

NONCAPITAL PROJECT PAPER (PROP)

DP Project File 6250161-3

1. PROJECT IDENTIFICATION

1. PROJECT TITLE: GRAIN STABILIZATION MARKETING & PRODUCTION

2. APPENDIX ATTACHED: ☒ YES ☐ NO

3. RECIPIENT (specify): ☐ COUNTRY: Entente States ☒ REGIONAL ☐ INTERREGIONAL

4. LIFE OF PROJECT: BEGINS FY: '68 ENDS FY: '79

5. SUBMISSION: ☐ ORIGINAL ☒ REV. NO. 05/09/73 DATE: CONTR./PASA NO.:

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

A. FUNDING BY FISCAL YEAR	B. TOTAL \$	C. PERSONNEL		D. PARTICIPANTS		E. COMMODITIES \$	F. OTHER COSTS \$	G. PASA/CONTR.		H. LOCAL EXCHANGE CURRENCY RATE: \$ US 228 CFA (U.S. OWNED)		
		(1) \$	(2) MM	(1) \$	(2) MM			(1) \$	(2) MM	(1) U.S. GRANT LOAN	(2) COOP COUNTRY	
1. PRIOR THRU ACTUAL FY	630	370	96	25	40	200	35	370	96			
2. OPRN FY 73	-0-	-	-	-	-	-	-	-	-			
3. BUDGET FY 74	302	132	36	60	84	100	10	132	36			
4. BUDGET +1 FY 75	285	160	32	15	24	100	10	160	32			
5. BUDGET +2 FY 76	305	250	50	15	24	30	10	250	50			
6. BUDGET +3 FY 77	55	10	2	15	24	20	10	10	2			
7. ALL SUBQ. FY	150	50	4	30	48	50	20	50	4			
8. GRAND TOTAL	1727	972	220	160	244	500	95	972	220			

9. OTHER DONOR CONTRIBUTIONS

(A) NAME OF DONOR	(B) KIND OF GOODS/SERVICES	(C) AMOUNT
Canada	Services (200) Commodities (700)	900,000
France	Services (100) Commodities (166)	266,000

III. ORIGINATING OFFICE CLEARANCE

1. DRAFTER: William E. Garvey	TITLE: AID/Project Officer	DATE: 9/10/73
2. CLEARANCE OFFICER: James E. Hill	TITLE: Reg. Development Officer, s.i.	DATE: 9/10/73

IV. PROJECT AUTHORIZATION

ADO/Mcnamay

1. CONDITIONS OF APPROVAL

2. CLEARANCES

BUR/OFF.	SIGNATURE	DATE	BUR/OFF.	SIGNATURE	DATE

3. APPROVAL AAS OR OFFICE DIRECTORS

SIGNATURE: DATE:

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

SIGNATURE: DATE:

TITLE:

ADMINISTRATOR, AGENCY FOR INTERNATIONAL DEVELOPMENT

Introduction

The sub-Saharan, or Sahelian region of Africa stretches 2,500 miles across the continent from Senegal to Chad, and is the home of an estimated twenty-five million people. Most of these people are nomads or traditional farmers. Nearly all are dependent for their staple food on locally produced millet and sorghum.

Until recent years production over the region was roughly equivalent to consumption except in years of exceptional drought. This situation has changed over the past fifteen years and feeding ^{the} people of the Sahel has become an increasingly acute problem. The major elements of this program are as follows:

1. An increasing population, both rural and urban. The increase in urban population is particularly important in this respect since city-dwellers do not produce their own grain.

2. A fixed land resource. Authorities differ on this point, some saying that the land resource is almost limitless. Recent studies bring this opinion into doubt. Land in fallow is decreasing. Although land is being brought into cereal production in proportion to the increase in population; average yields are decreasing as the farmer moves onto less productive soils. There is strong evidence the entire natural resource base is deteriorating under the combined pressures of increasing population and an extremely harsh climate.

3. An effective marketing system has not developed to equate production and consumption. As a consequence shortages are evident in many areas even in good years; there is not an assured flow of grain into population centers or to normal populations; there is no carryover of stocks from good production years to poor; and prices fluctuate widely both geographically and seasonally to reflect the above situation.

4. Little effort has been put into increasing food crop production, the assumption being that an adequate food supply would be automatically forthcoming. In contrast there has been substantial investment in export crops, with in general, very good results.

5. Climate in the region is harsh and rainfall is capricious, highly variable geographically in any one year, and from one year to the next. Most variation in production from year to year is caused by rainfall deficiencies either in timing or quantity. Furthermore, there is evidence that the climate is deteriorating. Certainly this has been true of rainfall over the past six years and 1972 was disastrous over the entire Sahel. Complete evidence for 1973 is not available but present indications call for another disastrous ~~harvest~~, at least in Niger.

The Grain Stabilization Marketing and Production Program was developed in response to the above described situation and intended to address itself to each of the above problems. It should be emphasized that this program is a long-term drought relief program with an on-going day-to-day impact on food production and distribution problems caused by drought. It was the only such program "on the ground" at the time of the 72/73 drought. The institutions it has helped develop performed well, though not perfectly in the face of the worst drought in 60 years.

This PROP has been written in the light of 2 1/2 years of program experience. All of these have been crop deficit years. It is felt that the actions indicated in this document will enable the Grain Stabilization program to respond very effectively to the food production and marketing needs of Upper Volta and Niger in all but the most disastrous drought years.

It will be noted that production phases of the programs are not presented in complete detail. These programs are under development and will be incorporated in a revision of this document to be written 1 July 1974.

This project provides assistance to an African regional organization, the Council of the Entente, to assist member states to develop a stabilized market for locally grown staple cereals (millet and sorghum, plus corn, assuming entry of Togo and Dahomey into the program) thereby encouraging their increased production for an expanding rural and urban population. National cereals offices were established in Niger in 1970 (Office des Produits Vivriers du Niger - OPVN) and in Upper Volta (Office National des Cereales - OFNAGER) in 1971, and these two countries are the active participants in the program at present.

Togo and Dahomey have expressed their interest in participating in the project in letters addressed to the Council of the Entente in late 1972. The Entente staff will meet with representatives of Togo and Dahomey in 1974, to work on the details of participation by these states. The northern half of both of these countries is climatically and agronomically similar to Upper Volta and Niger. Millet and sorghum are the major cereal crops and production-marketing problems resemble those of the latter countries. If Togo and Dahomey indicate their interest in millet/sorghum marketing and production, the expanded program will follow the existing on-going stabilization program very closely in purpose, conception and detail. If however Togo and Dahomey are primarily interested in their other major crop, corn - and this is almost certainly the case - the program design may be substantially different, with a strong emphasis on preventing heavy grain losses in storage.

It should be pointed out that neither Togo nor Dahomey have followed up on their 1972 expression of interest in participation. The door remains open, however.

The need to provide a more stable market for cereal grains as a first step toward increasing production in the region has been recognized for some time. The first detailed study dates from 1963 and is titled "Les Produits Vivriers au Niger" by the French Societe d'Etudes pour le Developpement Economique et Social. More recent studies, specifically directed toward the present program, include:

TITLE	AUTHORS	DATE
"A Grain Stabilization Study of the Entente States and Ghana"	Weitz-Hettelsater, Eng.	March 1969
"Production and Marketing of Cereals West Africa"	Checchi & Company	March 1970
"Regional Grain Stabilization in West Africa"	Kansas State University	Dec., 1970

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"Rapport Concernant les Produits
Vivriers au Niger"

Helden Menzies
Assoc., ACDI

Jan., 1971

The first three studies were financed by AID, the fourth by the Canadian International Development Agency. These studies furnish the technical basis for the grain stabilization program. The conclusions of all studies are essentially the same:

(a) There are possibilities for increasing cereal grain production, within the limits imposed by weather conditions, through the adoption of improved cultural practices, improved varieties, farmer credit, more effective extension, etc.

(b) An urgent and necessary condition for increasing production is an effort to improve the efficiency of the grain marketing system, providing for efficient distribution geographically and over time; stabilizing wide fluctuations in farmer and consumer prices; increasing dependability of farmer income, thereby providing incentives to increased cereal production.

The three AID sponsored studies recommended the program include both production increasing and market stabilization inputs, but placed first priority on the marketing and storage phases of the program.

The Council of the Entente, in collaboration with the cereal offices in Niger and Upper Volta, synthesized the information contained in these studies in a document entitled, "Requete pour le Projet de Commercialisation des Céréales et des Nibes et de Stabilisation des Cours en Haute Volta et au Niger." This document serves as the Entente's program of action for the grain stabilization program. Collaborating directly with the Entente in this program are CIDA, FAC and AID to provide to the national cereals offices adequate resources to achieve the purposes of the program by providing technical assistance, commodities (both grant support and grain imports), participant training, and loan funds for warehouse construction. Support is also given to a small regional staff of technical experts who assist the national offices in the marketing, engineering and training fields, and in the development of a coordinated regional grain policy.

The Government of Niger established the Office des Produits du Niger in August, 1970. OFNAGER, the cereals office in Upper Volta was established January, 1971.

The Entente "Requete" defines their objectives as follows:

- (a) Stabilization of prices to producers and consumers.
- (b) Gradual solution of the problem of inter-zonal disequilibrium (zones with tendencies to deficit and surplus production).
- (c) Development of an income policy which would open up those zones where few income crops are grown, by drawing into the commercial market those products presently produced only for home consumption (millet and sorghum).
- (d) Application of a rational price policy to improve the level of living of producers and consumers, at the same time allowing for participation on the market of traditional merchants and transporters.

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- (e) Expansion of agricultural production to the benefit of producers by means of effectively controlling prices to producers.
- (f) Growth of trade across country borders.
- (g) Participation in production development programs run by other government services.

The original PROP, dated April 27, 1971, provided for AID funding of its participation in this multidonor program through FY 1975. Since the PROP was first written, it has become obvious that the weather cycle as assumed in the technical studies was overly optimistic, and that the cereals offices will require assistance, particularly insofar as grain imports and technical expertise are concerned, for a longer period of time. In addition, and subsequent to the writing of the original PROP, Togo and Senegal have requested entry into the program. The PROP is hereby revised to take these developments into account and to provide additional information on the project.

Since the implementation of the project, AID has furnished grant support in the amount of \$630,000 to (a) help equip the new cereals offices, (b) to provide them with three marketing and storage technicians on a regional basis) and (c) to provide in-service participant training to cereals office field and middle-level personnel. Further support has been provided in the form of a loan totaling \$1.8 million to construct a storage capacity of 28,000 MT. Construction of these warehouses is now underway in both countries.

A substantial item of support to the stabilization goal has been the import of 22,000 MT of American sorghum in FY 1971, and 28,000 MT in FY 1972. A total of 38,000 MT of stabilization grain will be imported in FY '73. Due to the disastrously poor harvest of 1972, the worst since 1913, an additional 57,000 tons of American emergency grain, mostly sorghum, plus substantial quantities of other donor cereals were brought into the two countries. It is only fair to say that for the year 72/73 market stabilization concerns were subordinated to the urgency of saving lives. At the time of writing this document, 1973 crop prospects appear dismal, particularly in Niger, where the crop reporting service states the harvest is substantially lower than 1972.

It appears that the 1973/74 season therefore will see a substantial need for imported emergency grain, over and above the requirements of a grain stabilization program.

Whether labelled emergency or stabilization grains these stocks serve the function of a market stabilization program. A portion of the emergency stocks are set aside for free distribution to the totally deprived. The rest of the grain in both categories is sold on the local market at the officially declared local price to assure consumer supply at reasonable prices. The net proceeds from their sale permit the offices to accumulate a substantial working fund for the purchase of local stabilization cereal stocks.

In addition to American support, FAC has thus far allocated grants totalling \$224,000 for purchase of equipment and provision of a regional agricultural engineer, and CIDA has made a \$700,000 grant for equipment and technical support. These grants are to be spread over the first four years of the program.

A. GOAL

The goal of this project is to increase the percapita supply of staple food grains within the participating countries of the Entente.

Reliable statistics on per capita cereal consumption are unavailable for the Sahel. FAO estimates per capita consumption in Upper Volta at 164.6 kilo per year, in Niger at 172.5 kilos/per year. This is a barely adequate food supply. Increases in the hectareage planted to cereals have generally kept pace with population growth. However actual cereal production lags population growth as farmers (1) move to less productive land and (2) fail to apply production increasing technology to any of their land. These factors, aggravated by an apparently increasingly less favorable rainfall pattern over the past 6 to 10 years, has resulted in stagnant or even decreasing level of cereal production in this time period

Assuming an improvement in the reliability of agricultural statistics, an indication of goal achievement in this program will be a gradual reversal of this trend with annual cereal production averaging 185 kilos per capita in the period 1980/85.

A further indication of goal achievement will be the discontinuation of the need for foreign grain imports by the end of scheduled American participation in the program (1980) except in cases of very extreme drought emergency. Another positive indication of goal achievement, again assuming better agricultural statistics, would be a gradual increase in farmer income attributable to increased marketings of sorghum and millet at higher and more stable prices than obtainable at the beginning of the project.

One of the most important assumptions underlying the grain stabilization program is that the lack of a stable market offering a fair price is one of the major disincentives the farmer faces in any decision to increase his plantings of cereal, or to invest in a new yield-increasing input. Another important assumption is that the farmer, once he obtains an increase in income from a steady, more remunerative price, will invest a part of his increased income in additional yield-increasing inputs so as to further improve his income position.

It is recognized that to achieve the goal of increased cereal production, the stabilization program is in large part a necessary but not a sufficient condition. An absolutely essential element for achieving this goal, is a substantial investment by the respective governments, aided as required by other donors in a production-increasing program involving improved varieties, seed multiplication, more effective cultural practices, fertilizers, animal traction, credit, better extension services, etc. With the addition of this production program the integral components of the ADO sector approach to increasing food production, of which the Major Cereals and Livestock projects are other essential parts, would be in operation.

Another important assumption is that an increase in cereal production can be achieved without sacrificing production of important exchange-earning export crops as cotton and peanuts. This will require important attention to price policy for the various crops.

A final important assumption for the long run is that the weather cycle is not, in fact, turning against the countries of the Sahel, and that production, buying and storage over the long term will be sufficient to carry through the deficit years.

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B. Purpose

The purpose of this activity is to assure a stabilized market in staple cereals (millet, sorghum and corn) at reasonable prices to consumers and at a fair return to producers in the participating Entente States. Assurance of an adequate and reliable supply will require (1) the free flow of grain from excess to deficit production regions (deficit either due to local weather conditions, or to heavy consumer concentration), and over a period of time, and (2) the carryover of stocks from good crop years to deficit years. Implied in this free flow is the development of policies and institutions capable of facilitating the legal flow of grain across national boundaries. The instrument designed to effect this program will be national cereals offices with the resources to buy, sell and store locally produced food grains and to have in good condition a sufficient quantity to meet both market stabilization and emergency needs. It is assumed that this purpose can be achieved by marketing institutions which do not have a monopoly of the grain trade, but have the resources to trade in a percentage of the grain commercialized (estimated at this time at approximately 25 percent of the quantity marketed) sufficient to make effective their announced price structure throughout the market (an additional supply of grain reserved for emergencies is required, estimated at approximately 35,000 MT). An assumption fundamental to the previous assumption is that the cereals offices will have the ability and the freedom to set their official prices according to economic principles which will, in fact, enable them to accomplish the program objectives, i.e., that farmers will have a floor under their prices which gives them reasonable return on their labor and investment, even in bumper crop years; that consumers will not have to pay excessive speculative prices even in very short crop years, and that the range between official buying and selling prices is sufficient to cover costs including a fair return to an efficient commercial dealer.

This is not an easy price structure to arrive at even under ideal conditions, but it is essential that these be the guiding criteria, rather than excessive social welfare considerations.

Clear indications of achievement of purpose will be easily apparent - farmer prices which do not go below the floor price, consumer prices which hover near the official price, the failure of a black market to develop, a gradual increase in the quantity of grain commercialized and the size of the private marketing sector to handle it, and the gradual increase in the legitimate flow of grain across national boundaries.

C. Outputs

The original PROP for this project considered only Upper Volta and Niger, and covered the period of FY 1971 through FY 1975. Since the original program was planned, it has become evident that one of the assumptions in the original planning of a four-year cycle of one poor harvest, two average harvests and one good harvest was excessively optimistic. An early 1972 crop cycle assumption calls for two to three years of poor harvest, two to three years of average harvest, and one good harvest year. The apparently disastrous crop of 1973 arriving on the heels of 1972's failure indicates this revised cycle may be realistic or possibly somewhat optimistic. At any rate the significance of such a longer and more difficult cycle is to prolong the time period before a stabilization program will become self-supporting.

Additionally, Togo and Dahomey have requested participation in the program.

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While any program designed for these two countries is expected to be operationally similar to the programs now underway in Niger and Upper Volta, a program in the former countries will probably deal largely with corn storage and marketing under tropical conditions; The technical and structural problems are new, and their resolution will require an expanded and lengthy effort.

For the above reasons, the funding period of the project has been extended through FY 1980, at which time the outputs as described below should have been achieved:

1. Functioning cereals offices established and operational in each of the participating countries, and effective in terms of:

- a. Sufficient working capital to buy, treat, store and sell approximately 25 percent of commercialized food grains.
- b. A trained host country managerial, administrative, and technical staff.
- c. Adequate infrastructure for purchase, treatment, storage and sale of 25 percent of commercialized food grains. In terms of stabilization storage, a capacity of approximately 69,000 tons is indicated in Niger, Upper Volta.
- d. An additional emergency reserve storage capacity estimated at 25,000 MT in Upper Volta, 35,000 MT in Niger.
- e. A supply-management policymaking capability, including adequate statistical gathering and analysis, and a reasonable degree of autonomy in policy-making decisions.

"Functioning effectively" will be indicated by the success achieved by the individual cereals offices in stabilizing farmer and consumer prices within limits which bring a reasonable return to farmers, and cover distribution and marketing costs to the consumer; encourage increased production of millet, sorghum and corn, though not at the expense of export crops, and encourage the development of the private grain marketing sector. The above results will be achieved through the operations of the national cereals offices in buying, storing and selling approximately 25 percent of the production or locally grown cereals. By the end of the project, these ends will be accomplished under all the most extreme weather conditions and thus importation of these three cereals will drop ^{but} essentially. Persistent drought over the initial years of the program indicated ^{comprehensively} that closer attention must be given to a new element in the program - a substantially higher reserve storage capacity that will enable the cereals offices to carryover from good and average years to poor years an emergency stock.

In years where grain must be imported to meet extreme deficits, the cereals offices will have sufficient working funds to buy all or part of their needs on the world market.

2. A coordinated and compatible marketing and price structure among the participating Entente countries which minimizes market distortions within the region, facilitates inter-regional exchange to equalize supply and demand within the participating countries, and encourages export when surpluses of these cereals are produced within the region.

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These coordinated policies will have been developed by a small team of regional experts stationed in Niamey, but working in collaboration with all of the cereals offices. It is assumed at this time that the above policies will have been achieved before the end of this project (approximately 1977) and, that, the original purpose of the regional team having been achieved, it will be dissolved. It is possible that in the course of the project it will appear desirable and necessary to maintain at least a small regional group to continue the coordination of efforts in marketing. If this is the case, one of the outputs at the end of the project will be a small regional staff of one or two African marketing economists to continue the effort.

The achievement of the above national and regional outputs is based on several very crucial assumptions as follows:

- a. Continued support of the various national governments and their cereals offices to the grain stabilization objectives of the program. Although this is obvious, it cannot be taken for granted. There is a substantial risk of governments subordinating the stabilization objective to other social-welfare objectives in deciding marketing policy.
- b. National governments will award a reasonable degree of autonomy to their cereals office in matters of management, finance and market policy decision-making.
- c. National governments will continue to assign highly competent and motivated personnel to the direction and middle management of the national offices.
- d. The national governments will support and cooperate with the regional office in its effort to coordinate national marketing policies.
- e. Participating donor governments will continue their support at the level required and through the period 1980, and will not become discouraged by the difficult problems the program is sure to encounter, such as prolonged drought.

D. Inputs

The Entente Grain Stabilization Program is supported by coordinated multidonor assistance from the United States, Canada, and France. In addition, OPVN has received certain bilateral support from Libya, OFIACER from Germany and Great Britain, and both OPVN and OFIACER receive commodity grain assistance from a number of countries and international organizations.

I. U.S. Government

A grant agreement signed 21 June 1971, amended 28 June 1971 between the U.S. and the Mutual Aid and Loan Guaranty Fund of the Council of the Entente, in the amount of \$630,000, has provided a substantial share of U.S. participation in the project to date. The specifics of the U.S. participation were further detailed in an exchange of letters between USAID and the Entente dated 29 October 1971.

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1. Technical Assistance

a; Technicians

The lack of trained and experienced grain marketing personnel in both Upper Volta and Niger makes technical assistance an important component of this program. The program calls for the U. S. to supply the following technical assistance personnel:

At the national level -

One marketing technician for OFNACER

One transport technician specialist for OPVN

At the regional level -

One marketing specialist

One storage/marketing specialist

Additionally, provision was made for short-term experts on an as-needed basis, and a bilingual secretary for the regional office in Niamey.

A grain marketing technician, began work with OFNACER in April, 1972. A grain marketing technician came under AID contract of assignment as a grain expert with OPVN in March, 1972. Both men have a lifetime experience in grain handling and marketing, one in the United States, the other in Tunisia.

It has proved difficult for all donor countries to recruit personnel for the regional office and, as a consequence, the formation of this very important element of the inputs into the grain program has fallen six to eight months behind schedule. The training officer (eventually provided by ACDI) arrived in Niamey in December, 1972. He has prepared, in consultation with officials of both cereals offices, a projected staffing pattern for both offices, has derived from this staffing plan a schedule of training and retraining through 1976 and has already completed one formal training program for field men of both cereals offices.

A second member of the regional cell, a FAC civil engineer joined the regional team in February 1973. His major duties in the first two years of his assignment will be close supervision of warehouse construction provided under the AID loan, or from other sources.

The action of ACDI in providing the training officer, originally to be provided by AID, released an additional AID position and allowed for provision of a grain storage technician at the regional level. Problems of storage will become more serious as the cereals offices gradually construct and utilize some 60,000 tons' capacity of stabilization grain over the next two to three years. Furthermore, the

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request of Togo and Dahomey to join the program triggers a requirement for a storage expert both to study their possible participation in the Entente program, and to implement any activities decided upon. As mentioned elsewhere in this document problems of storage will be paramount in any Togo/Dahomey participation. A storage engineer with over 12 years of marketing and storage experience in cereal grains in Africa took over assignment as regional grain storage specialist in June, 1973. In addition to his storage duties, he is charged with regional responsibility for grain marketing until such time as AID provides a full-time grain marketing expert to the regional office. The need for studies and policy guidance in this field is urgent.

AID will continue to search for a grain marketing technician for the regional office.

Short-term experts have not been used as yet under terms of the present grant agreement, but several requirements for this type of assistance are beginning to shape up for FY 74 and later as follows:

(1) Economic analysis, with emphasis on pricing

An excellent review of grain production trends in Niger and Upper Volta has been completed and is now under review. This is only a first step and further study must be undertaken immediately to continue this for the entire Sahel, to develop a grain supply inventory model, and for the benefit of the cereals offices as a pricing model. There are a number of intermediate components of these final models which cannot be supplied from existing statistics and which will require field work. Supply-price responses must be determined through micro-studies of farm-management practices. Special attention must be given to on-farm storage, the factors which influence it and its magnitude.

Becker or a similarly qualified economist should be assigned to this task no later than 1 January 74.

(2) Statistics improvement study. The above (1) study is expected to indicate in a general manner what deficiencies exist in the ag statistics now being used in the Entente grain program countries. A need is seen at this time for a closer look at this problem, with recommendations for improvement in the gathering and analysis of their statistics, particularly as they have bearing on food grain production and marketing policies. A start in this direction was made in the summer and fall of 1973 with the assistance of a crop statistician to improve the precision of Upper Volta 73 cereal harvests statistics and to accelerate the analysis of 73 crop production statistics in Niger. In November 73 on the second visit of the crop statistician to these countries a precise medium to long term plan of assistance to these offices will be planned.

(3) Production: The production phase of this program should be implemented as soon as possible. The following appear to be high-potential areas for study:

- a. Seed multiplication. Facilities do not exist in either Niger and Upper Volta for seed multiplication. Both countries have indicated an interest in this project and IRAT/Upper Volta make a verbal commitment to undertake 40 hectares of multiplication in 74 (the extent of their foundation seed at this point) expandable to 250 hectares by '75, given AID financing. Niger has requested this program also but will not be able to present a dossier until 15 November 73.

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- b. Pre-extension. Despite reasonably good cereals research in both countries, no farmer has been known to adopt an IRAT recommendation. The problem appears to lie in the failure of IRAT to check out its recommendations under farmer conditions, and the complete lack of contact between researchers and extensionists. Both countries are aware of this deficiency and are keenly interested in remedying it. Experimental villages, along the lines of Senegal's Unités Experimentales have been suggested as one of the best ways to attack the problem.
- c. Strengthened extension programs. Niger has requested a program to strengthen cereals extension program in two cereal growing departments. A dossier has been promised by 15 November 73.

The first feasibility and program development field study on the above items will be started in its period January/February 1974 with a team consisting of the agronomist and one production economist.

(4) Evaluation: The grant agreement of June '71 states that the Entente Grain Stabilization program will be evaluated after two years of operation by a joint committee of AID and the Grantee to determine if satisfactory progress has been made, and if the project should be extended. Criteria to be included in the evaluation are (a) the establishment of an effective regional office (b) have they developed the policies to be recommended to the participating government, (c) have the governments indicated a disposition to cooperate in effectuating these policies, and (d) have the participating countries contributed to the project satisfactorily within their limitations. The suggested time period of two years is up. The period April, May '74 is suggested as an appropriate date for such an evaluation. A minimum of one outside expert, preferably a marketing economist, should complement the efforts of the AID and Entente evaluators. It would be appropriate for ACDI and PAC to collaborate in the evaluation.

(5) Reserve storage: The continuation of the drought emergency and the large quantity of grain requirements to meet consumer needs during these deficit periods has underlined the insufficient attention given in any of the studies upon which this program was designed to reserve storage. This storage requirement is substantial and presently estimated by the regional cereals office at 25,000 MT and 35,000 MT respectively for Upper Volta and Niger. This requirement is an addition to stabilization storage needs, and is not sufficiently provided for in present planning and funding. The study required for implementation of this phase of the program might be undertaken by the regional cereals office, possibly assisted by AID short-term technical assistance during May-June 74.

b; Training

The planning and organization of all training for both cereals offices, and for Togo/Dahomey when they join the program have been placed under the responsibility of the regional training officer. Mr. Paul Ferron assumed this assignment and has developed both a staffing framework and a training plan for the two offices.

This training will include short training courses, refresher courses, and on-the-job training for all cereals office staff members including top management, controllers, stockkeepers and bookkeeper accountants. Some of this training will be given in one or both of the participating countries or in a third country with experience in this area, e.g., Tunisia.

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AID has agreed to finance all training costs over the first four years of the project except for the salary and housing of the training expert and for air travel between Niamey and Ouagadougou.

A budget to accomplish approximately the first year of training for OPVN and OFNACER was submitted by Mr. Perron through the Conseil de l'Entente in May, 1973 and has been approved by AID.

c. Commodities

AID obligated a total of \$200,000 for commodities under the original grant agreement. Commodities furnished have included wood pallets for grain storage, fumigation material, grain handling equipment, and office equipment for the two national offices and the regional office. These commodities combined with those supplied by FAC and AGDI, and bilateral donors are approximately 80 percent delivered at this time. In addition to commodities supplied under the original grant, equipment will be programmed for the second lot of warehouses.

d. Other Costs

Included in this category are funds for a bilingual secretary to work in the regional office in Niamey. A local secretary for this position is under recruitment at this time and is expected to be on the job not later than June 1, 1973.

Funds in this category have also been used to contract with TransCentury Corporation to recruit experienced French speaking grain technicians for national office and regional technical assistance positions.

The timing and details of U.S. inputs to the project for technicians and participants are as follows:

U.S. Inputs - Grain Stabilization

FY

71 72 73 74 75 76 77 78 79

1. TECHNICIANS

MAN-MONTHS

Grain storage tech-regional				12	12	12	12		
Grain mkt. tech-regional				6	12	12	12	6	
Grain mkt. tech-Niger		9	12	12	12	3			
Grain mkt. tech-Upper Volta		1	12	12	12	11			
Short-term technicians				24	18	10	2	4	2

(Thousands of dollars)

2. PARTICIPANT TRAINING

25	60	20	20	15	10
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(Thousands of dollars)

3. COMMODITIES

Niger/Upper Volta	200	25	25				
Togo/Dahomey		75	75	30	20	25	25

4. PL 480 TITLE II GRAIN**

(Thousands of tons)

Niger	2	13	26	24	20	16	12	8	4
Upper Volta	20	15	12	20	16	12	8	5	3
Togo					3	2	2	2	1.5
Dahomey					3	2	2	2	1.5

5. CAPITAL ASSISTANCE

(Millions of dollars)

Niger/Upper Volta	1.8	2.0	2.0*	2.0*
Togo/Dahomey		2.0	1.5	

** Stabilization Grain Only

* Emergency Reserve Storage

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2. Capital Assistance

A loan in the amount of \$1.8 million was made to the Entente in November, 1972 for the construction of warehouse facilities in both Niger and Upper Volta. These warehouses are essential elements of the grain stabilization effort.

Sixteen units in 15 locations with a total capacity of 14,500 tons will be constructed in Niger; 11 units in eight locations with a total capacity of 15,500 tons will be built in Upper Volta. Floors, walls and roofs will be constructed locally, in Niger. Roof trusses, door and window frames will be imported from the United States for the Upper Volta warehouses. Flat warehouse type construction for storage in sacks and for very simple handling equipment is planned. Construction of this first phase will be completed in late '73 or early '74. Two complete pre-engineering units will be constructed in Upper Volta during Phase I to test the feasibility and acceptability of this type of construction for possible wider use in Phase II.

In as much as the cereals offices seek approximately 25 percent of the commercial market, and in view of the need for emergency as well as price stabilization storage, Phase I will provide not more than 50 percent of the required storage capacity, even when added to existing capacity. A second phase loan providing funds for additional storage capacity of approximately the same amount will be provided upon the successful completion and evaluation of Phase I construction.

Given the continuation of the drought emergency at least through 1974, and the need for both cereals offices to handle and store extremely large quantities of grain (over 200,000 MT in the case of Niger) the implementation of the 2nd tranche should be started immediately.

Drought experience has also indicated the need for storage facilities in the northern, non-grain producing regions of both countries to allow for accumulation of stocks during the period January through June when roads are passable for distribution and/or sale to nomads during the summer when roads are blocked. A plan for a limited capacity of this type of storage of approximately 10,000 MT in each country has been developed by the Fei Team. Construction will be hopefully completed before 1 June 74. Financing will be separate from grain program funds.

Finally, provision must be made for additional reserve storage for emergencies. Present plans allow no more than 8,000 tons reserve capacity above stabilization stocks and, in the light of recent experience is totally inadequate. Provision is made elsewhere in this PROP for further study of this requirement.

3. PL 480 Title II Assistance

The provision of PL 480 Title II sorghum for sale is an integral part of the Entente grain stabilization program, at least in the early years. In effect the imported sorghum has made up a large percentage of the stabilization stocks in the first three years of the program. The fact that these three years and particularly the crop year 1972 have been short crop years has further accentuated the important role of PL 480 sorghum.

During the first two years of the program, PL 480 sorghum has enabled the two cereals offices to stabilize consumer prices around a level between 25 and 30 CFA per kilo. The cereals offices have been able to use these early years to advantage

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in building up their staff, their buying and distribution organization and to make a start toward the construction of substantial storage capacity. At the same time the net proceeds generated from the sale of imported grains has permitted the accumulation of a sizable working fund for the purchase of local grains. With a reasonably good 1973 harvest, both cereals offices will have sufficient resources of staff storage capacity, transport and working funds to enable them to effectively support farmer prices and lay in a sizable stock of locally purchased millet and sorghum for use both as emergency and stabilization stocks. Unfortunately the 73 harvest appears disastrous in Niger and below average in Upper Volta. As a consequence large quantities of both stabilization and emergency grain will be required in 73/74. The exact requirements are presently under study by a UN multi-donor team.

The quantities of PL 480 cereals imported as part of the stabilization program since its beginning in 1971 are as follows:

	<u>70</u>	<u>72</u>	<u>73</u>
Niger	2,000	13,000	26,000
Upper Volta	20,000	15,000	12,000

In addition to the stabilization stocks listed above for 73, emergency stocks of 25,000 tons were imported into Upper Volta and 32,000 into Niger.

The fairly regular occurrence of short crops in recent years has led to the conclusion that the original assumption upon which PL 480 sorghum imports were based, of a four-year weather cycle of one good, one poor and two years average crops, was in fact overly optimistic, and might best be assumed as a seven year cycle of one very good, one very bad, one good, two average and two poor years. Such a cycle would require a heavier importation of cereals than the 10,000 tons per year originally programmed, perhaps up to average of 14,000 tons for Niger per year, 11,000 for Upper Volta. It is possible that this figure is overly influenced by the pessimism caused by the present shortage and that, given the increased ability of the cereals offices to buy local grain over the next few years, a somewhat lesser tonnage of imported grains on an average may be adequate through the 1980 planning period. Required quantities should decrease in the latter years of this period if the stabilization program achieves its purpose. It should be noted these figures do not include emergency needs, since these can only be estimated in terms of the specific emergency. Emergency needs will be substantial in 1974.

Estimates are also stated below for Togo and Dahomey. These estimates are low since it is assumed at this time that substantial imports will not be required, since the program will probably be largely directed toward reducing storage losses.

	74	75	76	78	79	80
Niger	24,000	20,000	16,000	12,000	8,000	4,000
Upper Volta	20,000	16,000	12,000	8,000	5,000	3,000
Togo		3,000	2,000	2,000	2,000	1,500
Dahomey		3,000	2,000	2,000	2,000	1,500

The figures cited are averages. It is assumed that (a) there will be short and good years in the time period indicated requiring greater or lower importations in the respective years, and (b) requirements will trend downwards through FY 1980.

By the projected end of this project both cereals offices will be in position to stabilize cereal markets and handle all but the most extreme emergency conditions with locally produced grain. Storehouses will be in place and functioning, as will a purchasing and selling infrastructure, including trained cadre. Effective marketing and storage policy will have been developed. Most important, an adequate working fund for the purchase of local grain will have been accumulated from the sale of grains in the early years of the program. This latter point highlights the importance of safeguarding the bulk of funds realized from imported grain sales from dissipation to uses of secondary importance or irrelevance to the grain stabilization program. Proceeds must be directed primarily to working funds for grain purchase.

II. Entente Countries Contributions

The cereals office in Niger received a GON contribution of \$120,000 at the time of its creation in 1970. They also received a special credit through the Niger Development Bank for any working capital deficiencies up to a total of \$700,000.

OFNACER received the assets of a predecessor agency equivalent in value to \$120,000 and an additional contribution of \$280,000 in 1971.

The cereals offices have been set up to be financially independent and self supporting. Once launched their operating expenses are to be covered by their own operations. The size of these operations measured in terms of grain handled, budget, and increase in staff was nearly four-fold in the first two years of operation.

The support of the Council of the Entente to the program consisting largely of logistic support of the members of the regional office plus the grain program's share of the Entente agricultural officer's time, is estimated at \$20,000 in 1972, and will increase to approximately \$35,000 per year as the regional office becomes completely staffed.

III. Other Donors

The contribution of each cooperating donor (Canada, France, US) in this multi-donor program was worked out in several meetings among donor, Entente, and national government officials in May and October of 1971. These contributions from donors other than the U.S. over the first four years of the program were to be as follows:

Canada (ACDI)

Technical Assistance

OPVN - one management expert

Regional = one training officer

Both assignments are filled.

Commodities - a grant of \$700,000 for construction of OPVN headquarters office and grain treatment equipment and materials; vehicles, sacks, electric generators.

France (FAC)

Technical assistance.

Regional - one agricultural engineer

This assignment filled February '73.

Commodities - A grant of \$166,000 for purchase of vehicles, typewriters, grain treatment equipment, weighing equipment, vehicles.

In addition, both countries have contributed substantial quantities of cereal (corn, wheat) which have been distributed through the cereals offices and the proceeds have contributed to their working funds. Part of the money from the sale of Canadian grain in Niger has been used to construct offices and housing for regional controllers. These are being built in conjunction with the construction of OPVN warehouses.

Other countries have also assisted the program. OPVN using a grant of \$240,000 from the Government of Libya increased its storage capacity by 3,000 tons. Libya also has contributed trucks and vehicles to the OPVN fleet. The Federal Republic of Germany through a grant of \$60,000 to OFNACER has enabled that office to construct prefabricated plastic storage units of 6,000 ton capacity in Ouagadougou.

Donations under the drought assistance program from a number of countries have added to the resources of both cereals offices. For example OPVN now has a new fleet of some 50 vehicles ranging in size up to 25 tons.

E. Rationale

The basic staple foods of the people of the Entente States are millet, sorghum and corn. Although sufficient land and manpower resources exist within this region to provide for the food needs, even of a growing population, farmers at the present time scarcely grow enough food grains to satisfy their own needs, not to mention those of a growing urban population. Grain production in Upper Volta, Niger, Togo and Dahomey has increased only slightly if at all (statistics from various sources conflict) since independence, and production per capita has in recent years apparently decreased. On the other hand, production of export crops such as cotton and peanuts increased considerably across the Sahel during the colonial era and in the case of cotton continues to do so. This increase in export crops at the expense of food crops is attributable to two causes:

- (1) The long-term flow of resources into increasing production of export crops, and
- (2) the existence of a ready market and an organized marketing system for export crops.

This stands in sharp contrast to the situation for food grains, where it has been taken for granted until only recently that, since farmers' self-interest dictated he produce sufficient grains for his needs, an adequate food supply would be automatically forthcoming. Furthermore, no institutionalized marketing system has developed

for the food grains other than the small scale traders whose areas of operations and resources are usually quite limited.

The assumption of an automatic food supply was probably never correct in an area so prone to hazardous climatic conditions as the northern parts of Togo and Dahomey and all of Upper Volta and Niger. But recent economic and social trends have aggravated the problem. An increasingly large number of people are moving to urban centers, and thus are dependent upon the market rather than their own efforts for their food supply. Furthermore, the introduction of cash crops has reduced the quantity of inputs potentially available for food production. There is also a tendency, even among rural people to experience the pressures of the consumer society, and in order to obtain cash, sell off part of the family grain supply fairly soon after harvest. Although this places more grain on the market, it also means the farmer must enter the market again to buy grain at a later time when it is in shortest supply.

Most of the grain in the Entente States is produced by small subsistence farmers on holdings of less than two hectares. This grain is consumed on the farm and only a small proportion, somewhere between 10 and 20 percent of production, enters commercial channels. Grain produced within a given year is largely consumed over the year until the next harvest. When weather conditions are reasonably favorable over several crop years, most farmers attempt to build up and carry a reserve supply equivalent to at least one year's supply in their farm granaries. Grain supplies often fall short of needs before a new harvest comes in. The period of shortest supply is the "Soudure" from May to September. This short period coincides with the growing season when nutrition requirements among the active farm population are highest, and it has become increasingly necessary over the past ten years to import cereals to make up the deficiency.

Actual production of millet and sorghum are usually estimated as high as 1,300,000 MT in a good year in Niger, and up to 1,000,000 MT in Upper Volta. Both of these figures are probably high. Sorghum and millet are less important in Togo and Dahomey than in the Sahel, amounting to only 100,000 and 75,000 MT respectively on an average. Corn, however, is a much more important staple in these latter countries, particularly in the higher rainfall regions along the coast where recently production has averaged 100,000 MT in Togo and 215,000 MT in Dahomey. An extremely serious problem in the corn producing regions is the loss of stored corn to insect and moisture damage. It is estimated that as much as 40 percent of corn produced is lost in storage.

As stated earlier, the potential exists for achieving a substantial increase in regional production of these cereals. Soil resources are adequate, as is farm labor. A labor constriction does exist at the time of crop cultivation, using traditional technology. Existing research-developed techniques such as improved varieties, cultural practices and the adoption of animal traction could probably give a 30 percent increase in yield, even without the application of fertilizer. Some estimates go even higher. One of the more serious limitations up to this time has been the primitive level of marketing. Until improvements have been made in the technique of market exchange, with the possibility of offering the farmer a reasonably stable and remunerative price, little progress in increased production can be expected.

Traditional grain markets in the region are characterized by small quantities marketed at any one time by the producer, in small markets close to the area of production. Prices received by farmers vary widely during the year, from season to season, and from one area to another. This situation is closely linked to inadequacies in the system of collection, storage and distribution. For example, the price of millet to the producer may vary from 6 to 8 CFA per kilo at the time of harvest to 40 or 50 CFA six months later. At any one time, the market price may vary by 100 percent between neighboring markets. Consumer prices can rise from 25 CFA per kilo at harvest time to three or four times as high later in the season. During the soudure, many of the consumers are the same producers who sold at six F/kilo. Such price variations are in part a reflection of geographical and season variations in production due to variation in rainfall. They also reflect, however, a very imperfect market structure, insufficient storage, transport, and market knowledge, alternative selling outlets, and the speculative actions of grain dealers. For good reasons, the producer has come to the conclusion that the production of food grains for the market is a non-paying proposition and has done little to increase production.

This situation has been recognized for several years in the Entente States, by the individual governments, by the Council of the Entente, and by various development organizations within the region. The problem has been studied in depth (see earlier citation of studies) by a number of American, French and Canadian specialists. These studies are all agreed upon the approach to the problem indicated in this PROP - the formation of national cereals offices which by their action of buying, storing and selling a portion of the commercialized grain crop, would assure a steady and reliable supply of food grains to consumers in all parts of the country, while at the time motivate producers to greater production through the provision of a stabilized market outlet at good prices. In addition, for the corn producing areas, the stabilization agencies would introduce grain conditioning and insect and disease control along with storage to reduce storage loss from the present high levels.

During average and good crop years cereal offices would buy in stocks not only sufficient for the ongoing stabilization program, but substantial reserve buffer stocks. The severity of the drought in 1972 and 1973 indicated that buffer stocks must be substantially larger than planned in the original design. With adequate buffer stock storage and a successfully functioning market stabilization effort, plus a cereals production program, both countries can arrive at a point by the end of this program where they can successfully cope with all but the most serious drought. (e.g. drought of 72/73 and 73/74). Originally estimated at between 7,000 and 10,000 MT for each of the two countries, it has become evident during the disaster years of 72/73 and 73/74 that a minimum emergency reserve of some 35,000 tons will be required over and above stabilization needs.

The economic benefits which will be derived from the operation of the cereals office will be proportional to their success in meeting the above objectives. If the agencies function as planned, the price to farmers will increase, more particularly in years of good harvest, and consumers will benefit from a more assured supply of grain at lower prices, especially in deficit harvest years.

The benefits to accrue to Niger from the functioning of OPVN, based on the assumption of a four year cycle mentioned earlier, have been estimated by the Canadian study to amount to 290 million CFA increased revenue to farmers, 330 million CFA

decrease in costs to consumers. The latter figure represents eight percent of the consumer gain cost over the four years. In effect, Niger will almost completely recuperate, in the first eight years of operation, the amount necessary to establish, equip and sustain the cereals office during this period. Estimates for cereals offices in the other countries are equally favorable; a large part of the benefits accrued to Togo and Dahomey would result from the value of corn saved which is now lost to insect and moisture damage.

In addition, to the above direct benefits, other benefits will accrue. The need of the cereals offices for more precise information on crop production and marketing requires the development of a system and a structure for improved gathering and analysis of agricultural statistics. This will benefit not only the cereals offices but also other government offices concerned with agriculture, economic planning and development.

The construction program to provide the storage infrastructure required by the cereals offices will cover a period of four or five years in each country and will directly employ an estimated 175 people. This construction will also require purchase on local markets of sand, gravel and other materials. In, a similar manner, the operation of the cereals offices will increase employment in the area of transport, and in actual buying, storage and selling operations.

Another indirect benefit worth mentioning is the improved health of people assured a regular supply of their basic foodstuffs and the attendant increase in their own productivity as a result.

Finally, and important to further development of the program, it is anticipated that farmers will be motivated, given the development of a dependable market for their cereal production, to invest at least a part of their increased income, in production-increasing inputs (improved seed, cultural practices) to be applied to subsequent cereal crops.

F. Course of Action

The Entente Cereal Grain Stabilization program has made substantial progress since its beginning in 1970. Cereals offices have been established in Upper Volta and Niger, which have demonstrated conclusively during their first years of operation that they can effectively achieve their objectives. Office and transportation equipment has been furnished, cadres have been selected, a central staff has been assembled, grain marketing technical specialists have taken up their duties, construction will soon be started on the first half of the required warehousing in each country, and buying and selling infrastructure have been established. Price stabilization has been achieved during the initial years of the program using substantial quantities of PL 480 Title II sorghum and other donor grains available for local sale. This assistance in grain has been of crucial importance in the first three years of operation, since all of these years were to greater or lesser degree drought years. These imported grains have been sold in addition to the sale of locally produced millet and sorghum which the offices have been able to buy, and the monies accumulated from their sale in each country have gone into a special fund. This special fund will accumulate and be used, for the most part, as working capital for the purchase of local grains in years, or regions of surplus.

As the cereals offices increase their cadre and storage facilities, they will soon be in a position to achieve market stabilization with locally grown cereals and the program will gradually free itself of dependency on imported cereals except during periods of extreme drought. Even in this situation, they will have accumulated sufficient working funds to enable them to make up large production deficits through cash purchases on the world market.

However, a great deal remains to be done, and the program through 1980 is anticipated to include, but not be limited, to the actions described in this section. These specific actions refer to critical aspects of the total expanded program and thus concern only certain of the inputs discussed in Section D.

1. Addition of Togo and Dahomey into active participation in the program.

Active participation until now in the grain stabilization program has been confined to Niger and Upper Volta, and has involved almost exclusively the two cereals, sorghum and millet. In mid 1972, both Togo and Dahomey, through letters addressed to the Council of the Entente, indicated a strong interest in participating in this program. Their program will still be concerned with sorghum and millet since both these crops are grown in the northern part of both countries. In addition, corn will be of major concern in both of these countries, and will add a new dimension to the program, particularly at the technical level. Specifically, the conditioning of the grain to the proper moisture conditions, and measures to meet a more serious insect and disease control problem will be of prime importance. In terms of achieving its market stabilization objectives, the programs in Togo and Dahomey are expected to follow the lines of present programs in Niger and Upper Volta.

Following receipt of the letter of application from the two countries, the Entente is planning a meeting in '73 or early '74 of the responsible authorities in both countries in order to arrive at a precise statement of their understanding of the problem, of their objectives, and of the alternatives which might be available under the Entente grain stabilization program for resolution of the problem. At this point, both the Entente agricultural program officer and the AID project officer will conduct survey studies in both countries to arrive at the preliminary assessment of the parameters of the project.

The Entente will then organize a meeting of the participating countries --Cnanda, France and the United States, to discuss possible lines of participation and assistance. If, at this point, participation of these two countries appears feasible, the Entente will arrange with the donor countries for in-depth studies to (a) resolve specific technical problems which are present in this situation, (b) outline an organizational and infrastructure framework that will be required and (c) conduct the program design studies required by the donors for their participation.

Grain marketing organizations are already established in both Togo and Dahomey, and a part of the responsibility of the project feasibility study will be to assess the adequacy of their enabling legislation, resources, organization, structure, and cadre for achieving the objectives of the program.

Implementation of the program at this point will follow the lines of implementation in Niger and Upper Volta with technical assistance, commodities, training and loans for capital contribution provided as called for in project design studies.

To the extent feasible, development of the program details for U.S. participation for Togo and Dahomey will be conducted in collaboration with the development of a similar program now under discussion in Ghana. Although the two programs will necessarily be separate, the technical and structural problems to be solved in Togo and Dahomey will closely resemble those of Ghana. One of the ancillary functions of the project's regional technical office based in Niamey will be to review developments and propose courses of action liable to affect the Entente-Ghana as a whole.

2. Price Setting

As has been indicated earlier, one of the most crucial elements in determining the ability of this program to meet its objectives is the skill with which various official prices are set. The officially announced farmer floor price must be high enough that even in years of good harvest, the farmers return is sufficient to cover his expenses, and to maintain his interest in producing cereal grains for the market. On the other hand, the floor price cannot be so high as to excessively draw farmer's resources from the production of other crops, particularly export crops, nor can it be so high as to exhaust the resources of the cereals office in attempting to support the floor price during the bumper crop years.

In a similar manner, the official consumer price must be set in such a manner that while it is not excessive to the consumer, it is sufficiently high under the circumstances of the particular year to enable the marketing organizations, both the official cereals office and reasonably efficient commercial dealers to cover their costs and make a reasonable return on their investment.

Price setting of this nature is key to the proper achievement of the market stabilization objective of the program and requires a substantial degree of economic expertise. The cereal offices need to be assisted to develop a logical methodology for arriving at their prices, and for improving their position and their arguments vis-à-vis the national councils who determine price levels. Part of this type of technical assistance will be provided by the regional grain marketing specialist after arrival.

However the problem seems sufficiently pressing and complex as to require the technical assistance of at least one economist/marketing specialist to study the problem in depth, develop a usable pricing model, and present an action oriented report to the cereals offices through the Council of the Entente at an early date.

This assistance should be fairly long term. The job cannot be done by a quickie visit of a month or two. Much basic data must be collected and certain crucial studies never before undertaken must start with the field work, e.g. a study of the extent and magnitude of on-the-farm storage. This study would be a continuation of the supply/demand analysis started by John Becker during summer 72.

This study should also consider and make recommendations on a closely allied problem - the almost complete lack of valid production and market statistics. Reasonably accurate statistics are absolutely essential to a successful functioning marketing organization at the national level, and neither the statistics nor an organization to gather them exist. While this is no doubt beyond the resources of the grain program to establish a complete crop and market reporting system, an effort must be made to develop a reliable system for generating and analyzing the

statistics essential to the grain marketing program. The price-structure study team will be requested to make a study of their requirements in statistics and recommend a course of action for implementing a suitable reporting system.

3. Improved crop reporting

A key element in the proper functioning of a market stabilization program is solid dependable crop reporting. Both countries have a two man crop reporting service which does its best with almost no resources. Ag statistics are generally admitted to be prone to serious error. Short-term technical assistance has been provided to the statistical reporting services of both countries in late fall 1973 to improve the 1973 crop estimate. This assistance will provide for an independent sampling of the crop in Upper Volta and a speed-up of the estimation and analysis process in Niger. The technician providing this short term assistance has been requested to suggest not later than 30 January 73 a long term assistance program to the crop reporting service in support of the market stabilization program. It is anticipated that such assistance will enable accurate timely crop estimates as a basis for price, buying, selling and storage decisions on a continuing basis after 1973. Specific details of this support will be incorporated into the next revision of this PROP.

4. Additional Technical Assistance at Regional Level

In the original planning for this multidonor project, three regional technical specialists were to have provided technical guidance to the national offices in the development of regionally coordinated policies and procedures. The skills to be represented at the regional level were a marketing specialist furnished by the U.S., a training specialist furnished by Canada or the U.S., and an agricultural engineer to be furnished by the French. The Canadian training specialist took up his duties in December, 1973; the agricultural engineer arrived in March, 1973, in time to commence supervision of construction of the first set of warehouses financed by A.I.D. The third member joined the regional office on 1 June 1973. He is to be charged both with regional marketing responsibilities and with the resolution of technical problems of grain storage. Assuming the early addition of Togo and Dahomey to the program; with the serious technical problems of storage involved in storing corn in tropical climates, the present regional marketing/storage specialist will assume full time assignment in the storage area, and his present marketing duties will be taken over by a full-time marketing economist supported by USAID.

All technical assistance at the regional level will be continued at least through 1976. It is anticipated that the regional office will have fulfilled its objectives by that date, and it is not anticipated that the office will be continued. However, this matter will be reviewed on a continuing basis by the Council of the Entente, and if it becomes evident that a small continuing regional staff is necessary, steps will be taken to recruit and train African technicians to replace expatriates in these positions at the earliest possible date,

It is anticipated at this time, that the technical assistance provided directly to the national office by the US marketing specialist (AID) at OPVN, and one grain marketing specialist (AID) at OFNACER will continue through FY '76. In addition,

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at least one grain specialist will possibly be required by each of the cereals offices in Togo and Dahomey beginning on/about 1 January '75. Given USAID difficulty in finding qualified French-speaking technicians, it will be suggested these posts be taken in charge by either the French or Canadians.

4. On-the-Job Local Courses and Participant Training

CIDA's regional training officer has just arrived on assignment and has completed planning for a first year of operations. AID will continue to provide the funding necessary to support the project's training program in terms of scholarship funding, additional instructors, and other local costs. Given the arrival of the training officer, this important area will assume a new dimension. A first effort has been to give training in elementary accounting and management to field controllers of CFT and CFIACER. This type of training will be a continuing annual requirement and will increase with the addition of Togo and Dahomey. Short courses in grain storage technique, damage control, stock management and related subjects will begin in Summer '73 for warehousemen who will work in the new storage facilities. More detailed technical training will be required for corn storage techniques as the Togo and Dahomey offices become active.

A serious problem which must be addressed by all cereals offices, is the selection and training of administrative and management personnel. This has been neglected and both offices, which have until now gotten by under the personal direction of their chiefs and technical advisors, will find this system no longer feasible as their operation grows in volume and complexity. A final task will be the recruitment and training of technicians to replace the expatriate advisors. Advice and technical assistance in this area is provided by the regional training specialist.

5. Warehouse Capacity

With the financial assistance of the AID loan of 1.8 million Upper Volta and Niger are in the process of constructing warehouses, thus bringing each country to approximately 50 percent of its required stabilization storage capacity. Upon successful completion of this construction, another loan of approximately the same size will enable both countries to complete their storage requirements. Storage and treatment facilities requirements for Togo and Dahomey will become known as the necessary studies are completed. While storage facilities in these countries are not as short as in Upper Volta and Niger, grain conditioning equipment requiring fairly high levels of investment will probably be necessary, and additional loan funds of an estimated magnitude equal to that of Upper Volta and Niger, will be required.

The continuing 72/73 drought has brought to light two additional storage needs which were not foreseen in the original studies and program documentation upon which this program was based:

- a. Storage in the remote consuming areas of the north of both countries, which are deficit (non-producing) every year and which are inaccessible by road during much of the rainy season. The Fei team estimated this
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need at approximately 8,000 tons in both countries and has provided an estimated 2.5 million dollars emergency funding, based on an estimated construction cost of \$30 per ton. The objective is to have these warehouses constructed and ready for stocking not later than May 73. This will require an immediate start and fantastic luck but is worth the effort. The first step will be closer study of suggested localities, capacities and construction costs. It is highly probable that the \$30 figure for these remote locations (e.g. Gorom-Gorom, Agadez) are too low.

b. Reserve storage to carry the countries through more serious emergency periods. If stabilization storage requirements are considered to run between 25,000 and 30,000 MT (25% of commercialized production) then little storage is left over for buffer stocks to carry over from year to year in more or less permanent storage against seriously short years. This is estimated conservatively at a level of at least 25,000 tons for Upper Volta, 30,000 tons for Niger. Serious study should be given to bulk systems of storage as an alternative to the flat warehouses of the stabilization program. A preliminary study of reserve storage needs will be made by the Regional cereals office during the period 1 January - 30 June 1974. This study of requirements will then be presented to participating donors for their consideration.

Another step which is indicated by the drought and which should be taken as soon as possible is activation of the 2nd tranche of the USAID warehouse loan. Such a step was strongly recommended by the Fei group. According to the existing program agreement with the Entente the 2nd tranche can be activated only after a joint evaluation of the project by the USG and the Entente. This evaluation is recommended elsewhere in this PROP for the period April/May 1974.

6. Grain Imports

Grain imports during the early years of the stabilization program are essential to establish the program. In the first three years of the program the cereals offices have lacked the working capital with which to purchase local cereals, and warehouses in which to stock them. Moreover, crop production has been seriously deficient in these first three years and would have made difficult the accumulation of local stocks through purchase, even if warehouse and working funds were available. Provision of American sorghum on a scheduled basis enables the offices to stabilize consumer prices (especially important since the early years were short years) and to accumulate working funds. It also gives the offices time to develop and train staff, and to build grain storage facilities. The severity of the weather over the past three years has led the offices to change their view of the crop cycle and lengthen the time period over which they see the need for grain import assistance.

Under present planning, it is anticipated that grain imports for stabilization will be required by Niger and Upper Volta through 1980 in decreasing quantities, but varying in requirements per year depending on weather conditions. By 1980, sufficient resources will be available to the cereals offices, and sufficient impact will have been made on levels of production to either eliminate the need for imported grain, or to permit the cereals offices to purchase such imports on the world market.

In addition to stabilization grain it was necessary to import large quantities of emergency grain into Upper Volta and Niger during 1973; Prospects for the 1973

crops are even worse than 1972 and emergency imports will be even greater. Based on experience gained in 72/73 the following policies must be insisted upon both for effective emergency support and market stabilization:

- (1) Clear designation by host governments of people requiring free emergency distribution.
- (2) Sale of all emergency grains over and above those quantities required for free distribution (No. 1 above) under same regulations as established for stabilization grain.
- (3) PL 480 grain, both emergency and stabilization destined for sale to be sold at same price as officially set price for similar local grain.

Some U.S. sorghum and corn imports may be required for up to five years to launch the Togo and Dahomey programs, but quantities required are expected to be substantially less in these two countries.

7. Regularization of Working Funds

At present, funds accumulated from the sale of imported grain are placed in a special account. Cereals offices may draw upon this account, with the agreement of AID, for any purpose which advances the objectives of the program. In general, they have chosen to use these funds to buy local grains, and to purchase certain items of operating material and equipment such as sacks, insecticide, etc.

Use of the blocked account for miscellaneous commodity purchase should be kept to a minimum. Principle use for funds accumulated from PL 480 grain sale is as a working fund for local cereal purchase. In the near future both cereals offices may be called upon to purchase 50,000 or more tons of grain annually. At present prices this represents an expenditure of some five million dollars. There is no way for the cereals offices to accumulate funds of this magnitude except through safeguarding the proceeds of the sale of donated grain. And there is no way for the project to succeed except upon purchase and sale of local grain. Dissipation of working funds for other objectives, however worthy, jeopardizes the program.

AID/Washington policy guidance is required at an early date on the replenishment of the special account upon sale of local grain originally purchased with account funds. At the present time the cereals offices are not required to return these funds to the account. Policy of the two offices differs, with OPVN replenishing the account, OFNACER not.

8. Development of a Production Program

As a natural outgrowth of the Grain Stabilization program, and in fact as a necessary complement to it, a cereals production program will be studied and developed over the coming year. This program will emphasize the provision of production-increasing inputs and an efficient delivery and credit system. The Council of the Entente has already canvassed the Entente countries and has received positive assurance of interest. Currently, AID has launched base-line studies to develop certain basic information necessary to the accomplishment of the program. These studies will research necessary planning information where it is not readily

available, and will probably require up to two years. It is anticipated, however, that indications will be available early to suggest what additional inputs might be required and when they might most advantageously be made.

An economic analysis of cereal production and consumption in the Sahel, including use of satellite photos has been conducted during May, June 1973 by an agricultural production economist and an earth satellite interpretation expert.

AID/Niamey submitted a number of specific program elements in the 1973 Field Budget Submission which could be implemented at this time on the basis of available knowledge and inputs.

The Fei short-term team also recommended several projects in the production area which fall directly in the domain of this project - specifically a facility and resources for millet and sorghum seed multiplication in both Upper Volta and Niger.

Another project being studied at this point and requested by both governments is to establish a link between research and extension which would enable field testing of research findings under farmer conditions, and pre-extension work. The ADO/Niamey is studying the feasibility of the Senegalese "unités expérimentales" in collaboration with IRAT and the agricultural services in both Niger and Upper Volta.

A short-term study team of at least one production economist and one agronomist will study grain production programming opportunities in both countries in January through March 1974.

Greater program detail, as a result of their study will be attached to the next revision of this PROP scheduled for July 1, 1974.

9. Agricultural Credit: The cereals offices have discovered that the small grain dealer provided a necessary service, albeit at a very high price - consumer, and to a limited extent, production credit. The cereals offices are giving serious attention to the problem of how best to provide such credit within their own marketing program. While relegated to a secondary place by the more urgent problems of the drought, credit will come in for increasing attention over the next two years.