.25	6.2	685	312
73	707	.45	318	10	1.4	1.30	13.0	717	331
74	722	.45	325	20	2.7	1.30	26.0	742	351
75	722	.45	332	30	4.0	1.35	40	752	372
1976	733	.46	337	42	5.4	1.35	57	772	394
77	711	.47	334	60	8.0	1.40	84	772	418
78	686	.47	319	90	12.0	1.45	130	756	443
79	654	.48	290	120	16.0	1.50	180	724	470
80	554	.48	265	150	21.0	1.55	232	704	498
1981	490	.49	240	180	27.0	1.60	288	670	528
82	437	.49	214	210	32.0	1.65	346	647	560
83	372	.50	186	240	34.0	1.70	408	612	594
84	316	.50	158	270	46.0	1.75	472	586	630
85	360	.50	130	300	53.0	1.80	540	560	670

UNCLASSIFIED

Appendix V table 2

Projection of Demand for Maize and Rates of Modernization in Maize Production Nigeria, 1971-85

	Traditional Practices			Improved Practices				Required Combined Output				Fertilizer Requirements		
	Acres 1000	Yield Tons/A	Production 1000 tons	Acres 1000	% Total Acres	Yield Tons/A	Prod. 1000 tons	Acres 1000	Production Food 1000	Production Animal feed Tons	Production Total	N	P	K
												000 tons		
1971	1888	.45	848	2	0.1	1.0	2	1890	805	45	850	.04	.02	.02
72	2000	.45	901	9	0.5	1.0	9	2009	845	65	910	.24	.12	.12
73	2125	.45	957	18	1.0	1.0	18	2143	885	90	975	.40	.24	.24
74	2135	.45	960	90	4.0	1.0	90	2225	930	120	1050	2.4	1.22	1.22
75	2120	.46	920	180	8.0	1.2	215	2300	975	160	1135	4.0	2.40	2.40
1976	1955	.46	900	270	12.0	1.2	325	2225	1025	200	1225	6.0	3.60	3.60
77	1820	.47	855	360	16.5	1.3	470	2180	1075	250	1325	8.0	4.80	4.80
78	1725	.47	810	450	20.6	1.4	630	2175	1130	310	1440	10.4	6.00	6.00
79	1595	.48	765	540	25.3	1.5	810	2135	1185	390	1575	12.8	7.20	7.20
80	1460	.48	705	630	30.0	1.6	1010	2090	1247	465	1710	15.2	8.40	8.40
1981	1305	.49	640	720	35.0	1.7	1225	2025	1305	560	1865	16.0	9.60	9.60
82	1185	.49	580	810	40.5	1.8	1460	1995	1370	670	2040	18.4	10.80	10.80
83	1060	.50	530	900	46.0	1.9	1710	1960	1440	800	2240	20.8	12.00	12.00
84	980	.50	490	990	50.0	2.0	1980	1970	1510	960	2470	23.2	13.20	13.20
85	950	.50	475	1080	54.0	2.0	2160	2030	1585	1050	2635	25.6	14.40	14.40

LAGOS TOAID A- 33

Appendix V: Table 3

Sorghum
Projections of Demand for Data and Rates of Modernization in Sorghum Production, Nigeria 1971-85

	Traditional Practice			Improved Technology							Total Requirements			
				Open pollinated varieties			Hybrids							
	Acres 1000	Yield tons/A	Total Production 1000 tons	Acres 1000	Yield tons/A	Production 1000 tons	Acres 1000/	Yield Tons/A	Production 1000 tons	% of Total acres improved	Acres 1000	Food (000	Animal feed tons	Total)
1971	13450	.223	3000							0.0	13450	2995	5	3000
72	13906	.224	3115							0.0	13906	3105	10	3115
73	14377	.225	3235							0.0	14377	3220	15	3235
74	14796	.226	3344	35	.625	16				0.1	14831	3340	20	3360
75	15239	.227	3414	77	.650	50	26	1.333	33	0.7	15342	3465	30	3495
1976	15166	.228	3458	108	.660	72	74	1.360	100	1.2	15348	3595	35	3630
77	15619	.229	3581	154	.675	104	161	1.387	240	1.6	15874	3730	45	3775
78	15243	.230	3575	217	.692	150	241	1.415	300	2.8	15901	3870	55	3925
79	15487	.232	3593	308	.714	217	191	1.445	275	3.1	15986	4015	70	4085
80	15192	.234	3555	439	.740	325	862	1.472	355	4.4	15693	4165	90	4255
1981	14546	.235	3433	625	.732	457	560	1.500	340	6.3	15531	4320	110	4430
82	13415	.238	3193	886	.747	662	598	1.530	755	9.3	14794	4430	195	4630
83	11600	.240	2785	1260	.762	959	675	1.560	1055	14.3	13536	4045	155	4200
84	8843	.242	2140	1768	.777	1350	938	1.590	1475	23.4	11599	4820	185	5005
85	5000	.244	1220	2525	.792	2000	1235	1.620	2000	42.9	8760	5000	220	5220

LAGOS TRAIL 33

UNCLASSIFIED

24 MAY 1973

ACTION MEMORANDUM FOR THE ADMINISTRATOR

EXSEC EXECUTIVE SECRETARIAT

FROM: AA/PPC, Philip Birnbaum

SUBJECT: Request for Project Authorization - Nigeria Rice/Maize PROP Revision

It is recommended that you authorize subject PROP as presented by the Africa Bureau. The project has been reviewed and approved by all AID offices concerned.

You will note from Dr. Adams' Action Memorandum that the Bureau proposes to provide grant funded project assistance for only 2½ years of the 5 year project life, with the expectation that the Government of Nigeria will take over financial responsibility for AID's inputs at that time. PPC took a hard look at this aspect of the proposal, and was persuaded to endorse this partial funding arrangement for several reasons:

1. The AID input ($1.9 million for 9 technicians, consultants and participant training), though very important, is a relatively minor portion of the overall Nigerian effort ($23.0 million for the project).

2. The nature of AID's role was specifically defined by the Permanent Secretary of Agriculture who personally requested AID assistance to the project and is showing an active interest in the project.

3. Nigerian policy forbids loan funded technical assistance at this time, and this year's block grant is already programmed for other purposes. There is some hope, however, that these avenues of funding might be available to this project in the future and the Bureau wishes to prepare the Nigerians for such an arrangement.

Further details concerning the proposal are spelled out in Dr. Adams' Action Memorandum.

Attachments

Clearance: CC:AZGardiner: [illegible] Date: [illegible]

in FY 1974 and FY 1975 at the indicated levels; (2) that an evaluation of the project be conducted prior to the end of FY 1975 to assess project activity and to identify other possible follow-on funding sources.

Attachment
Rice/Maize PROP Revision

Approved _____

Disapproved _____

Date MAY 25 1973

Drafted: AFR/CWA, JDWilson:mr:5/14/73

Clearances:
AFR/CWA, AHEllis _____ Date 5/14/73
AFR/GC, JHoskins _____ Date 5/15/73
AFR/DP, EHogan _____ Date 5/16/73
AA/PPC, PBirnbaum _____ Date 5/25/73
SER/FM, SBrown _____ Date 5/18/73
AA/AFR, DBrown _____ Date ____
GC, AGardiner _____ Date 5/17/73

ACTION MEMORANDUM FOR THE ADMINISTRATOR MAY 23 1973

THRU: EXSEC

FROM: AFR/CWA, Samuel C. Adams, Jr.

Problem: Approval of Rice/Maize PROP Revision (Project 620-11-130-798)

Discussion: Pressed by an increasing concern about stagnant production, declining exports and rising food prices, the Federal Military Government (FMG) is giving high priority to improvement in the agricultural sector. Perhaps the most important evidence of the FMG's concern is the imminent launching of a National Accelerated Food Production Program (NAFPP) designed to bring about marked increases in productivity in the production of rice, maize, millet, sorghum and cassava, the country's most basic food crops. Significantly, AID has been asked to help implement this program.

The FMG request to AID for assistance stems in part from our efforts over the past two years in the Western State where we have successfully introduced improved rice and maize production technology in a pilot Rice/Maize project. During those two years a program has been developed for each crop which included: (1) the design of improved packages of technology; (2) the development of an organization for coordinating advisory services through district and circle level field staff; (3) the establishment and improvement of supporting services, such as machinery hire units, fertilizer distribution services and seed production and processing facilities; and (4) the creation of linkages with private and public agencies for improved marketing and credit arrangements. It is this Rice/Maize project the FMG has specifically asked us to make national in scope. They want to include millet, sorghum and cassava in the expanded project and have indicated a strong interest in incorporating elements of other AID projects in credit and planning which have already been completed.

Although our success in previous programs in Western State was an important factor in causing the FMG to turn to the U.S. for assistance in implementing the NAFPP, the primary reason was their recognition of our excellence in producing most of the crops included in their program and our success in transferring the technology of the "Green Revolution" to the developing world. A request for AID assistance in this key program is particularly significant in that since the end of the Nigerian civil war AID has been trying, without much success, to reestablish the close, productive development assistance relationship which was badly shaken by the ambivalent position the U.S. assumed vis-a-vis Biafra. To that end, in the past eighteen months, we have attempted to work more closely with the FMG in determining their priorities for our assistance. The Block Grant was introduced to provide greater flexibility, and we have been more responsive in areas such as transportation (the Nathan project) and Civil Aviation.

Throughout this period, however, we have felt the agricultural sector probably offers the most effective way for us to contribute in Nigeria in terms of our own expertise, the long term relations with FMG and the well being of a large number of the Nigerian people. The proposed expansion of the Rice/Maize project in conjunction with their NAFPP offers an excellent opportunity to make a meaningful contribution.

While we welcome the request of the FMG for assistance in the implementation of their NAFPP, we also realize that they are becoming increasingly able to underwrite projects of this kind themselves. Therefore, although the program presented in the PROP revision covers a five year period, we are recommending that AID provide direct grant funding for only the first two and a half years. The two and a half years of financing will carry them through the development of a comprehensive national plan in Phase I, and provide sufficient time to complete the research/extension network so vital to the overall success of Phase II.

As presented in the attached PROP revision, this is essentially a five year project, with both phases beginning simultaneously. Phase I, the planning phase, will be largely completed within a two year period while implementation of Phase II, the production phase, will require the full five years. However, the basic research/extension network upon which much of Phase II will depend will be completed during the AID-funded period. It is expected that by the end of the first two years of the project, the outputs of Phase I and the progress made on Phase II will provide Nigeria with the basic ingredients required to begin implementing the broad, long term accelerated food production program. To support and implement these activities, it is proposed that AID provide $1.3 million in FY 1974 and $576,000 in FY 1975. The primary purpose for this funding would be to enable the FMG to employ a contractor who would provide much of the management, technical and coordinating personnel required to organize a program on this scale. This would include the services of 9 resident experts/managers and appropriate consultants for varying periods, plus short-term training for 52 participants, and some commodities. At the conclusion of the period funded by AID (i.e., FY 1975) the FMG will take over financial responsibility for the project, through a loan from AID or elsewhere, under the Block Grant or with their own resources, or some combination of these sources.

The priority given to the NAFPP by the FMG is indicated by their commitment of $23 million over a five year period. They will commit a sizeable combined staff to the program as well as existing agricultural research facilities at Ibadan, Samaru and Umudike. Thirty-three existing zonal substations and their staffs will be involved as will 156 additional agricultural scientists and supporting staff. In addition, each state is expected to provide the services of five agricultural assistants and one agricultural superintendent for each of the crop programs in which it participates. The total cost to the states is estimated at $344,000.

<u>Recommendation</u>: That you approve the requested PROP revision subject to the following conditions: (1) that AID will finance the project only