

**First External  
Evaluation of the  
Agricultural  
Support Project  
in Niger**

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## PREFACE

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Although the contract called for the entire draft report to be translated into French prior to the team's departure, Mrs. Kerst and the team leader agreed that an executive summary in French, with principal findings and recommendations, was more suitable for review by the Government of Niger. The entire report was translated into French in Washington, D.C., after the team's return.

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## EXECUTIVE SUMMARY

This first external evaluation was undertaken to measure the progress to date of the Agricultural Production Support (APS) Project and to recommend modifications in project strategies and implementation both to help ensure success by the project assistance completion date (PACD) and for possible inclusion of separate components in follow-on activities financed by the U.S. Agency for International Development.

The APS project has six separate but interrelated components: input supply, cooperative training, seed multiplication, extension support, fertilizer use and extension, and a Program Coordination and Management Unit (PCMU) for the five other components. In addition, the PCMU provided support to the Rural Engineering Service of the Government of Niger (GON).

The APS project is directly tied into USAID's Agriculture Sector Development Grant (ASDG), particularly through its input supply and cooperative training components. Certain conditionalities and policy reforms are required under the ASDG. Achieved conditionalities and reforms make possible progress in APS. Conversely, technical progress in APS enhances the ability of the Government of Niger (GON) to meet conditionalities and make the required reforms.

The purpose of the APS project is the expansion and improvement of the national-level supporting services needed to achieve sustainable increases in agricultural production. APS project support was aimed at two levels: the national and the field, with an emphasis on bottom-up development. The services to receive support are agricultural extension, input distribution, cooperative training, and seed multiplication. The companion project, Niger Cereals Research (NCR) Project, is to support development of improved technical packages. To date, project purpose achievement has been mixed. Delayed start-up of three components (input supply, cooperative training, and extension support), non-adherence to its primary purpose by the seed multiplication component, and the failure of the GON to provide the human resources to create the necessary project-government bridging at the top account for the modest performance.

The initial design of this project was carried out in 1980. After the initial design until 1982, little happened except for the addition and design of the input supply component, since it was felt that the supply of agricultural inputs was not reliable. The period 1980-1982 was marked by a shift in priorities in Washington, D.C., leading to a redesign of the input supply component (completed in June 1983) toward a privatized input supply organization. Further redesign was necessary as it was learned that the private sector had little interest in long-term input supply because of its low profitability. As a result, the redesign called for a guarantee fund with a private bank to enable cooperatives to obtain credit to buy, distribute, and resell stocks of fertilizer from the Centrale d'Approvisionnement (CA). The final design change occurred in 1986 with the transfer of the credit function and guarantee fund from the input supply component to the cooperative training component. This shift was made on the grounds that the cooperative training function would be better served by a credit arm to actualize the economic activities cooperatives wanted to undertake and in which they would be trained.

Thus, the components began to be implemented at different times:

Input supply	March 1985
Cooperative training and credit	July 1985
Extension support	March 1986
Seed multiplication	August 1982
Fertilizer use and extension	March 1987
Coordination and management unit	August 1982
Rural engineering	mid-1983

These design changes, implementation delays, and non-adherence to primary missions, and lack of required GON support have resulted in a project that is not completely coherent and lacks the desired cross-fertilization of components. Also, the project did not adhere to its original organizational design with the result that the required team effort and formal links between components have not been realized.

The project is still far from achieving its purpose -- that is, expanding and strengthening national-level institutions providing support services to agriculture. This shortfall is partly due to the weak and highly centralized national services that the project is to strengthen, and partly to the lack of coherence within the project itself.

Four of the five technical components have made varying degrees of progress toward strengthening or creating infrastructure, which, in turn, could strengthen individual national support services. However, on the national level, there often is very little to strengthen. In fact, three project components work more locally than nationally, in part by project design and in part by default.

A further concern is the effects of the size of the project, that is, its physical, financial, and human resources. The project's relative size makes it appear a competitor (and a threat) to the very national-level institutions it is designed to strengthen. From the project's standpoint, it is often easier and more effective to bypass the weak national service and go directly to the field or to set up its own operating infrastructures. The result, however, is not collaboration and cooperation at the national level. And, in the longer term, the national services are not prepared, either with the experienced personnel or financially, to assume the field-level human resources that have been developed and the additional infrastructures that have been created.

To date, the project components have had varying degrees of success. Cooperative training and credit has shown good progress, with 114 cooperatives (of 210 desired by the project assistance completion date [PACD]) active and 37 of them beneficiaries of the credit sub-component. Training, ranging from literacy to inventory management, is proceeding well, and there have been no defaults and only a relatively small arrearage over the total portfolio. In the 17 months since the first cooperative took out a loan, some 91 million CFA have been lent to cooperatives by the Banque Internationale pour l'Afrique Occidentale (BIAO) under the guarantee fund. The loan portfolio continues to grow.

The input supply component has been successful in establishing a sound financial management system at the CA. The CA, however, is still plagued by high operating costs and the legal inability to make its own business decisions, that is,

pricing and where it will operate. It depends on donors for fertilizer supplies and, to date, does not have a track record (any profitability) to justify cooperatives buying into it through share participation.

The extension support component's purpose was to strengthen the ability of the national Extension Service to manage and support its own field personnel. This has not been achieved. In fact, the national Extension Service may well have been weakened by the existence of the stronger project extension component. Although the Extension Support Center (ESC) may have by-passed the smaller national Extension Service by working directly with the field extension staff, its work has been of high quality and has contributed to improving agent performance in the field. The relationship between the national Extension Service's representatives in the field and the network of research institutions in Niger, appears satisfactory, and is said to be improving.

The seed multiplication component has not yet achieved its primary purpose -- to make improved, high-quality seed available to local farmers. Much progress has been made, however, in creating the infrastructure necessary to produce improved seed. Quality of multiplied seed remains a severe problem, and at present there is no evidence that seed produced by this component is any better than seed that farmers produce themselves. Finally, there is little feedback (linkage) to the researchers at the National Agricultural Research Institute of Niger.

The first year of the fertilizer use and extension component was without result because of late arrival of demonstration materials at test sites and because of 1987's low rainfall. This component has not adopted a farming systems research/extension approach. Nor has it adopted recommendations for fertilizer use stemming from the last five years of research in Niger. The farmers were generally favorably impressed by the performance of the improved varieties of millet and by the cowpea demonstrations. The latter often surpassed farmer expectations given the low amount of rainfall.

Following are the evaluation team's principal findings and recommendations. The organizations responsible for implementing recommendations are indicated after each recommendation.

## INPUT SUPPLY

### Key Findings

- Progress has been made by the project in institutionalizing inventory, accounting, and financial management systems at CA headquarters. These systems will facilitate operation of the CA as a business.
- Union Sous-Régionales des Coopératives (USRC) directors are responsible for collecting payments and managing inventory for the CA at the field level. Their collaboration has been spotty in the past. Cooperative members have not been trained to manage inventory and collect payments despite the storage of CA inventory in sub-depots at individual cooperatives.

- The CA's operating costs have not declined and receivables remain large. Warehouse rental and repairs and maintenance on CA vehicles represent a significant impediment to reduction of operating costs.
- The operating subsidy provided by the GON was reduced to zero in FY 1987. Distribution costs are being withheld from sales proceeds of donor-supplied fertilizer.
- As fertilizer subsidies have been reduced under the ASDG, CA sales have declined. Although aggregate fertilizer demand is decreasing, traders have captured an increasingly larger part of the market. This is not a negative finding as prices from traders are generally lower than those charged by the CA.
- The CA may be able to compete with traders from the standpoint of quality and timeliness of delivery in some geographic areas. Traders are increasingly serving areas near the Nigerian border and irrigated agriculture.
- The CA has no ability to conduct market studies to assess demand for its products.
- The CA has been transferred to the cooperative movement, but the legal statutes defining the CA's structure and operations have not been finalized. The CA's debt to the Caisse Nationale de Crédit Agricole (CNCA) has been absorbed by the GON, greatly improving the CA's economic viability.
- The CA has not been provided with a revolving fund. It is not clear that cooperatives have the ability to purchase shares in a cooperative CA, or that the CA represents an attractive investment. This situation is not likely to change before the end of the project.

#### Achievement of Purpose

Some progress has been made toward providing an institutional framework to allow the CA to be managed and owned as an agribusiness. The internal and financial management of the CA has been improved, the CA has been formally transferred to the cooperative movement, and there has been some CA-cooperative movement interaction insofar as training is concerned.

Key elements, however, are missing. The CA does not have a positive financial and managerial track record necessary to attract cooperative and business buy-in to ownership. Nor has a viable mechanism for capital participation by these outside parties been developed. Furthermore, the CA does not yet operate on sound business principles.

Competition from the private sector has increased in the border area with Nigeria and in irrigated areas, as traders have increased their market share of fertilizer sales at the CA's expense in a static market. Cooperative trade with the private sector based on cooperatives' access to credit via the guarantee fund has not materialized to any great extent, other than in the irrigated areas.

### Principal Recommendations

- To become financially independent, the CA should be allowed to control pricing policy and move toward reducing its burdensome inventories. It must also have the independence to eliminate unprofitable operations and liquidate buildings and property. (USAID/ASDG, CA/UNC, and GON)
- Donor and GON agreement should be sought allowing the CA to utilize the proceeds of fertilizer sales as a revolving fund, or financing should be provided through a loan on a concessional basis. This assistance should take place on a fixed timetable with CA self-financing at the end of the period. (USAID/ASDG, GON, and other donors)
- The statutes governing the operation of the CA as part of the Union Nationale des Coopératives (UNC) must provide authority to run the CA as a business, on sound business principles. (CA/UNC and USAID/ASDG)

The remaining recommendations address specific management issues:

- Ensure that approval of the statutes governing the cooperative functioning of the CA are expedited, and that they grant independence to the CA in marketing and pricing of agricultural inputs. The CA should spearhead this effort. (USAID/ASDG, GON, and CA/UNC)
- Work toward resolution of the capitalization problems of the CA. Reassess the ability of cooperatives to purchase shares in the CA and the extent to which this factor will constrain achievement of project objectives. (USAID and CA)
- Move toward incorporating a marketing strategy in the management of the CA. This may require modification in the delivery of technical assistance. (CA and USAID)
- Some mechanism must be found to allow the CA to reduce its burdensome expenses related to vehicle repair and maintenance. Vehicle rental, or a combination of rental and purchase, should be explored as options. Should purchase be justified, only the number of trucks required to deliver the CA's reduced sales volume should be purchased. (CA, GON, and donors)
- The question of motivation of USRC directors needs to be given further attention. The CA should take a lead role in developing guidelines defining the role of Union Régionales des Coopératives (URC) and USRC personnel in CA operations. These guidelines should then be incorporated into UNC job descriptions and personnel policies. (CA)
- More attention needs to be paid to developing systems that allow the timely collection of sales proceeds. The feasibility of billing USRCs for inputs supplied to them should be investigated. The CA must collect unpaid balances from large projects. The CA should be given the authority to refuse continued sales until the balances are made current. (CA)

- The CA needs to provide training at the cooperative level in the areas of inventory control and accounting procedures. In this regard, the CA should take advantage of the training expertise in place in the cooperative training component. (CA and cooperative training component)

## COOPERATIVE TRAINING

### Key Findings

- There are 114 pilot cooperatives under the project; this is more than one-half of the final PACD goal of a maximum of 210 cooperatives. Expansion is occurring on average at the pace of 20 new cooperatives per quarter.
- Thirty assistants have been hired and trained by the project in a year and one-half. Twelve more are due to be recruited imminently, and this will round out the team to 42 -- a cadre of carefully selected and capable trainers based at the most appropriate level -- the village. Cooperatives are not yet assisting in the payment of the salaries of these assistants.
- The component is lagging in its preparations for transfer in the cooperatives from the Cooperative League of the U.S.A. (CLUSA) assistants to the assistant village trainers.
- The economic, social, and pedagogical advancements made by this core of pilot cooperatives are contributing toward a strengthened cooperative movement nationwide. A rejuvenated sense of purpose and solidarity predominates.
- The main reasons that CLUSA's cooperatives are succeeding in their movement toward capitalization and self-management where others have failed in the past are that:
  - The CLUSA assistants are willing to be based in the villages;
  - Many income-generating activities are successful;
  - The training model is village based, needs driven, and pragmatic; and
  - The intervention is centered on training and not credit.
- After an initial 17 months of activity, 37 cooperatives have economic activities financed under the guarantee fund, and the number continues to grow steadily.
- The BIAO is reluctant to renew the guarantee fund protocol with anything less than a 100-percent guarantee.
- A system of control that can be audited has not yet been put in place.

- Thirty-two cooperatives have outstanding debt of 94 million CFA to the CNCA. The CNCA and the project agreed that these prior CNCA loans would not impinge on guarantee fund activities.
- The Banque de Crédit et du Commerce de Niger and the Dar Al Maal Al Islami bank expressed possible future interest in lending to cooperatives.
- The component's management of cooperative credit activities is effective, and loan repayment rates are generally good, given that the credit subcomponent is still in an early stage of growth.
- Cooperatives' savings have grown to the point where, in the very near future, 20 cooperatives will have savings totaling 6.3 million CFA.
- No guarantee fund loans have been taken out for the purchase and subsequent resale of agricultural inputs.
- The component wants to establish a capital fund of 50 million CFA to permit cooperatives to establish infrastructure, such as building extensions, drying sheds, and equipment, for future economic activities.

#### Achievement of Purpose

The cooperative training component, including its credit subcomponent, has made substantial progress in a short time toward achieving its purpose of "contributing to the growth of a viable cooperative movement in Niger." Cooperatives, via the assistance of the component and credit available to them, are undertaking viable economic activities and are starting to achieve social and economic objectives that they set for themselves.

Key to this development is the component's training model, which helps the cooperatives identify, design, and carry out viable economic activities. So successful is the training model that six other projects and organizations have sought out the component for assistance with their own cooperative training needs. Several have asked the component to help them design a training unit based on the component's model.

#### Principal Recommendations

- USAID should extend funding of project activities past PACD (1989) by including them in the upcoming Rural Organization Development (ROD) Project. (USAID)
- The goal of 210 cooperatives should be seen only as a ceiling, and the final number should be determined only by the absorptive capacity of the assistants and the team. It is better to do fewer well than to do many less well. (APS-USAID)
- Consolidate the gains made thus far in the project. A comprehensive and standardized training plan must be developed. Older cooperatives should be encouraged to evaluate their current economic activities and launch them

again to benefit from lessons learned. On-the-job training must be stepped up and more refresher courses held to further solidify the achievements made so far. (APS)

- Concentrate on bolstering local capacity for future take-over of activities. This includes shoring up the numbers and professional talents of the assistant village trainers, targeting national agents for additional training, stepping up emphasis on basic literacy education in the Mutualist Groups (GMs), and supporting the cooperatives in asserting their authority upwards into the local unions and sub-regional unions. (APS)
- Home-office staffing should be increased by a professional trainer who could serve as a counterpart to the expatriate training adviser and/or as a roving master trainer and coordinator up-country. (APS-USAID)
- Cooperatives, once on a comfortable financial footing, must be urged to contribute their share of the assistants' salaries. Guidelines on when it should start to happen and how much should be paid must be developed soon. (APS)
- Resolve the status of the prior CNCA loans to cooperatives to avoid jeopardizing future commercial bank-cooperative relationships. (APS-CNCA)
- Renew the guarantee fund protocol with a 100-percent guarantee for a period of two years. (APS-BIAO, USAID)
- Create and make operative an effective computerized control system that can be audited. (APS-BIAO)
- Explore the initial interest in cooperative credit shown by the Bank of Credit and Commerce Niger and the Dar Al Maal Al Islami Bank. Maintain continuing contact with these banks. (APS)
- Consolidate the gains already made in the credit subcomponent, and begin an intensive search for new and expanded market opportunities for cooperatives. (APS-ASDG)
- Set aside a minimum of 50 million CFA in the guarantee fund for a cooperative capital fund. (APS-BIAO)

## EXTENSION SUPPORT

### Key Findings

- The role envisaged for the ESC was the strengthening of the ability of the national Extension Service to manage and support its field personnel. ESC has by-passed the national agency office in the Ministry of Agriculture and provides support directly to the field from its own resources. The national Extension Service has not been strengthened but has possibly been weakened by the presence of a stronger and more active analogous organization.

- The GON has not assigned a sufficient number of personnel to the extension support unit to ensure the effective functioning of the organization. A minimum of 10 Nigerien cadre are required. Only three have been provided, however, plus three contract specialists for the audio-visual section whose tenure is in doubt.

#### Achievement of Purpose

In part, the purpose of increasing the effectiveness of Niger's agricultural extension program is being achieved. Despite the GON's failure to provide instructors, counterparts, and support staff, in-service training of Ministry of Agriculture's field extension staff is proceeding well, and is timely and appropriate. Concomitant to the training effort is the dissemination of information to this field staff. The increased flow of information, which was to have occurred, has not.

Work toward improving extension methodologies is progressing, despite the diversion of staff to an unproductive demonstration plot program. Liaison on research is strong with the Institut Pratique du Développement Rural, but less so with the Institut Nationale de Recherche Agronomique du Niger, the national research institution. The weakest linkage, however, is with the headquarters of the very organizations this component is to strengthen -- that is, the National Office of the Extension Service and the National Office of Agricultural Production.

#### Principal Recommendations

- If the ESC activities are to be continued within the framework of the new Niger Applied Agricultural Research (NAAR) Project, these activities should be physically and administratively located in the Ministry of Agriculture in Niamey. There should be only one extension institution in Niger, and the delegation of extension-oriented functions to other agencies will simply continue to be a source of inter-agency friction and discontent. (GOA-USAID)
- If the technical assistance furnished the ESC is extended beyond June 1988, the GON, through the Ministry of Agriculture, should provide minimum numbers of professional cadre and support staff. This will ensure the functioning of the ESC and a potential for continuing the activities when project financing from USAID is terminated. (Ministry of Agriculture)

### SEED MULTIPLICATION

#### Key Findings

- The seed component of the project has not yet reached its primary goal of making improved, high-quality seed available to local farmers. At this point very little seed has been sold to local farmers, and there has been no monitoring of its performance since the activity was begun in the 1970s.

- The quality of the seed has been called into question by a number of observers and has been listed as a principal reason why farmer demand for project seed is low. There is no evidence that seed produced by the project is any better than that which farmers produce themselves.
- The active role in the refinement of varietal selections that the centers were supposed to play has not happened. There is a passivity in the centers' staff has resulted in little feedback to the research people.
- The M-3 growers generally praise the new types of millet that have been introduced and give mixed reactions to the cowpeas. No estimates of farmer adoption of seed have been made by the project. The benefits of the fertilizer dosages used also seemed to bring mixed reactions.
- Administratively the program seems to be doing well. The required reports and documents appear in order and have been done in a timely fashion. Expatriate technical assistance did not seem to instill the basic knowledge for good seed production methods. The two-year period of this assistance was too short. The seed technologist's work during this period has been criticized as superficial.
- The results of the participant training in seed science that is taking place have yet to be assessed since most of the participants have not returned. It is hoped that their return will mitigate some of the component's problems.

#### Achievement of Purpose

After five years of operation, the seed multiplication component has not achieved its primary purpose, that of producing high quality seed. The component, unfortunately, produces large quantities of low-value seed. The component has made good progress in establishing and managing a large contract grower program.

The quality issue emerges in the program for contract growers because impure seed is furnished them. Moreover, there is insufficient supervision leading to inadequate roguing of seed plots, further aggravating seed quality.

#### Principal Recommendations

- The next phase of the component must solve the quality control problems if any of the previous investments are to pay off:
  - Additional training in seed technology, soil conservation, and quality control is necessary for the centers' staff. (APS)
  - Independent seed quality control must be carried out. (National Seed Services-ASDG)
- Close or stop multiplication at two locations with soil and rainfall problems, Hamdallaye and Doukou-Doukou, to bring project activity back to a manageable scale and improve quality. (GON/USAID)

- Farmers' use of seed must be monitored to allow the component to give feedback to the research unit and to enhance the component's ability to estimate price and demand. (APS)

## FERTILIZER USE AND EXTENSION

### Key Findings

- One year of the proposed two-season program of the International Fertilizer Development Center (IFDC) fertilizer use and extension activity has passed. There have been no valid data collected because of the tardy arrival of demonstration materials at the testing sites, and because of the low rainfall during the 1987 growing season.
- The IFDC demonstration and trials activity continues to support an extension methodology that conflicts with the model of FSR/E supported by other offices of the ESC. The IFDC design for the trials and demonstrations has not taken advantage of the recommendations for fertilizer use that were developed during the five previous years of formal IFDC/ICRISAT research in this area.
- The IFDC program has participated in a new system of paying bonuses to field extension personnel who participate in the IFDC program, and has thereby placed in jeopardy the conduct of trials for institutions that do not elect to pay tribute to accomplish their work.

### Achievement of Purpose

Given the failure of the 1987 fertilizer trials, there was no progress toward purpose achievement.

### Principal Recommendations

- The IFDC trial and demonstration program should be redesigned prior to the 1988 planting season. The design should be based upon previous ICRISAT/IFDC research in Niger.
- Feedback from farmers who participated in the 1987 demonstrations should be collected during the 1987-1988 dry season for incorporation into the new program.
- The payment of bonuses to Ministry of Agriculture employees should be stopped.
- Unless these changes are incorporated into the 1988 IFDC activity, USAID and the GON should give strong consideration to terminating this component of the project. (USAID-APS)

## PROGRAM COORDINATION AND MANAGEMENT UNIT

### Key Findings

- The PCMU's organization bears little relationship to that which was proposed in the project agreement. The coordinating structure envisaged in the original design is absent. Instead, the project coordinator, with a management specialist and counterpart, is the only point of coordination between the technical/implementing components and the administrative/support side of the project.
- The technical/implementing units report that the support activity is cumbersome, notoriously slow, and inefficient.
- The PCMU has greater coordinating (control) ability over those components for which it exercises a higher degree of budgetary control.
- PCMU collaboration with components varies according to the component. The greater the degree of budgetary independence of the component, the lesser the degree of collaboration.
- The PCMU sees itself as facilitating administrative matters and outside contacts for the components, and as an evaluator of components' progress toward achieving desired objectives. The components would agree with this view.
- Other than for seeds, the PCMU has undertaken little policy-related activity. There has been no effective dialogue concerning the impact of policies on the CA, an important component of the ASDG reform program.
- The PCMU has only been partially successful in establishing collaboration with the NCR project.
- The PCMU did a credible job of support to the Rural Engineering Service of the Ministry of Agriculture.

### Principal Recommendations

In the remaining time under the APS project, the PCMU should:

- Develop methodologies that will help the several components and the project as a whole measure the attainment of outputs. (APS)
- Start the formulation of agricultural policy as it relates to cooperatives, input supply, extension, and credit. (APS)

## **CHAPTER ONE**

### **PROJECT BACKGROUND**

#### **OVERVIEW**

The Agricultural Production Support (APS) Project grew out of the U.S. Agency for International Development's first multicomponent project, the National Cereals Program (1975), which comprehensively addressed Niger's agricultural constraints. The APS project comprises five technical components: input supply, cooperative training and credit, seed multiplication, extension support, and fertilizer use and extension. A sixth component is responsible for coordinating and managing the five technical components. In addition, APS is linked to Agriculture Sector Development Grant (ASDG), a \$40-million sectoral program in agricultural policy reform; the Niger Cereals Research Project; the Niamey Department Development Project; and the new Niger Applied Agricultural Research Project -- all funded by USAID.

Designed during 1980-1982, and with some components redesigned in 1983-1984, the various components of APS began implementation at different times, from August 1982 to March 1987.

#### **RATIONALE**

The sector goal, as stated in the logical framework, is "to assist Niger in achieving self-sufficiency in food production and improve rural standards of living." The project is an integral part of USAID's ASDG, the goal of which is "to assist the Government of Niger (GON) to achieve its economic and financial stabilization program under IMF auspices and to contribute to the goal of increasing food production and farmers' incomes." The project fits the GON strategy to give cooperatives and cooperative credit high priority in the next years. It also responds to the GON plan to transform the parastatal agricultural input supply system into one run by cooperatives and the private sector. The strategy of greater food self-sufficiency is supported by the seed multiplication and extension support components.

### **Relationship to the Agriculture Sector Development Grant**

The APS project is an integral part of USAID's ASDG program. Progress (or lack thereof) in agricultural input supply, seed multiplication and distribution, and cooperative training and credit under APS affects performance in ASDG. Conversely, the policy reforms called for in ASDG affect progress in APS. The policy issues involved in ASDG center on liberalization and privatization in Niger's agricultural sector.

The ASDG program includes conditionalities that must be met by the GON to trigger the transfer, in tranches, of some \$29 million in resources to development activities. Some of the conditionalities bear directly on APS:

- Reduction of subsidies on agricultural inputs. This is proceeding satisfactorily, in stages; and
- Transfer of the Centrale d'Approvisionnement (CA) to the cooperative movement. The transfer has started, but legal statutes have yet to be formalized.

Recommendations from the December 1986 evaluation of the ASDG program also bear on APS:

- Collect data on all fertilizer imports, consumption, and yield responses to fertilizer application. This is being carried out in part by APS, under the fertilizer use and extension component;
- Carefully monitor the transfer of the CA and the workshops to cooperative ownership. This is being pursued by the input supply component of APS;
- Establish revolving funds at the CA to generate proceeds that would be used to cover operating expenses. Establish systematic cost accounting of indirect costs for the CA. This is the responsibility of the input supply component's technical assistance; and
- Establish a strategy to improve the organizational capacity of cooperatives. This would entail encouraging the government to intensify training of cooperatives to help them assume their role as business enterprises, such as expanding training activities of the type undertaken by the Cooperative League of the U.S.A. (CLUSA). This objective is being carried out under APS and will be continued under Rural Organization Development (ROD) Project.

The relationship of APS to ASDG will continue with the proposed FY 1989 ASDG II. Two of its three purposes affect APS directly: the completion of the transfer of the CA to the cooperative and private sector, and operative full service rural financial markets with flexible and realistic interest rates. The latter directly involves the cooperatives of the APS project. The proposed amendment to ASDG, entailing the modification of Niger's legal framework to permit the operation of independent cooperative credit unions, will affect APS to the extent that its member cooperatives wish to participate in credit union formation.

Thus, APS and ASDG are firmly linked. On the one hand, the technical interventions under APS make possible the meeting of certain conditionalities and thus certain policy reforms. On the other hand, the reforms engendered under ASDG make possible progress for the various components of APS.

#### Counterpart Funds

As of late November 1987, approximately 12 billion CFA in counterpart funds have been generated by ASDG, of which 3.8 billion CFA have been placed at the disposal of APS. This amount represents one-third of the counterpart funds.

A principal specification of the ASDG was that it would not finance a project beyond the level of 40 percent. The amount of \$19.99 million of U.S. assistance was authorized for APS. To date, \$11.45 million (at an exchange rate of 330 CFA to \$1) has been provided by ASDG, or 57 percent of the total authorized. Of the cumulative accrued expenditures to date (October 8, 1987, Project Implementation Report) of \$13.188 million, the ASDG contribution represents 87 percent.

USAID cites a major weakness in the funding mechanism, which it feels acutely. While there is more than ample justification for expenditures before the fact (see "Project Coordination and Management Unit," in Chapter Two for details), there is no regular follow up on the use of counterpart funds after they are spent.

## PROJECT HISTORY

Below is a brief description of the APS project's background, evolution, and implementation.

### Background of APS

Prior to 1975, the research, extension, and credit system serviced cash crops, a continuation of agricultural activities and practices from colonial days. The drought of the early 1970s brought a change in orientation toward food crops. The National Cereals Program, AID's first multicomponent project, began in 1975. With research, seed multiplication, extension, cooperative, and technical assistance components, it provided a comprehensive approach to Niger's agricultural constraints.

One main purpose of the program was to develop the national agricultural services abilities to carry on after the program ended. As it became evident that the national services were atrophying, regional productivity projects were designed and funded by various donors. The National Cereals Program was now to support the outreach function of the productivity projects.

The period 1975-1981 saw the development of a technical package by IRAT that addressed climate changes and shorter rainy periods. The decrease in arable land coupled with bush fallowing led to increased fertilizer use and increased density of agriculture.

Research picked up on shorter cycle millet breeding to accelerate it under a continuum of research teams from IRAT, the Institut Nationale de Recherche Agronomique du Niger (INRAN), and the United States. After a long time learning about the Sahel, U.S. technology and approach were found not to be transferable. Seed multiplication centers were established as part of an outreach program for third and fourth generation seed. The extension support component was based on farmers' acceptance of the technical package. Extension's objectives were to publicize the package, get it out to farmers, train agents to promote the package, and provide back-up to the agents. At the productivity project level, farmers were to be trained in training centers over an agricultural season. Trained farmers were then to return to their villages and spread the technology via direct demonstrations.

Cooperatives were to have been supported and trained to handle input supply--selling seeds and fertilizer and buying back output. The training focus was at a lower level than extension, with agents providing operational and literacy training. With respect to credit, the Caisse Nationale de Crédit Agricole (CNCA) and Union Nigérienne de Crédit et de Coopération (UNCC) worked together, with the CNCA handling the credit. As a result of poor recovery rates on loans made to parastatals, however, the CNCA's financial situation deteriorated.

Extension activities required an increase in agent personnel, some 150 per year, with all the concomitant logistical support (including motorcycles, gasoline, and salaries). Not only was the personnel increase expensive, but monitoring and control of activities also was virtually impossible.

The NCP had a coordinating unit (Consortium for International Development) whose task was to coordinate program activities. The unit soon recognized the additional needs of coordinating with USAID, INRAN's activities, paying agents' salaries, and accounting requirements.

#### Evolution of APS

In 1980, the initial design of APS was carried out. Research was split out as a separate project under the NCR project. The perspective was to have been on farming systems research since donors and the GON were questioning how well the technical packages would do on farm. On station, they had already proven out. This concern was important for the extension support component of APS, as its design called for maintaining tight, effective linkages between research and extension.

The extension support component was to have determined what did and did not work well on farm and why. Its job was complicated by the fact that there had been no on-farm testing program during the post-drought rush to get results out. The extension support component's purpose was institutional strengthening -- that is, to increase the effectiveness of the national Agricultural Extension Service and to promote a strong linkage between extension and research.

The seed multiplication component underwent little change from what had occurred under NCP. The purpose of this component was to improve the quality and quantity of seeds produced. Management techniques and cost control were added requirements of the seed multiplication component under APS.

The major redesign of APS entailed the input supply and cooperative activities. An input supply component was added under APS because the supply of agricultural inputs was not reliable. At this point, the CA was the only source of supply except for a little border trade. The CA was paid by the government and under the control of the Ministry of Agriculture through the UNCC. Moreover, without a viable credit network, the technical packages could not be promoted. Thus a main thrust of APS was to develop these two areas. The initial design called for commodity and construction support -- that is, trucks and warehouses. Cooperatives, financed by the GON, were to have handled the distribution of seeds and fertilizers. The GON, however, never did finance the cooperatives.

The period 1980-1982 was largely moribund, except for the design of the input supply component. A shift in priorities in Washington, D.C., entailed moving away from pure input supply concerns to a privatized input supply organization, in competition with the private sector. The design was completed in June 1983, debated, and then redesigned. The major finding was that the private sector (merchants) would not or could not get involved in input supply. The reasons for this were its low profitability relative to consumer products and the slow turnover of fertilizer kept capital tied up for long periods of time. The only area of interest to these merchants was large governments bids, for example, 500 tons, for supply.

Also, the Zinder Conference on Rural Development in November 1982 influenced the redesign of the input supply component calling for cooperatives' participation in managing and distributing agricultural inputs. Concurrently, the public sector was to relinquish control of certain inputs as a means of encouraging the private sector to participate in their supply. Thus the initial purpose of distribution of increased amounts of inputs to farmers on a timely and regular basis expanded to one of developing an institutional framework from which a privately or cooperative-managed agribusiness would arise. The expanded purpose also called for private sector competition to the input supply organization, the CA.

Parallel with the input supply component, a guarantee fund with a private bank was created. Cooperatives were to be able to draw on the fund for capital to manage, distribute, and sell stocks of fertilizer from the CA. In the long term, cooperatives would become sufficiently solvent to buy shares in the CA. The cooperatives would see the CA as a profitable entity, buy into it, and become involved in its management. In this fashion, the CA would become the national cooperative purchasing agent. Moreover, the CA would have to begin to operate under market conditions and create its own capital through retained earnings, and through cooperative and private sector buy-ins to the CA.

The Zinder Conference also changed the thrust of the cooperative training component. The National Center for Cooperative Training was abolished, and the component was resigned to emphasize practical training of cooperatives on a decentralized village-based basis. This was in line with the Zinder Conference, which called for villagers to assume responsibility for their own development and for institutional structures to be created for which recurrent costs could be met by Niger itself.

The purpose of this component expanded, from improving the abilities of cooperative officials to manage their economic and social affairs, to include the provision of a training model that would allow cooperatives to identify, design, and carry out their own choice of economic activities. It also specifically included credit availability for these activities and for the supply of seasonal agricultural inputs. Thus the credit function was shifted to the cooperative training component. Since training involved developing commercially viable activities for cooperatives and since cooperatives had to become familiar with the management of credit and banking relationships, it was logical that credit be placed under this component. At the time of the Zinder Conference, the CNCA was in a bad financial situation. Today, it is defunct.

In March 1987, another component was added to the project -- the fertilizer use and extension component. This component was designed to test and extend the five years of research carried out by the International Fertilizer Development Center (IFDC) and International Center for Crop Research in the Semi-Arid Tropics

(ICRISAT) in Niger over 1982-1986. Its purpose is to eliminate constraints to fertilizer utilization by the small farmer and to strengthen the Extension Service's ability to promote fertilizer use.

The final component of the project is the Project Coordination and Management Unit. This component is responsible for the coordination of the APS project, its components, and the NCR project. As part of the project's institutional strengthening, this component provided support to the rural engineering function of the Ministry of Agriculture. This support entailed the construction of buildings, principally for the seed multiplication component; on-the-job training for rural engineering staff; and U.S. training for two individuals in civil engineering on the undergraduate level.

#### Implementation of APS

Implementation of the APS project officially began in 1982; however, GON and U.S. policy changes led to modification and delay of the input supply and cooperative training components. These two components did not begin until March and July 1985, respectively. The extension support component did not begin until March 1986 as a result of difficulties in fielding a contract team for this activity. The fertilizer use and extension component started in March 1987. Thus, only the seed multiplication and Project Management and Coordination Unit components have been functioning since 1982. The support to the Rural Engineering Service ended in August 1987.

The overarching purpose of the APS project is to expand and improve Niger's national-level agriculture supporting services -- that is, extension, seed multiplication, input distribution, and cooperative training. Because of the delays in start-up of some components, achievement of purpose has been modest. The cooperative training component has had early success in making its cooperatives more effective in providing services to its members and in self-management. The ability of cooperatives to generate their own economic activities and become financially self-sufficient is just beginning. This fact is linked to the achievement of one purpose of the input supply component -- that it become self-financing, in part through ownership by member cooperatives. Neither the input supply component nor the cooperative training component has the financial strength to permit financial

self-sufficiency. Furthermore, the CA does not have a business and financial track record that would attract cooperatives to buy into it.

The extension support component has improved the performance of field extension staff; however, it has largely bypassed the national Extension Service. The Extension Support Center (ESC) feels that the Extension Service is too weak to reinforce, and the Extension Service sees the ESC as a threat to its existence. The seed multiplication component, in operation since 1982, has made good progress in establishing the infrastructure to produce improved seed. It has not yet, however, been able to offer high quality seed to farmers -- the purpose of this component. The fertilizer use and extension component had no results in its first year of operations as a result of poor rainfall and the late arrival of inputs at test sites.

The Project Management and Coordination Unit finished its support activities to the Rural Engineering Service of the Ministry of Agriculture in August 1987. Apart from some delays and an occasional poor choice of contractor, the buildings are judged to be sound and the technical assistance and training given the department were effective. Although there is no specified purpose for this component, its responsibility is to ensure the coordination and management of the project, its components, and the NCR project. Its management depends on how much budgetary control it has over the several components. Its coordinating abilities have been hampered by the lack of the coordinating structure (Inter-Ministerial Executive Committee) called for in the original project design. Its role in policy formulation is just starting to be fulfilled.

## CHAPTER TWO

### LOGICAL FRAMEWORK

This chapter addresses the progress made by the project's six components. It examines both the original and the modified goals and purposes of each component as stated in the logical frameworks and in project amendments. It also examines the outputs that were expected of each component and the assumptions underlying the outputs.

Each output is analyzed to determine the progress made toward achieving the output, the findings with respect to the progress, and what the team concluded based on the findings. Finally, recommendations are provided for improving or changing or adding to the efforts by the project to attain the output. In some cases, the evaluation team has recommended a change in output.

For each of the five technical components, a section is devoted to special issues. Here the type of analysis done depends on the issue, but in general follows the form of findings, conclusions, and recommendations. Finally, where needed, the team has suggested modifications of some components.

#### INPUT SUPPLY COMPONENT

##### Original and Modified Goals and Purposes, Expected Outputs, and Assumptions

###### Original Goal and Purpose

The original input supply component as described in the project paper was designed to increase the storage and handling capacity of the CA. In so doing, the component's purpose was to increase the amount, and improve the timeliness, of agricultural input deliveries to cooperative farmers. Thus it was to meet its design goal of "food self-sufficiency and increased agricultural incomes."

The original activities included the construction of a 200-square-meter office complex to serve as CA headquarters in Niamey. Construction or leasing of warehouse space in Niamey and at the department and arrondissement levels, increasing the storage capacity of the CA to 4,000 square meters, was also planned.

In addition to improvements in infrastructure, the original project design called for instituting a more effective management system. This management system would contribute to improving the timeliness of input distribution and the internal management of the CA, especially in inventory and financial control. These improvements were to take place as a result of technical assistance and staff training.

Two factors led to the redesign of the input supply component. One was the orientation of the GON's rural development strategy as articulated at the 1982 Zinder Conference. This seminar recommended a greater participation of cooperatives in providing agricultural inputs. The seminar also endorsed the idea that the CA would eventually evolve toward a commercial operation that would permit cooperatives to function independently in the input supply markets.

The second factor necessitating the redesign of the input supply component was the disapproval of the original design by the project paper review team in AID/Washington. This team found that the input supply component as originally designed did not adequately address the issue of potential privatization and increased efficiency. The component was redesigned with emphasis on attaining the maximum economic viability of the CA, and on increasing the involvement of the private sector in marketing and distribution of agricultural inputs. As indicated in the Project Agreement, Amendment Four, the design addresses itself primarily to seasonal inputs while awaiting resolution by other agencies of the complex issues surrounding CNCA's agricultural credit operations.

#### **Modified Goals and Purposes**

The redesigned input supply component had two principal long-term goals: 1) to contribute to food self-sufficiency and the improvement in agricultural incomes; and 2) to encourage the progressive development of a voluntary cooperative system

for input supply. This system was to be self-financing and would eventually be managed by cooperatives and become their property.

The purposes of the component are:

- "To provide in the near to medium term for the institutional framework for management and eventual ownership of an agribusiness based on inputs"; and
- "To provide for the private commercial sector to participate competitively in both the supply and/or distribution marketing functions related to those actions."

The project encourages the evolution of an input supply business and allows the private sector to compete in input supply activities.

#### Expected Outputs

The fourth amendment to the project agreement specifies the achievement of the following outputs by the the project assistance completion date (PACD):

- Improvement in the cash-flow situation of the CA and reduction in its operating costs. This will lead to lower GON financial support requirements, and provide the basis for developing a sustainable cooperative business operation;
- Creation of a privatized commercial management structure for the supply of inputs; and
- Greater access by farmers to inputs in those geographic areas where use of inputs is proven to be profitable. This will take place as a result of a more efficient distribution system.

The attainment of these end-of-project outputs was to be accomplished in a phased approach. This midterm evaluation, while commenting on progress made toward achievement of the end-of-project outputs, concentrates on outputs planned for the first phase of the activity. These include:

- Guarantee funding furnished by the cooperative training component on a test scale to permit cooperative access to bank finance on commercial terms to purchase seasonal inputs;

- Institutional changes to permit cooperative representation in the input supply company; and
- Introduction of business management methods at the input supply company.

#### **Assumptions**

The assumptions implicit in the design of the component are the following:

- Improved agricultural technology exists that can increase farmer productivity in Niger;
- The increased income resulting from the use of this technology package justifies the added expense, risk, and effort;
- Cooperatives will be willing and able to invest in the input supply company;
- The CA will be progressively converted into a commercially managed business; and
- The input supply company will have the independence to operate like a commercially managed business.

These assumptions govern the feasibility of attaining the end-of-project outputs. Their validity will be discussed in the following analysis.

#### **Financial Management: Inventory, Accounting, Budgeting, and Cash Flow**

The original project design called for "an improved system of financial management" at the CA. This output was elaborated on in amendment four, which called for the introduction of managerial accounting practices to help the CA move toward financial self-sufficiency.

#### **Progress to Date**

The project has made excellent progress in developing a system that produces monthly reports on inventory at a national level and for each Union Régionale des Coopératives (URC) and Union Sous-Régionale des Coopératives (USRC) by product. Little progress has been made in stock rotation.

The project has put into place an accounting system that allows control at the field and headquarters level. Budgets have been prepared for CA operations on a regular basis, and CA headquarters staff have been trained in their use. These controls have allowed some improvement in cash flow. Problems with late payments and accounts receivable continue, however, and constitute serious impediments to the CA's financial viability.

The CA has made good progress in obtaining collaboration from URC and USRC field personnel. The CA must rely on these individuals to collect payments, verify information, and estimate needs in the field as it has no staff of its own at the field level. The collaboration has been greatly improved through training seminars. It should improve even more now that the CA has been transferred to the cooperative movement.

### Findings

Compared with the CA's mandate of ensuring the input supply needs of Niger, the CA's staff of 20 employees is small. The CA's warehouse staff consists of one employee in each of the seven departmental capitals and a chief warehouseman at the CA headquarters. These departmental warehousemen constitute the entire field staff, and the CA must depend on the cooperative structure for the majority of its field operations.

Information concerning input needs, stock levels, and cash must flow from the cooperative level, through the USRC directors, to the URC, and then to the CA. It is at the URC and USRC levels that a CA employee intervenes in this information flow. He works together with the URC director to synthesize the information from the cooperatives and sends reports to CA headquarters. He makes monthly trips to the USRCs to help the directors at that level with inventory and accounting. The project provides gasoline and a motorcycle for this purpose.

### Inventory

Inputs are ordered by individual cooperatives, development projects, or GON institutions such as INRAN. Inventory is delivered to CA departmental warehouses,

to warehouses at the USRCs, or directly to cooperatives. The CA is responsible for transportation costs. The CA must be able to account for inventory, which is spread among many sub-depots and cooperatives. For example, in the Zinder and Tahoua departments alone, the departmental warehousemen estimated that CA inventories are stored at 120 sub-depots or cooperatives.

Having no staff at the cooperative level, the CA is handicapped in its oversight of these storage sites. In some cases, unsold orders may have contributed to the accumulation of inventory at the sub-depot and cooperative level.

The potential for blockages in the flow of inventory information and the effects on collection of sales proceeds of such a complex system are obvious. USRCs are organized by administrative division with one USRC for each arrondissement, irrespective of the number of cooperatives present. In areas of numerous cooperatives, this arrangement can result in a large amount of work in inventory and accounting control for the USRC directors.

The system developed by the project for perpetual inventory and accounting control improves on the previous CA system by allowing more precise breakdowns. For example, information on quantities sold on a cash or 30-day credit basis during the month is readily available. In addition, information on beginning inventory, deliveries, transfers, and final stocks is easily generated.

During observations of CA departmental depots in Zinder, Maradi, and Tahoua, and at several USRCs in these departments, the team observed the efficacy of the CA system. Team members visited the warehouses during the last week in October 1987 and examined inventory reports that had been prepared for FY 1987. The timely production of these reports so soon after the end of the fiscal year is an excellent demonstration of project progress.

The importance of this accomplishment should not be underestimated. Having inventory information available on a timely basis is useful for planning purposes, especially for requesting fertilizer allotments from donors. Past sales represent the most accurate indicator for estimating input needs at the local level.

At present, up-to-date inventory information is especially useful because of the transfer of the CA to the Union Nationale des Coopératives (UNC). This information will contribute to the GON's ability to make informed decisions on the future of the CA and will facilitate the transfer of the CA to the cooperative structure.

One area of concern is stock rotation. Little progress appears to have been made in developing a system by which the oldest inventory is sold first. Observations indicate that CA departmental warehouses operate on a last in - first out basis. This situation could be corrected by a change in procedures and by training.

#### Accounting

The CA has put in place, with project assistance, a good system for accounting control at the URC and USRC levels. The CA's warehouseman works in collaboration with the URC accountant and turns over sales proceeds on a daily basis. Payments for inputs that are made at the cooperative level are collected by the USRC directors, who visit the cooperatives usually on a monthly basis. These payments are deposited with the URC accountant when they reach a certain level.

Reliable systems are in place to ensure that sales proceeds are credited to the CA. Deposits are made to the CA bank account generally when cash at the URC reaches the level of 100,000 CFA. These deposits are made on the signature of the URC Director, the accountant, and the CA warehouseman. This is a sound financial control.

At the national level, a computer system for processing data from FY 1987 is now operational. This system is used for invoicing clients and for preparing reports on accounts receivable. The CA has been able to bring its accounting records up to date and to get through a seven-month backlog.

Monthly and national sales summaries can be produced by product and by type of sale, either cash or credit. This allows reconciliation of inventory movements to cash receipts and accounts receivable.

In addition to these computer procedures, financial control systems have been introduced by the project at CA headquarters facilitating the preparation of financial statements. The generally improved state of accounting information allows better financial planning and management, representing considerable improvement as a result of the project.

### Budgeting

Substantial progress has been made in budgeting under the project. Prior to the arrival of the CLUSA technical assistant, CA budgeting was done on an annual basis and was one year behind. At present, the CA generates yearly and monthly budgets that project sales revenues and costs. CA personnel are trained in budget preparation and analysis.

### Cash Flow

The timely preparation of client invoices and generation of information on amounts of cash and credit sales have allowed the CA to improve its budgeting and cash-flow situation since the project began in 1985. The monthly budgets that are prepared help to match expenditures with revenues.

Since FY 1985, fungicides and agricultural equipment have been sold on a cash basis, but fertilizer is still being sold in large quantities on a 30-180 day credit basis. Cash flow, as measured by receipts from cash and repayment on credit sales, increased from 506 million CFA in FY 1985 to 552 million CFA in FY 1986 (Table 2). Cash receipts themselves dropped slightly from 166 to 151 million CFA. However, receivables from credit sales, including pre-FY 1985, increased from 447 million CFA in FY 1985 to 541 million CFA in FY 1986. At the same time, operating costs increased with a resulting decrease in coverage of operating costs by cash flow from 4.6 times to 3.7. Had interest charges on the CA's CNCA loan (157 and 171 million CFA for FY 1985 and FY 1986, respectively) been included in operating costs, coverage would have dropped to 1.9 times for FY 1985 and 1.7 times for FY 1986.

Data for the first eleven months of FY 1987 reportedly have been prepared, but the evaluation team was told that they could not be made available then. The team

would have found this useful information since it would have provided an up-to-date picture of the progress of the cash-flow position of the CA and its coverage of operating costs.

Also important is the volume of credit sales paid for. Data provided by the CA to the evaluation team show that in FY 1985 credit sales (30-180 days) amounted to 414 million CFA, of which 390 million was paid. In FY 1986 credit sales amounted to 495 million CFA, of which 401 million was paid. Based on these two years alone, the CA entered FY 1987 with 21 percent more accounts receivable (447 million versus 541 million).

The bulk of these receivables is mainly former fertilizer sales to irrigated perimeters or development projects. These are the CA's largest and most-valued customers. Obviously there are problems with prompt payment by some clients. The largest outstanding receivable is from the Maradi Rural Development Project. As of August 12, 1987, this project owed the CA approximately 111 million CFA. Discussions were undertaken at that time to ensure that the back payments would be made before the end of the Maradi project in 1988. These discussions resulted in a signed agreement for repayment between the CA and the Maradi project. Total repayment to the CA should be made by September 1988. The CA has already received three payments totaling 26.5 million CFA under the agreement.

Despite this large debt, the Maradi project continued to be sold fertilizer on credit terms from the CA. The attitude expressed by CA departmental warehousemen and URC directors alike is that the projects are good credit risks, but large receivables have a negative impact on cash flow. If the CA is eventually to become viable, it must keep clients from accumulating large unpaid balances. At present the CA does not have the independence to refuse delivery to projects and irrigated perimeters that have accumulated arrears, or to charge interest on unpaid balances.

On the cooperative level, USRC directors sometime have problems collecting payments for agricultural inputs. This problem was mentioned by the USRC director in Konni (Tahoua Department) concerning fungicides. At the end of FY 1987, 263,000 CFA was outstanding to cooperatives for fungicide, representing approximately 14 percent of the total value of fungicide sales for that year. Past experience indicates

that much of this amount will be collected later in the calendar year as the buying campaign for cereals and cash crops gets under way, but this type of payment arrears has a negative impact on the CA's cash-flow situation.

The URC director in Maradi mentioned a similar collection problem with fungicide sales. The approach in that department since 1985-1986 has been to bill the USRCs for the fungicide. If full payment is not received from the USRCs, the URC deducts the outstanding amount from the money it provides to the USRC. The USRC is also allowed a margin in resales of the product, which helps cover cost. According to the URC director, the procedure of direct billing of the USRC has substantially improved the problem of uncollected fungicide sales proceeds.

In summary, some improvement in the cash-flow position of the CA has taken place, but late payments of sales proceeds by projects, irrigated perimeters, and cooperatives have a negative effect on the CA's coverage of operating costs. The CA must have the independence to require that receivables be repaid, or to charge interest on unpaid balances.

With regard to cooperatives, the Maradi experience of billing USRCs directly for inputs may be a workable one for use in other parts of the country. If the USRCs are eventually able to become autonomous economic entities, it may be possible to require them to pay for inputs as they are delivered. It does not appear, however, that the USRCs now have enough income sources to make this possible.

#### Collaboration with the Cooperative Structure

Other than the departmental warehousemen, the CA has no field staff and depends on the cooperative structure for the majority of its field operations. The most critical link in the chain occurs at the USRC. This is the level at which the interaction with cooperatives takes place. Numerous reports and field observations indicate that the collaboration on the part of USRC directors has been spotty. Prior to the transfer of the CA from the Ministry of Agriculture to the UNC, USRC directors had little incentive to make timely reports to the CA, as the two entities were under separate structures. As of June 23, 1987, the CA has been transferred to the cooperative movement, and it is hoped that collaboration will improve now that the CA is part of the same structure as the UNC.

The project has improved collaboration of the USRC directors through training seminars. Two trainers were hired by the CA, and six national seminars were delivered to assistant directors and accountants of the URCs, departmental CA warehousemen, and USRC directors. The major subjects covered in the seminars were inventory and cash control, estimation of input needs, marketing and promotion of sales of agricultural inputs, and methods for training cooperative members. Information on the use of fertilizer was presented by a fertilizer specialist from INRAN. The formal seminar training was followed by in-service training.

The seminars helped to develop a feeling of shared mission between the CA and the cooperative movement. They have been effective in increasing the timeliness and quality of reporting by giving USRC personnel the skills necessary to provide information to the CA in the form most useful to it.

Despite the progress the CA has made in its training program, some problems remain. One is the continuity of the training effort. Since March 1986 no further CA training has been undertaken. Although both of the original trainers are no longer with the CA, a new trainer has been hired and the next seminar is planned for November 1987.

In the past, the CA had not attempted to train those responsible for inventory and cash control at the cooperative level, although the CA is considering this as an option. The need for this training was evident in field observations and in the comments of URC and USRC directors. In one cooperative at Droum (Zinder Department), the manager of the village store was also in charge of the CA sub-depot. While the inventory and cash records of the store were kept in excellent order, those of the sub-depot were non-existent at the cooperative level. There is not much difference between managing the inventories and sales of a small store and managing the ordering and sale of agricultural inputs. Thus there is no reason why the manager could not keep records of inventory and sales for the CA, assuming cooperative members were interested in purchasing CA inputs. This would enormously facilitate the USRC director's work, and have a positive effect on inventory and cash control. The cooperative might also consider paying a small fee to the manager of the sub-depot to compensate him for the services provided to the members.

One pertinent question concerning the CA-sponsored training involves the lack of collaboration with the cooperative training component. The CA has the technical expertise in the subject matter to be presented, whereas the cooperative training component has considerable expertise in the methodology and delivery of training programs. Because of lack of collaboration, the CA was not able to profit from these skills in presenting its seminars.

The CA's training program has been suspended since March 1986. Collaboration among the components might have allowed a greater degree of continuity in the delivery of training programs by the CA.

### Conclusions

Large receivables from irrigation and development projects have had negative impact on the CA's operating cost coverage. These receivables constitute a serious impediment to the CA's financial health.

The complex system by which information and sales proceeds must move from the cooperatives through the USRCs, to the URCs, and then to the CA has great potential for breakdown. The efficiency of this system depends to a large degree on the input of the USRC directors upon whom the CA depends for record keeping at the cooperative level.

To date project effort has been concentrated at the national and departmental levels. URC and USRC personnel have been trained in inventory control and accounting. CA headquarters personnel have received training in these areas and also in budgeting. Now that the CA has strengthened its operations at the national and departmental levels, it can move toward improving the quality of the information at the cooperative level. Having developed workable financial management systems, it is in a good position to do so.

The CA has made real progress in the areas of inventory control, accounting, and budgeting. The project has been introducing business management methods. These methods will allow the CA to move toward the objective of operating like a commercial enterprise.

### Recommendations

- More attention should be paid to developing systems that allow the timely collection of sales proceeds. The feasibility of billing USRCs for inputs supplied to them should be investigated. The CA must collect unpaid balances from large projects. The CA should be given the authority to refuse continued sales until the balances are made current.
- Motivation of USRC directors should be given further attention. The CA should take a lead role in developing guidelines that define the role of URC and USRC personnel in CA operations. These guidelines should then be incorporated into UNC job descriptions and personnel policies.
- The CA should provide training at the cooperative level in the areas of inventory control, accounting procedures, and sales management. In this regard, the CA should take advantage of the training expertise already in place in the cooperative training and credit component, especially village store inventory control and sales management.

TABLE I  
ACCOUNTS RECEIVABLE  
(million CFA)

	1984/1985	1985/1986
Beginning Accounts Receivable	423	447
Credit Sales	414	495
Collections	(390)	(401)
Ending Accounts Receivable	447	541

**TABLE 2**  
**ESTIMATED OPERATING COSTS AND CASH FLOW SITUATION,**  
**FY 1985-1987**

	FY 1985	FY 1986	FY 1987
Operating Costs (a)	111	148	134
Cash Receipts (b)	166	151	N/A
Collections on Credit Sales (b)	390	401	N/A
Total Receipts	506	552	
Coverage of Operating Costs: Total Receipts/Operating Costs	4.6	3.7	

Source: Centrale d'Approvisionnement

- a Operating costs no longer include interest charges on debt to CNCA since debt assumed by UNC.
- b Estimate, prices increase in mid-year; latter price used.

#### Operational Costs and Financial Support by the Government of Niger

The original project proposal and the fourth amendment to the project document called for lowering CA operating costs and reducing the contribution by the GON to the CA.

#### Progress to Date

##### Operational Costs

The debt of the CA to the CNCA has been eliminated, thereby reducing total operating costs significantly. Little progress has been made, however, in reducing the CA's costs for salaries, transport, and overhead. Operating costs in these areas have grown by 23 million CFA since FY 1985.

The amount of costs that are covered by cash and credit receipts is a more important indicator of improvement in the CA's operating situation. There has been deterioration in this area.

### GON Financial Support

The GON contributed 300 million CFA toward the operation of the CA in FY 1985. In FY 1986 this amount had decreased to 68 million CFA and by FY 1987 the GON was not contributing at all to the CA's operation. The reduction of GON financial support to the CA represents progress toward the stated goal of reducing GON contributions to the operation of the CA. Unfortunately, the GON operating subsidy has been replaced by one from the donors as the CA withholds operating costs from the reimbursements of sales of donor-provided fertilizer. No formal mechanism for providing the CA with a revolving fund has been put into place.

### Findings

According to the annual activities reports and budget estimations of the CA, its cost of operations -- defined as salaries, transport, and overhead costs -- rose from 111 million CFA in FY 1985 to an estimated 134 million CFA in FY 1987 (Table 2). Although the nominal cost of operating the CA has risen by 23 million CFA, discounting for inflation would result in a smaller increase.

One positive note relative to operating costs concerns the elimination of CA debt to the CNCA. This debt, of approximately 1 billion CFA, was absorbed by the GON in June 1987 as part of the transfer of the CA to the UNC. This development represents a significant step in reducing the CA's operating costs, and the debt is not included in the following discussion of CA operating costs.

Project efforts have undoubtedly resulted in more efficient operations and increased recovery of sales proceeds, but several factors have intervened to keep costs from declining. One of these is the requirement that the CA provide agricultural inputs in all parts of the country, irrespective of costs of operation. In the past, no mechanism existed allowing the CA to reduce operations in unprofitable areas.

Warehouse rental charges and vehicle maintenance costs are other important factors that have kept operating costs from declining. In FY 1985 rent on

warehouse space and expenses related to vehicle maintenance represented 37 million CFA, or 33 percent of the CA's total operating expenses in that year.

Of the total, vehicle maintenance accounted for 32.8 million CFA and warehouse rental for 4.2 million CFA. It is estimated that by FY 1987 warehouse rental expenses will have reached 12.5 million CFA and vehicle maintenance costs will have increased to 39.6 million CFA. These operating expenses will account for 39 percent of the CA's total estimated FY 1987 operating expenses, up from 33 percent in FY 1985.

The project's contribution of light trucks has been instrumental in increasing the CA's mobility in controlling inventory and verifying accounting. However, the issue of reducing the large expenses related to heavy vehicle maintenance is a critical one. The CA purchased its current fleet of heavy trucks in 1980. Seven years later the vehicle fleet is fully amortized and the CA works with seven trucks rather than the nine that would be optimal.

Observation by the team in the field confirms the difficulties encountered with CA trucks. For example, the CA's 7-ton truck stationed in Tahoua has not been operational since June 1987. The lack of reliable vehicles has a negative impact on the CA's ability to deliver fertilizer on a timely basis, and in the quantities desired. It also makes the CA a less attractive investment choice for cooperatives.

The warehousing problem faced by the CA is mainly related to the large accumulation of unsold inventory. The necessity of maintaining storage space for this inventory leads to the high cost associated with warehouse rent. Given that CA fertilizer sales are falling, it is a wise idea to rent warehouses rather than constructing them.

Unfortunately no FY 1986 opening balance of CA stocks was available to the evaluation team, but estimates can be calculated based on fertilizer donations and sales. Table 3 details the increase in CA stocks since FY 1986. Assuming that the CA had no fertilizer in stock at the beginning of FY 1986 and that all additions to inventory came from donations, by the end of FY 1987 the CA had accumulated approximately 2,200 tons of unsold fertilizer, or roughly 36 percent of its estimated

FY 1987 sales. The situation may be even worse, as actual sales figures for FY 1987 are likely to be less than the estimates presented and it is unlikely that the CA began FY 1986 with zero inventories. As described below, the accumulation of large fertilizer inventories was noted during the evaluation team's field work.

In all the departments visited, unsold fertilizer inventories were significant. In Tahoua, for example, the CA warehouseman indicated that 832 tons of natural phosphate fertilizer were in inventory as of October 1, 1987. In Zinder over 270 tons of nitrogen fertilizers and approximately 350 tons of phosphate fertilizers were in stock at the end of FY 1987. Although storage conditions were generally good, deterioration is a potential problem. Approximately 105 tons of super simple fertilizer had been in store at the Zinder URC for up to two years. Much of the nitrogen fertilizer had been in storage for one year or longer.

In Maradi the team examined warehouse records that indicated another problem related to warehouse space. The records showed that frequent transfers of inventory were made from CA headquarters to Maradi and then back again, apparently as a result of a lack of storage space at headquarters. For example, in April 1987, 44 tons of urea fertilizer was transferred from Niamey to Maradi. Five months later, 64 tons were transferred back to Niamey. This movement of fertilizer results in significant transportation costs and contributes to an increase in CA operating expenses.

One useful measure of an organization's financial health is the relationship between operating costs and cash flow, that is, how well are operating costs covered by cash flow. Table 2 provides this information for FY 1985-1986. Unfortunately, the CA could not provide information from FY 1987. There has been a deterioration in the coverage of operating costs by cash flow over the two-year period from 4.6 to 3.7 times.

#### Operational Issues

The GON has been able to reduce its contribution to the CA's operation from approximately 300 million CFA in FY 1985 to 0 in FY 1987, but not as a result of declining CA operating costs. Since GON contributions to the CA have started to

decline, distribution costs have been withheld from the reimbursements made to the counterpart fund from sales of donor-provided fertilizer; this procedure has apparently been accepted by the Ministry of Plan. The CA has thereby been able to continue to operate, albeit in a precarious financial situation. In effect, the burden of CA operating costs has been shifted from the GCN to the donor community. The CA will need to clarify the issue of whether fertilizer donations will continue now that the CA has been transferred to the UNC.

In September 1985 a detailed report was produced reviewing the design and operational problems encountered during the implementation of CLUSA technical assistance to the CA (Garvey, 1985). The report outlined ways in which the CA could move toward becoming a self-financing input supply company. One major recommendation of this study was to allow the CA to keep the entire amount of funds generated by the sales of donor-supplied fertilizer. It is not clear that the donor community is confident enough in the management of the CA to allow it to control all sales proceeds, and only USAID has allowed the CA to retain sales proceeds to constitute an informal revolving fund.

The Garvey report presented a detailed model on the operation of the revolving fund during a three-year period. This model presented the amounts of donor contributions necessary over time as a result of the introduction of a system of revolving funds. The most attractive version of the model assumes supply of fertilizer from Nigeria, because of its lower acquisition cost.

The results of the model show that donor contributions to the revolving fund would be decreased by more than 50 percent in each of the first two years of operation if the CA were allowed to retain all sales proceeds. Total donor contributions of 983 million CFA (\$3.3 million assuming 300 CFA equals \$1.00) would be necessary over the first three years. The support of a single donor would not be unrealistic, given this required level of funding.

The model indicates that the CA will require continued donor funding beyond the anticipated project completion date of June 30, 1989. More work will have to be done to carry the model beyond the three-year period to see at what point the CA can become financially independent.

The Garvey model makes some critical assumptions. One is that the debt problem of the CA has been resolved, which has happened. Others are that the truck fleet will be replaced and that amortization is carried in operating costs. The model also assumes that the level of CA fertilizer sales is increasing. Given the impact of decreased subsidy levels on the sales of fertilizer, this last assumption is unrealistic although the model should be studied to determine the effect of the decreased sales on donor funding requirements.

### Conclusions

The CA has made little progress during project implementation toward reducing its operating costs despite improved internal financial management. There has been deterioration in the proportion of operating costs covered by cash flow.

The GON has been able to eliminate its contribution to the operation of the CA, although this has been possible only because the CA has withheld its distribution costs from reimbursements of donor-provided fertilizer. No mechanism for providing the CA with a revolving fund has been put into place.

The largest obstacles to reducing CA operating costs have been the large debt service costs, large vehicle repair and maintenance costs, and important expenditures on rent for warehouse space. With the transfer of the CA to the UNC, the problem of CA debt has been resolved. For the CA to reduce warehousing costs, it will have to liquidate much of its accumulated inventory. Vehicle repair and maintenance costs will be reduced only if new vehicles can be provided. The needed investment is unlikely to come from the GON, considering its declining contribution to CA operating costs.

### Recommendations

- To become financially independent, the CA should be allowed to control pricing policy and reduce its burdensome inventories. It must also have the independence to eliminate unprofitable operations, and liquidate buildings and property.

- Donor and GON agreement should be sought allowing the CA to use the proceeds of fertilizer sales as a revolving fund or financing should be provided through a loan on a concessional basis. This assistance should take place on a fixed timetable with CA self-financing at the end of the period.
- Some mechanism must be found to allow the CA to reduce its burdensome expenses related to vehicle repair and maintenance. Vehicle rental, or a combination of rental and purchase, should be explored as options. Should purchase be justified, only the number of trucks required to deliver the CA's reduced sales volume should be purchased.

TABLE 3

CA FERTILIZER SALES AND DONATIONS, FY 1984-1987  
(tons)

Sales	FY 1984	FY 1985	FY 1986	FY 1987 (a)
Urea	2,161	3,447	2,955	2,833
NPK 15-15-15	2,056	2,504	2,232	2,179
Super Triple Phosphate	47	279	764	856
Super Simple Phosphate	2,128	1,135	415	314
NPK 14-23-12-6-2	1	6	1	0
Amonium Sulfate	56	50	2	25
Calcium Nitrate	58	50	17	40
NPK 26-12-0	0	13	0	0
Natural Tahoua Phosphate	730	487	11	0
Potassium	4	20	4	20
Others	0	0	1	0
<b>Total Sales</b>	<b>7,241</b>	<b>7,991</b>	<b>6,402</b>	<b>6,267</b>
<b>Total Donations</b>	<b>4,447</b>	<b>5,410</b>	<b>10,586</b>	<b>4,320</b>

Source: Centrale D'Approvisionnement

Note: Sales of less than one ton not shown.

a Estimate.

#### Increased Farmer Consumption of Seasonal Agricultural Inputs

The original project document called for the input supply component to result in the increased use of seasonal agricultural inputs by farmers. In the fourth

amendment, this end-of-project output was modified. The fourth amendment states that "in the geographic areas where use of inputs is proven to be profitable, farmers will have greater access to them as a result of a more efficient distribution system."

#### Progress to Date

As a result of price increases on CA fertilizer, due to reduced GON subsidies, the amount of fertilizer sold by the CA has decreased (Table 3). Although no quantitative estimates are available, total annual fertilizer demand appears to be decreasing, and is in the range of 8,000-10,000 tons. The CA estimates that its share of the fertilizer market has fallen from approximately 90 percent in FY 1985 to 60-65 percent in FY 1987. Private traders have seen their sales increase correspondingly.

The CA has been able to hold on to its share of the market in fungicide. The distribution of other pesticides has been transferred to the Crop Protection Service of the Ministry of Agriculture. The CA has no expertise in marketing seeds and is not presently involved in seed distribution.

#### Findings

Private traders are able to bring fertilizer into Niger from Nigeria where it is subsidized at 60-70 percent. Although the price of fertilizer has been increasing in Nigeria, the naira has been depreciating relatively faster. As a result, there continues to be an incentive for the private sector to import fertilizer from Nigeria. In the past, Nigerien traders have received import licenses and filled government orders for fertilizers from Nigerian supplies.

Field observations in Zinder and Maradi departments indicate that, in 1987, urea and NPK 15-15-15 fertilizers were available from traders at about 33-percent less than the CA's price. Super simple sold for about 20 percent less than the official CA price. This general price level was confirmed by the Direction des Etudes et de la Programmation des Statistiques Agricoles (DEPSA) in a study of fertilizer supply and demand in Niger (Josserand, 1986). In FY 1987 fertilizer was subsidized by 30 percent versus approximately 57 percent in FY 1985. Despite the subsidy, the CA

has not been able to match the prices charged by private traders. One reason for this has been its high distribution costs. Distribution costs for the CA were estimated at 15 CFA per kg in 1984 (Ronco) compared with 4-8 CFA per kg for private traders (Josserand, 1986).

The high distribution costs of the CA are related to its mandate to provide fertilizer at the same fixed national price irrespective of transportation costs, and its inability to close down unprofitable operations. This requires subsidizing operations in some areas and does not allow prices to be lowered in others.

CA subsidized fertilizer is generally of higher quality, but this has not been sufficient to compensate for the price difference of up to 50 percent. In dry-land farming, where fertilizer use is an uncertain proposition given the agro-climatic environment of Niger, fertilizer sales are extremely price sensitive.

The irrigated areas around the Niger River account for approximately 60 percent of the CA's fertilizer sales. Aggregate demand in these areas is relative stable, but cooperatives in these areas are sensitive to price increases. Because of the quantities involved, a small increase in price has a large effect on the total fertilizer bill. As a result of price increases, the CA estimates that approximately 30 percent of irrigated areas' needs are being supplied by the private sector.

Despite its loss of fertilizer sales, there are ways in which the CA can compete. One of these is on the issue of fertilizer quality. According to field sources, fertilizer from Nigeria is often of doubtful composition. Fertilizers can be mixed and bags incorrectly labeled.

A second potential area of CA advantage is reliability of delivery, although the CA's ability to compete in this area will be affected by continued improvements in its management and vehicle fleet. The DEPSA (Josserand, 1986) and Ronco studies (1984) indicated past problems with the reliability of the private sector. In some cases, traders have been unable to deliver the requested amounts of fertilizer. These are not arguments, however, against provision of fertilizer by the private sector, but areas of relative advantage for the CA.

Fungicide sales appear to be one bright area in an otherwise gloomy CA sales picture. In all of the areas the evaluation team visited, demand for CA fungicides was strong. This reflects the relatively small cost of fungicides (70 CFA per 25-gram package) and also the lack of competition from the private sector. One disturbing aspect concerns the type of fungicides sold. Farmers prefer the imported fungicide Thioral rather than the locally produced Callthio. The team observed some cases of CA warehousemen withholding supplies of Thioral from clients. Although the goal of selling locally produced fungicide is a laudable one, withholding those products that are in high demand could eventually reduce the CA sales even further.

Responsibility for the distribution of other pesticides has been transferred from the CA to the GON's Crop Protection Service. In 1985-1986 and in previous years, however, the CA was obliged by the GON to distribute pesticides free in violation of the ASDG subsidy agreements that limit the individual subsidies to 50 percent. Although the CA was reimbursed for the costs of the pesticides, the distribution costs had to be supported by the CA.

#### Conclusions

Although CA fertilizer sales have been reduced substantially by the decrease in subsidies, this is not a negative finding. One purpose of the APS input supply component as outlined in the fourth amendment was to allow the private commercial sector to participate in the supply and distribution of agricultural inputs.

Fertilizer use is most economically viable on irrigated perimeters. Some users there have shifted their source of supply from the CA to the private sector and are meeting their fertilizer needs at a reduced cost. There is no evidence that fertilizer demand in irrigated areas has decreased as the result of increases in the official price of fertilizer.

Agronomic research suggests that fertilizer use on dry-land farming may be questionable, especially at the doses recommended by the Extension Service. Again, it is not clear that demand for fertilizer in these areas has decreased. Eventual reduction in demand in marginal-use areas as a result of full-cost pricing represents a wiser allocation of scarce resources.

The private sector's success in fertilizer sales leaves open the issue of the impact of reduced sales on the CA's internal operations. The burden of unsold inventory is a crushing one. Fortunately, improved management systems are in place at the CA to allow it to assess current levels of inventory and sales. If given independence in pricing, it may be able to market its products more aggressively by competing in the areas of timeliness of delivery and quality. Mitigating against this strategy again are the requirements that the CA sell in all areas of the country and at one uniform national price. These are questions out of the direct control of the CA but that will largely determine its ability to deal with large unsold inventories.

In competing with the private sector for sales, the CA will need the capability to conduct marketing studies and the flexibility to respond to its clients' needs. There is no evidence that the CA currently has this capability or that the project considers this a priority. Efforts so far have been concentrated on achieving the first phase objectives of introducing business management methods at the CA. Now that progress has been made in attaining improved inventory and accounting control, marketing issues can be considered. This may be a viable role for short-term technical assistance.

#### **Recommendations**

- Develop a workable process whereby the CA can be relieved of its excess fertilizer inventory.
- Move toward the incorporation of a marketing strategy in the management of the CA. This may require modification in the delivery of technical assistance.

#### **Increased Cooperative Marketing of Seasonal Agricultural Inputs**

Related to the issue of increased access to seasonal inputs is the question of increased cooperative marketing of inputs. This output does not appear explicitly in the fourth amendment, although the participation of the cooperatives in the input supply component appears in the discussion of the project purpose.

### Progress to Date

No evidence suggests that cooperatives have participated in the marketing of seasonal inputs except to a very limited degree.

### Findings

The amount of fertilizer supplied to cooperatives by the private sector has substantially increased. Statistics compiled by the cooperative training component indicate, however, that only a limited number of cooperatives are involved in marketing of inputs. Only one loan made under the guarantee fund was for seasonal inputs, and the amount of the loan was insignificant. About five other cooperatives (of the 114 with which CLUSA works) are purchase and resell fertilizer, but the mark-ups charged do not appear to cover more than transport costs.

The cooperative training component stresses support to economic activities in which cooperatives chose to participate. The lack of guarantee fund loans for marketing of seasonal agricultural inputs indicates a lack of interest in this area. The directors of the Banque Internationale pour l'Afrique Occidentale (BIAO) branches in Zinder and Tahoua indicated that their portfolios do not contain any loans for the marketing of agricultural inputs, probably indicating a lack of economic viability for the activity.

In one case (Roukouzoum, Tahoua Department), however, the team observed the marketing of urea by a cooperative store. Roukouzoum is located in a productive area where onions are grown using urea fertilizer, which is generally not available from Nigeria. In addition to production, cooperative members are involved in onion marketing. The fertilizer sale price included a 15 CFA per kg mark-up. According to the manager of the store, 2.5 tons of fertilizer were sold in 1987. This finding indicates that in cases where viable commercial opportunities exist for agricultural production and marketing, farmers will purchase inputs even at a mark-up. The Roukouzoum cooperative has also been successful in selling fungicides at a mark-up of 20 CFA per 25-gm container.

### Conclusions

Little data are available on cooperative marketing of agricultural inputs; few cooperatives appear to be involved with this activity. It appears, however, that if economically viable agricultural investments exist, farmers will purchase inputs even when distribution and profit margins are included. Village stores represent a likely outlet for agricultural input sales by cooperatives.

### Recommendation

- Cooperatives should be allowed to participate in those economic activities that they deem appropriate. Project performance should be untied from the question of increased cooperative marketing of seasonal agricultural inputs.

### Cooperative and Privately Owned and Managed Input Supply Company

The fourth amendment states that the sub-sector goal of the APS project is to contribute to the

development of a phased voluntary cooperative input supply system which will be self-financing, serve the interest of cooperative farmers, and which will be progressively managed by or for the farmers or their representatives, and which will eventually be owned by them.

The amendment also calls for the establishment of an executive management committee "authorized to modify policy in the marketing and distribution of inputs . . . ." This management committee was envisaged by the implementation plan (Pattinson, undated) as the "first institutional step towards the organization of a central cooperative agricultural input supply company." The committee was to be formed in the short term and established by election. Its members would include representatives of the public sector and members from the regional cooperative unions. With regard to outputs, the first phase of project implementation (years 1-2) required "institutional changes to permit cooperative representation in the Input Supply Company."

### Progress To Date

On June 23, 1987, by decree of the Ministry of Agriculture, the CA was transferred to the cooperative movement. The UNC will now be responsible for managing the input supply organization. This transfer represents significant progress in achieving project outputs, both those of the first phase of implementation and the final objectives. Nevertheless, it is important to remember that the statutes governing the operation of the CA under the UNC and the method of CA capitalization have not been finalized.

### Findings

There is no evidence that the management committee envisioned by the fourth amendment was ever set up, although with the transfer of the CA to the UNC this is a moot issue. A more important question is that, although the transfer of the CA to the cooperative movement has been effectively accomplished by ministerial decree, the modalities under which the CA would operate have not been finalized. It is encouraging to note, however, that the decree specifically calls on the UNC to ensure that the preparation of the statutes of the CA allow for autonomous management.

The project's contribution to the preparation of the statutes governing the cooperative CA has been important. In December 1985, the CA submitted two documents relative to the functioning of the CA under cooperative management to an inter-ministerial meeting. These documents were "Les Dispositions Transitoires Regissant la Conduite de la Centrale D'Approvisionnement Durant la Periode Precedente l'Establissement en Societe Cooperative" and "L'Avant-Projet de Statut de la Centrale d'Approvisionnement."

In March 1987 the Ministry of Agriculture published draft statutes for the cooperative CA. These statutes define its mission as the management of agricultural inputs destined for the rural sector.

The draft statutes describe the structure and functioning of the governing bodies of the cooperative CA and the organization's financial operations. They specify the details of share ownership, and allow for subsidies from the GON as well as acceptance of grants and loans.

The draft statutes permit the purchase of shares in the cooperative CA by all rural cooperative organizations. It is not clear if non-cooperative entities would also be allowed to purchase shares, although capitalization problems may make this inevitable.

The draft statutes define the manner in which cooperatives can become shareholders in the cooperative CA and their obligations to it. They call for voluntary participation and forbid any cooperative from being forced to purchase shares.

At present the statutes have not been ratified by the GON. Until this process is completed, the future of the CA in the cooperative movement will remain unclear. The ASDG agreement provides for the adoption of these statutes by December 1987.

#### Capitalization

Apart from the issue of the legal structure of a cooperative input supply company is the question of capitalization of this entity. In the Pattinson pre-implementation and implementation reports (1985; undated), the guarantee fund was the mechanism that would capitalize cooperatives. It would thus "provide the basis for shareholding subscription capital to the Central Cooperative Supply Company" as the cooperative CA would be called.

In the Pattinson model, the guarantee fund would allow the cooperatives access to seasonal commercial bank credit. This would take the form of a line of credit that the cooperatives could use to purchase seasonal agricultural inputs. This would be advantageous both to the CA and the cooperatives. On the one hand, the former would have a purchaser for its inputs and be able to move accumulated inventory. The cooperatives, on the other hand, presumably would be free to resell these inputs at a profit or use them to improve their production, selling the resulting surplus and thus turning a profit. In any case the monies thereby created would represent the

capitalization fund whereby the cooperatives could buy into the CA. No determination was made about whether this type of activity could produce enough funds to capitalize the CA fully, even over the five-year period envisaged.

Subsequent to the awarding of the contract to CLUSA for implementation of technical assistance to both the CA and the cooperative training component, responsibility for the guarantee fund was transferred from the CA to the cooperative training component. This transfer was related to CLUSA's preference to use the guarantee fund as a training tool. Under CLUSA's training methodology, individual cooperatives identify needs and chose those economic activities in which they would like to participate. The guarantee fund then provides the resources which with to undertake the activity. In fact, the fourth amendment permits the cooperatives to use the guarantee fund as they see fit.

It is unclear from project documentation whether the transfer of the guarantee fund to the cooperative training component was ever officially endorsed by USAID. In practice, however, the CA has no involvement with the fund. Given this situation, it is curious that Pattinson's proposal that the guarantee funding mechanism be tested first in pilot areas, and eventually in an increased number of cooperatives, was conserved in the fourth amendment. There has only been one case of the guarantee fund being used to finance the purchase of seasonal agricultural inputs,<sup>1</sup> although cooperatives are in theory free to chose this as one of their economic activities. Interviews with BIAO branch directors in Tahoua and Zinder indicated that they have no loans of this type in their loan portfolios. These findings indicate that some aspects of the Pattinson model were flawed.

The Pattinson model rests on the assumption that the investment in seasonal agricultural inputs is profitable. This may not be the case for the majority of cooperatives that operate in conditions of dry-season agriculture. In fact, it is an open question in the research and extension community as to whether the use of fertilizer and/or animal traction is economically justifiable under rainfed conditions.

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<sup>1</sup> 500 kg of fertilizer for 42,000 CFA.

The resale of inputs by cooperatives to generate surplus capital may also not be viable. Given the economic uncertainty of using inputs, it does not make sense for a cooperative to increase sale prices to its members by much more than the cost of delivery. In many areas, field observations by the evaluation team indicate that Nigerian attitudes toward cooperative membership may preclude the resale of inputs at higher prices to non-cooperative members. Those users would of course be free to join the cooperative with little or no barriers existing to their entry into the cooperative.

The direct link between cooperatives and the CA is another implicit assumption of the Pattinson model that may be doubtful. Given the reduction in subsidies required by the ASDG and the CA's high cost of operation, cooperatives have great incentive not to purchase inputs from the CA but rather from the private sector. In addition, because of the CA's precarious financial situation, it does not follow that they would be interested in purchasing shares in the CA.

The possibility of commercial bank financing will have to be considered as a way of capitalizing a cooperatively run CA. The physical stock of the CA could serve as collateral for commercial bank credit. The small value of this collateral relative to the CA's annual operational costs, however, would limit the degree to which commercial credit could be used to capitalize the CA. Reduction of CA operating costs would certainly improve the outlook for commercial borrowing.

Another constraint to obtaining commercial bank financing in the short term is the uncertainty of the CA's mode of operation under the UNC. Before commercial credit can represent a significant source of financing, the CA will have to develop a track record of successful commercial operation. On a more positive note, the project has been successful in putting in place the financial management systems that will provide the type of information necessary to facilitate the granting of commercial bank credit.

The establishment of a track record of successful operation is not likely to take place before PACD, and at least in the short term it will be necessary find a way to provide the CA with initial operating capital. The eventual receipt of bank credit by

a cooperative CA would be a good indicator of attainment of the objective of creating a commercial operation at the CA.

Although the implicit assumptions of the Pattinson model regarding capitalization of the cooperatives and the agricultural input organization may be doubtful, the key feasibility issues identified in the implementation plan are still critical for the establishment and success of a cooperatively owned and managed input supply company.

One of these feasibility issues concerned the ability of the cooperative representatives at the departmental level to participate in overall management responsibility of the CA. Although the cooperative training component was to assist in developing this ability, little was done in this area. The training undertaken in 1986 of URC and USRC personnel in the workings of the CA represent positive steps in this direction.

Of even greater importance, however, is the question of pricing of inputs. This issue relates to the independence in pricing of the CA and its ability to move from one unified national price to a system of regional pricing. In the words of Pattinson:

If the cooperative managed Central Cooperative Supply Company is financially self-supporting, it will require to have control over its pricing structure in order to cover costs and set aside reserves . . . . National prices would possibly disappear, and be replaced by regional prices to reflect real distribution costs and/or competition from traders. The management committee of the CA . . . will require to address this issue with the GON price fixing commission and establish ongoing dialogue on price policy.

At present there is no evidence that this dialogue has been opened, although the CA should attempt to do so. It is not clear that the transfer of the CA to the UNC will solve the problem of pricing independence.

Although not stated in the implementation plan, another crucial issue to CA economic viability is that of national coverage. In some areas of Niger, farmers' needs for seasonal inputs may be more rationally covered by the private sector. Sales volume or distance factors may make operation unprofitable in other areas. In addition to pricing independence, the CA should have the ability to eliminate or drastically curtail its operations in these areas. Forcing the CA to be the supplier of last resort goes directly counter to the objective of creating a strong, economically viable input supply company.

The draft statutes call for the cooperative CA to be administered by a Board of Directors who presumably would have the authority to eliminate unprofitable operations. It is not clear, however, if this would be acceptable to the UNC leadership.

The implementation report raises the question of a revolving fund for the CA. Pattinson suggests that the issue be resolved directly between the GON and USAID. Given the contribution of other donors to the CA's fertilizer stock, resolution of the revolving fund issue will certainly require their participation. The question of a revolving fund remains unresolved and is discussed more fully in the section on "Operational Costs and Financial Support by the Government of Niger."

### Conclusions

Progress has been made in creating the institutional changes that would permit cooperative representation in the input supply company. The CA has contributed to this effort both in the area of training of URC and USRC personnel, helping to integrate cooperative leadership into the operations of the CA, and in the preparation of statute proposals that define the institutional functioning of a cooperatively run CA. It is unclear if the transfer to the UNC represents a positive step toward granting the CA the independence in pricing and marketing that it requires to operate on a commercial basis. The CA should lobby for this management independence as the UNC develops its strategy for operating the CA.

At present no viable mechanism of capital participation by cooperatives in the CA has been developed. This will have a negative impact on the incorporation of a

central cooperatively or privately owned and managed input supply company by the end of the project. In addition, the lack of a GON operating subsidy to the CA and the unresolved issue of a revolving fund are likely to delay the possibility of financial independence for the next several years.

#### **Recommendations**

- The statutes governing the operation of the CA as part of the UNC must provide authority to run the CA as a business, on sound business principles.
- Ensure that approval of the statutes governing the cooperative functioning of the CA are expedited, and that they grant independence to the CA in marketing and pricing agricultural inputs. The CA should spearhead this effort.
- Work toward resolving the CA's capitalization problems. Reassess the ability of cooperatives to purchase shares in the CA, and the extent to which this factor will constrain achievement of project objectives.
- Modify project implementation documents to untie use of the guarantee fund from the purchase of seasonal agricultural inputs by cooperatives.

#### **Special Issues**

##### **CA Debt to the CNCA; CA Receivables from CNCA**

The accumulated debt of the CA to the CNCA, in the amount of 1 billion CFA, has long represented a block to the creation of a self-sustaining input supply company. This debt resulted principally from the purchase of the CA's vehicle fleet in 1980.

The debt issue has recently been resolved with the transfer of the CA to the UNC. The GON has agreed to absorb the debt of the CA, and this issue no longer represents a major constraint to the CA's operation.

A related issue concerns receivables due the CA from the CNCA. Agricultural equipment was delivered by the CA to farmer cooperatives on behalf of the CNCA in the amount of approximately 33 million CFA. Unfortunately, the CNCA never furnished the animals that constituted the remaining portion of the technical

package. For this reason the transactions with the farmers were never fully completed.

At present, the CA is attempting to recover these receivables from the CNCA. This situation was not dealt with specifically in the decree transferring the CA to the UNC, but it is likely that these receivables will be netted out from the amount owed to the CNCA.

#### **Subsidy Requirements of the Agriculture Sector Development Grant**

The ASDG links the accomplishment of agricultural policy reforms to the release of funds to be used by the GON for financing development projects. The ASDG has so far provided \$11.5 million to the APS project and has attempted to promote agricultural production by diminishing the policy constraints to development in the agricultural sector. With regard to input supply, the ASDG is designed to reorient the agricultural input supply subsidy policies of the GON with the objective of improving the allocation of scarce economic resources.

In discussing the grant agreement, this section will limit itself to a treatment of the relationship between the ASDG and the CA. The conditions precedent of the ASDG require progressive reduction of the average rate of subsidies on agricultural inputs over the life of the agreement. The June 1987 reform target of subsidy reduction to 30 percent of the delivered cost of the inputs was attained. This percentage is scheduled to be reduced to 25 percent by April 1988 and to 15 percent in April 1989. In addition to these limits on subsidy rates, the maximum rate of subsidy on any one agricultural input cannot exceed 50 percent.

Besides reduction in the subsidy rates, the ASDG requires that appropriate actions be taken to develop the CA "toward a cooperatively owned input supply entity in competition with other merchants and traders in the private sector." The CA is not to be granted a monopoly in the sales of agricultural commodities and is to be moved closer to becoming an autonomous entity.

The original agreement called for the release of four tranches. The third tranche of the ASDG was released in June 1987, and USAID has found that the

conditions precedent of the grant have been met. The average level of subsidy on agricultural inputs handled by the CA is currently 22 percent, which is below the 25-percent level required by the ASDG. In general, the CA has taken the appropriate actions to conform to the subsidy requirements of the grant agreement, reducing subsidies to the levels required.

The input supply component was instrumental in first calling attention to the problem of what reference price to use in calculating the average subsidy. Subsequently USAID and the GON agreed that the purchase price of fertilizer from Nigeria (delivered in Niger) will be used as the reference price to calculate the subsidy. This is advantageous to the CA as fertilizer prices have had to be reduced less to meet the ASDG conditions. The improved internal management systems put in place by the project have facilitated verification of conditions precedent relative to subsidy rates.

In the past, subsidies on pesticides for use on cotton have been greater than the levels required by the ASDG, reaching 100 percent in some cases. However, the responsibility for their distribution was transferred from the CA to the Crop Protection Service, as they are not a normally marketed input to private or cooperative farmers producing under rainfed conditions. This satisfies the ASDG conditionality.

USAID has determined that the transfer of the CA to the UNC fulfilled the conditions precedent for release of funds under the third tranche. These conditions related to developing the CA as a cooperatively owned input supply entity. Issuance of funds under the fourth tranche is likely to require that the statutes governing the CA's operation under the UNC be put into place and that these statutes permit the operation of the CA as an autonomous entity with no monopoly control.

In addition to the conditionality affecting the CA's structure and operations, the ASDG contains provisions relating to credit and rural financial markets. A rural financial market study has already been undertaken and completed, and the grant includes requirements that the development of rural financial markets be encouraged. In the future, other USAID funds may be available to allow the GON to establish a rural credit and savings system. Should such a system become functional, the

available funds could increase the demand for inputs supplied by the CA and others, and could significantly improve the environment for the sale of agricultural inputs.

#### **Impact of Reduced Subsidies on the CA**

Fertilizers are the only subsidized input sold by the CA. The impact of reduced subsidies on the CA has been to reduce its fertilizer sales while increasing the share of the market covered by private traders.

This is not necessarily a negative development. In fact, it is in the spirit of the ASDG. Those consumers now receiving fertilizers from traders obtain them at reduced cost relative to the CA sales price.

The question about whether the private traders can be relied on to supply the fertilizer needs of Niger has been debated often. The potential for monopolies to develop is one issue. The quality and vulnerability of their Nigerian supply to cut off are others. Traders' lack of knowledge of products and the nature of traders' business practices, which involve minimum risk taking and little inventory for a security stock, have also been of concern. Given the strategic importance of fertilizer supply and the constraints faced by the private sector, there is surely a role for the CA to play in fertilizer provision. It can also play a role in the supply of other agricultural inputs such as fungicide and agricultural equipment, for which the role of the private traders is not as important.

Despite the questions surrounding their operations, the role of traders in fertilizer supply is not likely to decrease. The border with Nigeria is porous, and the fertilizer needs of Niger are estimated to represent less than 1 percent of the consumption of its southern neighbor. In fact, the DEPSA study (Josserand, 1986) reports that traders had well-developed supply networks in Nigeria and that large operators can provide several tons of fertilizer within 30 days. In a macro-economic sense, the Nigerian source of supply is beneficial to Nigerien farmers as it allows them to obtain fertilizer at a savings.

If the CA is granted autonomy and can reduce its operating costs, it should be able to compete more effectively with the private sector despite reduced subsidies.

If the CA can be turned into a strong, flexible, self-financing business, it will be better able to respond should supplies of Nigerian fertilizer eventually be cut off.

**Linkages: Fertilizer Use and Extension, Extension Support, and Seed Multiplication Components**

The project goal of increased fertilizer consumption is likely to be influenced by the fertilizer use, extension support, and seed multiplication components, inasmuch as they encourage fertilizer usage by farmers. Extension recommendations encourage the use of nitrogen and phosphate fertilizers and adoption of these recommendations would translate to an increased demand for fertilizers. Improved seed varieties translate better fertility conditions into improved yield.

The contributions of the extension support component to the goal of increased fertilizer use has been minimal to date. The work of this component, as well as that of the IFDC effort are recent. In their field demonstrations, they have tried to inform farmers about the use of fertilizer. It is too early to determine if these demonstrations will have any effect on fertilizer demand, either in the short term or by the end of the project. The reasons relate to unresolved questions of the agronomic and economic suitability of the technical package.

The seed multiplication component has contributed minimally to the increased use of fertilizer. This component distributes fertilizer to participating third multiplication (M-3) farmers on credit and provides technical assistance to them in the use of that fertilizer. Thus a greater number of farmers are exposed to the use of fertilizer than might have happened in the absence of the seed multiplication component.

The linkages between the research community, specifically, INRAN and NCR, and the CA are at best tenuous. One area of collaboration worth noting, however, involved the participation of an INRAN fertilizer specialist in the CA's national training seminars.

In theory, it might be possible for research and extension to advise the CA about the purchase of fertilizer types that might be more effective for use in Niger than those formulations already being sold. In reality, the choice of fertilizer is

constrained by what the donors give and what is available in Nigeria, and the level of research knowledge. This is not likely to change soon.

A more productive linkage between the CA, on the one hand, and research and extension, on the other, would be in the area of marketing plans. Like any business, the CA will eventually be obliged to study its clients' needs. The fertilizer use, extension support, and seed multiplication components would represent a source of technical expertise for the CA to utilize in developing marketing plans, not only for fertilizer but also for other types of agricultural inputs. The CA could also benefit from the experience of the fertilizer use and extension and the extension support components in identifying those geographic areas where fertilizer use is profitable, to adjust its operations accordingly.

#### **Agricultural Equipment Manufacturing Workshops**

Agricultural equipment manufacturing workshops were originally conceived to be connected to the CA component of the project. The manufacture and sale of agricultural equipment were directly linked to the CNCA's operations. In 1984 the CNCA ceased operations, and since that time no official credit has been available to purchase agricultural equipment. The design of the CA component addresses itself primarily to seasonal inputs, and the fourth amendment eliminates direct interventions by the CA in operation of the workshops. According to the fourth amendment, the issues related to agricultural credit were outside the scope of the project.

The evaluation team visited the workshops in Zinder and Tahoua, as well as two privately held workshops in Maradi. In this section the question of the economic viability of agricultural equipment manufacturing workshops will be reviewed. The effect of the workshops' ongoing promotional sales campaign on the CA will be described.

#### **Background**

There are four agricultural equipment workshops in Niger: Unité de Construction de Matériel Agricole (UCOMA), in Zinder; Atelier de Construction et

Réparation d'Équipement et des Machines Agricoles (ACREMA), in Tahoua; Centre de Division d'Artisanat Rural et de Mécanisme Agricole (C/DARMA), in Dosso; and a new workshop called Atelier de Fabrication de Matériel Agricole (AFMA) located near Niamey. AFMA has only recently begun to function as a production workshop, and this analysis limits itself to the first three.

The Zinder, Tahoua, and Dosso workshops were set up to provide agricultural equipment that was then sold on CNCA-financed credit to farmers. The CA was responsible for delivering the equipment to its owners. With the collapse of the CNCA, the market for agricultural equipment from the workshops has been reduced virtually to zero, and the workshops in Zinder and Tahoua have produced little or no agricultural equipment in recent years. The evaluation team was able to observe large unsold inventories of agricultural equipment both at the CA departmental warehouses and at the workshops.

All of the workshops visited have diversified their operations into the production of consumer items, and there appears to be a good market for these. This diversification has at least enabled the workshops to keep functioning, albeit with reduced personnel.

Quality and suitability of equipment to the agronomic and economic conditions present in Niger are other important questions that concern the workshops. Some of the equipment produced requires the use of two bullocks. This represents a substantial initial investment as well as a large continuing cost to maintain the animals. Cheaper donkey traction equipment may be preferable in some situations. The seeders produced by the workshops were also poorly adapted to many farming situations.

#### **Economic Viability of the Workshops**

The workshops were financed by a combination of donor-furnished credit and through working capital loans from the CNCA. The Tahoua workshop has been able to maintain its level of staffing, and because of lower production costs, it was able to repay its long-term loans. This workshop has turned a combined profit over its last two fiscal years of approximately 38.3 million CFA. Management at other

workshops may be in need of more improvement. Unofficial information indicates that clients owe an estimated 34 million CFA to the workshop at Zinder.

The workshops at Dosso and Zinder have substantial long-term debt. The former has a debt service of approximately 175 million CFA. In addition, the workshop at Dosso owes 150 million CFA in raw material loans to Canada.

The Zinder workshop's debt to the CNCA is approximately 1.2 billion CFA. This workshop also owes an estimated 55 million CFA to the counterpart fund for the reimbursement of raw materials supplied by Canada and 2 million CFA from other donor loans.

In June 1987 the workshops were transferred to the UNC. To reduce the debt of the workshops to the CNCA, a temporary promotional sales campaign was organized. This campaign has been under way since early 1987, and the price of agricultural equipment has been reduced by 50 percent. At the end of the promotional campaign, the remaining debt of the workshops to the CNCA will be absorbed by the GON, greatly improving the economic viability of the workshops. The UNC will be responsible for the other debts of the workshops relative to counterpart funds. A mechanism has yet to be worked out to cover these debts.

Another factor linked to the economic viability of the workshops is the availability of agricultural credit. Should an effective credit mechanism be put into place, the economic outlook of the workshops may be improved. It will still be necessary for the workshops to liquidate accumulated inventory and resolve the problems related to the quality and appropriateness of their equipment. The marketing of agricultural equipment will have to be given careful study before any new financing of the workshops is undertaken. A distribution system will also have to be developed.

One possible way to improve the economic viability of the workshops might be combine several of them. Unsold inventories could perhaps be used as raw materials for other workshops or adapted to make them more appropriate for farming conditions in Niger. The FAO National Agricultural Project at Tahoua, and the Center for Rural Artisanry and Agricultural Machinery under the Niamey Department

Development Project, are experimenting with new designs for agricultural equipment. The expertise of these organizations will be useful in any future efforts involving the workshops.

#### Effect of the Promotional Sale and the Workshops on the CA

The promotional campaign has resulted in sales of a large amount of equipment by the workshops, but inventory at some workshops remains high (Table 4). In the short run, the effect on the CA of the temporary promotional sales is to eliminate its sales of agricultural equipment. Once the promotional sales campaign is over, the workshops will then be required to sell their equipment at full production cost and sales at the CA should improve. Given the slow pace of sales, however, it is uncertain how long the promotional sales campaign will last.

In the past, the government of Canada provided raw materials and parts to the workshops. The timetable for repayment of spare parts and raw materials was not linked to sales, and the ateliers had delays in meeting the repayment deadlines. Since the workshops were under the administrative responsibility of the CA when the repayment agreements were negotiated, the CA was obligated to ensure the repayment of the workshops' loans. In any case, unless these loans are paid back, the CA risked losing its lines of credit for fertilizer from Canada. With the absorption of this debt by the UNC, the CA is freed from both of these constraints.

In the past, the CA was the exclusive distributor of agricultural equipment from the workshops. With the transfer of the workshops to the UNC, the former are free to sell to any client, including the CA. Should marketing studies show that it would be profitable for the CA to engage in the sale of agricultural equipment in certain areas, it could take delivery on a consignment basis. It would be unfortunate if the CA were forced to shoulder the burden of a national distribution system for agricultural equipment.

**TABLE 4**  
**EVOLUTION OF AGRICULTURAL EQUIPMENT SALES**  
**DURING PROMOTIONAL CAMPAIGN, UCOMA AND ACREMA**

Item	--Beginning Inventory--			-----Sales-----			Ending Inventory
	UCOMA	ACREMA	Total	UCOMA	ACREMA	Total	Total
Bullock Cart	2,790	519	3,309	1,238	144	1,382	1,927
Donkey Cart	1,285	240	1,525	294	9	303	1,222
Cart Frame (a)	300	421	721	312	421	733	
Hoe with 3 or 5 Harrow Teeth	2,100	2,100	287	287	1,813		
Plow	121	121	120	120	1		
Weeder Blade	1,600	1,600	71	71	1,529		
Ridger	775	219	994	76	76	918	
Seeder	695	695	21	21	674		
Donkey Hoe	20	20	7	7	13		
Chain			76		76		
8" Plow		677	677		422	422	255

Note: No information available for C/DARMA.  
 Sales for UCOMA through September 30, 1987.  
 Sales for ACREMA through October 31, 1987.

a Some production may have occurred during the period.

#### Modification of Input Supply Component

The assumption is made in this section that the CA will be transformed into a commercially operating input supply company.

#### Feasibility Study

The first step necessary in transforming the CA into a business operation would be to determine if this transformation is feasible. Among the issues to be addressed would be the question of the CA's inventory, specifically, how to dispose of the accumulated inventory, including agricultural equipment. The nature and type of accumulated inventory would have to be determined, as well as its present condition. This is especially relevant to fertilizer stocks, which deteriorate over time. A

commercial business faced with an excess inventory situation would probably mark down the inventory. In the face of the ASDG subsidy conditionality, it will probably be necessary to work out the mechanisms by which inventory mark-down can occur. These could include a one-time exemption with conditions set for future stock turnover practices.

Other questions related to the viability of operating the CA like a business include determining where it would be profitable to operate, and what prices to charge. This involves determining what the CA's areas of comparative advantage are in relation to the private traders and assessing the types of products for which there is a reliable market.

The feasibility study should also consider alternate modes of operation of the CA. The idea of decentralizing CA management and allowing regional autonomy deserves consideration. URCs could be billed for inventory and delivery charges. They would then be responsible for marketing the inventory and would be able to retain any profits. CA headquarters would take care of ordering and other operations where economies of scale exist. The URCs would be responsible for contributing to the operation of the central office in amounts proportional to the services they receive.

The changes necessary in management style to move from a government parastatal to a profit-making business should not be underestimated. Running a business, with the profit motive paramount, calls for a different mentality than running a government supply operation. Another important issue concerns personnel policy. The CA has been hampered by frequent personnel changes and lack of sufficient staff, and by problems of remuneration. To operate like a commercial entity, the CA will require sufficient, competent personnel, who are adequately remunerated for their work. The CA must also have the ability to hire and fire as it sees fit.

A related matter is that of future technical assistance and training. During a transition period, perhaps two to four years, assistance would be needed to build on the financial management skills already present, and to develop marketing, organizational, and entrepreneurial abilities.

The CA will need staff with experience in and exposure to business operations. Participant training can help in this area. An effective approach would be to provide short-term training opportunities, such as internships in profit-making companies and cooperatives. CLUSA is well placed to arrange for these training opportunities among its members, despite the limited time remaining in the project.

#### **Institutional and Capitalization Issues**

The future of the CA will be governed to a large extent by the institutional relationship it will have with the UNC. The statutes governing this relationship have not yet been put into effect and their eventual details are therefore not clear.

The decree transferring the CA to the UNC states specifically that these statutes should call for the autonomous management of the CA. This is a positive step. For the CA to become a commercial enterprise, it must be granted independence in pricing and marketing. This includes the ability to charge different prices for its inputs, depending on the costs of operation in different regions; the freedom to cease operations in unprofitable areas; and the independence to determine the type of products it sells. It is possible to imagine the CA expanding its inventory to include items such as pesticides, veterinary supplies, and other agricultural products, should the market exist for them.

Operating the CA on a commercial basis will entail reducing the emphasis on increased aggregate use of agricultural inputs, especially fertilizer, as a measure of project progress. The fourth amendment represents progress in this area, as it calls for increased input use only in geographic areas where this makes economic sense.

The statutes governing the CA will certainly provide a way for member cooperatives to purchase shares in the new input supply company. Cooperatives will have a choice in whether to invest in the CA. Consideration must therefore be given to the attractiveness of the CA as an investment. The CA will have to move rapidly toward becoming financially viable. In this context, it will be necessary to find a mechanism to provide the CA with an initial infusion of working capital to serve as pump-priming.

The capitalization model proposed in the implementation plan called for use of the project guarantee fund as a way of generating capital through the sales of agricultural inputs. This model appears to be flawed because of its assumptions that the sales of agricultural inputs could produce enough capital to provide for the needs of the CA. In practice, the project's guarantee fund has been transferred to the responsibility of the cooperative training component, and only one small loan has been made for the sale of agricultural inputs.

Commercial banks represent a potential source of capitalization, but the use of bank financing on commercial terms does not appear to be a viable one in the short term. The CA's poor financial situation, the small value of its collateral relative to capitalization needs, and the absence of a borrowing track record constrain the use of this method of financing.

Allowing the CA to retain sales proceeds from donor-provided fertilizer is one option that appears practical. In fact, in 1985-1986 USAID contributed funds for the purchase of 2,000 tons of super-triple-phosphate fertilizer and has allowed the CA to use the proceeds as a revolving fund. The establishment of a revolving fund in this way will require agreement on the part of the donor community, and its feasibility needs to be investigated further. The CA should contact donors to assess the conditions under which they would agree to the establishment of a revolving fund.

Under this mechanism, donor contribution of fertilizer would be reduced each year as a greater share of the CA's needs are purchased on a commercial basis. The proposals prepared by CLUSA in the Garvey reports will be valuable in detailing the operations of a revolving fund.

Another potential capitalization method would be the granting of a loan by USAID on a concessional basis for the purchase of fertilizer and other inputs. Such a loan could be made to the Central Bank at very low rates for on-lending to the CA. Another means would be a direct loan to the CA at current U.S. Treasury rates. This lending could possibly be linked to ASDG or African Economic Policy Reform Program (AEPRP) funds.

A loan arrangement would provide capital for a revolving fund more quickly than would a phased decrease in donor contributions of fertilizer. A loan arrangement would have the advantage of placing CA operations more on a business basis. With this type of mechanism, the CA might have a greater incentive to run itself like a business because its performance would determine whether it was granted any further loans. In addition, repayment of any loan, even one on a concessional basis, would help to establish a borrowing track record and facilitate the eventual receipt of credit from commercial bank sources.

Since vehicle repair and maintenance represent an increasingly onerous expense for the CA, and timely delivery is essential if the CA is to compete with the private sector, it will be necessary to find a way to replace the CA's aging fleet. In the short term, counterpart funds or monies from the ASDG might be used to provide bridge financing for this purpose.

## COOPERATIVE TRAINING COMPONENT

### Original and Modified Goals and Purposes, Expected Outputs, and Assumptions

#### Original Goal and Purpose

The original goal of the cooperative training component was to improve agricultural productivity and increase incomes of rural sector families. The original APS project design of 1982 included plans for a National Center for Cooperative Training. It was felt that the establishment of such a center was the best way to increase the effectiveness of cooperatives in delivering services to its members. The purpose of the component was to improve the capability of local cooperative officials to manage the delivery of cooperative services including marketing, distribution of agricultural inputs, provision of credit, continuing education, and design and implementation of income-producing initiatives. This was to be achieved by establishing a national program to train both UNCC personnel and local cooperative members, organized around the training center.

The outputs of the training program were quantified as follows:

- A national training center with classroom space for 80 trainees: 40 UNCC agents and 40 local cooperative officials. A five-person technical instructional staff was to have been put in place;
- Forty UNCC field agents were to have been trained each year for four years, resulting in 160 total agents trained;
- Each year, 240 elected cooperative officials (40 per month for six months a year) were to have received short-term training (two-week sessions) at UNCC, resulting in a total of 1,520 officials trained. Another 1,520 cooperative accountants were to have been trained in that same time frame; and
- Functional literacy training was to have been supported at 40 village centers for continuing education, offering one five-month literacy course per year to 40 cooperative members.

#### Modified Goal and Purpose

In March and April 1984, the cooperative training component was redesigned. It had been originally designed around the UNCC, which was abolished in December

1984. In the absence of the UNCC, the new program design was to be implemented in collaboration with ministerial and cooperative movement structures. The goal of the component remained the same in the project's fourth amendment as originally stated: to improve agricultural activity and to increase the incomes of rural sector families. Important assumptions underlying the goal were:

- Current cooperative legislation would remain in force or become more favorable to producer involvement;
- No significant degradation in ecological or meteorological conditions would occur;
- GON pricing and subsidy policies would support efficient economic transactions between cooperatives and other GON institutions;
- Improved agricultural practices would remain popular and prove to be advantageous to farmers; and
- Satisfactory solutions could be found to agricultural input logistics problems.

The new purpose became "to contribute to the growth of a viable cooperative movement in Niger" by :

- Supporting cooperatives so that they can achieve social and economic objectives;
- Providing a training model that could lead the cooperatives to identify, design, and implement viable economic activities; and
- Making credit available for supply of seasonal agricultural inputs and other viable economic activities.

Some assumptions of the designers, as indicated in the 1981 Logical Framework, include:

- GON cooperative policies provide viable incentives for villager participation; and
- Partially literate villagers can master cooperative management skills.

In fact, none of these assumptions has been in error; to the contrary, the government cooperative policies after the 1982 Zinder Conference have become more supportive of the cooperative movement.

The outputs of the redesigned component are now quantified as follows:

- Establish a national system of decentralized village-based training (VBT) for cooperative members and field trainers. This training model will attempt to:
  - Train cooperative leaders of 200<sup>1</sup> cooperatives in literacy, management, and accounting skills to allow them to plan and run viable businesses, as well as assume autonomous management of all cooperative activities;
  - Train the Service d'Appui à l'Action aux Cooperatives (SAC), UNC, or URC trainers and other GON agents and cooperative members, and provide consulting services to disseminate the above skills effectively and establish a decentralized educational capability;
  - Develop an organization (SAC, UNC, URC) whose primary mission is training and consulting and whose agents are accountable to the cooperatives rather than to its own administrative hierarchy;
  - Develop a cadre of qualified cooperative trainers across Niger and of cooperative officials trained in the principles of locally controlled, economically profitable cooperative management, and the establishment of more than 200<sup>2</sup> pilot cooperatives that are engaged in and managing economically viable activities;
  - Site selection provides viable context for infrastructure and staff locations;
  - Training programs are appropriately designed;
  - Staff candidates and field-level agents are available and can be recruited; and
  - Villagers will support and participate in local language literacy courses
- Create a guarantee fund to enable cooperatives to operate bank accounts; have access to funding and thereby increase the quantity of seasonal inputs paid for on a cash basis to suppliers. Part of the guarantee fund will be converted at the appropriate time to cooperative capital to assist cooperatives with capitalization of their businesses on a mutual contribution basis.

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<sup>1</sup> Some project documents read "135 cooperatives," which was the 1986 suggestion of the CLUSA team leader. The number 210 was mentioned in other documents, as was "more than 200." The original target was 485.

<sup>2</sup> See footnote above.

- Create a system of control that can be audited for the operation of the guarantee fund and cooperative funds.
- In the medium term, provide opportunity for share funding from the farmers and groupement mutaliste (GMs) and the donor guarantee fund -- a first step in voluntary cooperative share ownership toward an eventual cooperatively subscribed and managed input supply system.

For more discussion of the guarantee fund, see the sections of the report concerning credit and input supply.

#### **Village-Based Training: Scope, Appropriateness, and Effectiveness**

"Establishment of a national system of decentralized village-based training (VBT) for cooperative members and field trainers . . . in literacy, management and accounting skills . . . and in the principles of locally controlled, economically profitable cooperative management . . . which will allow them to plan and run viable businesses, as well as assume autonomous management of all cooperative activities."

#### **Progress to Date**

**Number of Cooperatives and Geographic Dispersion:** The cooperative training component now has 114 cooperatives within six departments, which is 96 short of the project's externally set goal of a maximum of 210 by PACD. The number comes very close to a more conservative target of 135 suggested by the CLUSA team leader a year ago. And it compares favorably with the 14 cooperatives operational in only five departments in November 1986. One Department -- Diffa -- does not as yet have any cooperatives within the fold of the component; however, the component will shortly assign three new trainers to the region to begin organizing and implementing project activities. Training is occurring in all cooperatives repartitioned into departments: Tahoua, 23; Agadez, 10; Niamey 39; Zinder, 13; Maradi, 16; Dosso, 12 (each cooperative is composed of 9-12 villages or GMs).

Approximately 20 cooperatives join the component each quarter, a schedule that if adhered to, will allow for the envisioned maximum 210 target by the end of 1989. Thus, in terms of component expansion in appropriate numbers of cooperatives, the component is on schedule.

**TABLE 5**  
**REALIZED VERSUS TARGETED ACHIEVEMENTS**

<u>Department</u>	<u>Achieved Oct. 86</u>	<u>Achieved Oct. 87</u>	<u>Targeted 89</u>
Niamey	10	39	52
Dosso	2	12	20
Tahoua	5	23	35
Maradi	6	16	34
Zinder	5	13	42
Diffa	0	0	17
Agadez	0	10	10

**Targeted Members of Cooperatives:** The number of members to be trained and the selection of these beneficiaries are not articulated in the component's design. However, it is stated that the component would aim to train "cooperative members of 200 cooperatives . . . ."

To date, the component claims to have trained 2,208 villagers, including administrators and managers, assistant trainers, and literacy instructors as well as members-at-large. This compares favorably to the 406 trained in November 1985, according to the internal midterm evaluation, but is much less than the project's targeted total of almost 20,000, according to the Statistical Report of October 1987. The internal midterm evaluation estimates that 7,000 managers and administrators will be trained by PACD but the October Statistical Report indicates that this number will more likely be around 10,000 (with the remaining 10,000 comprising the mass members). Thirteen percent of the target has been achieved in nine months. However, given the multiplier effect of the program, this percentage should increase over the next 27 months before PACD; thus the outputs are within reach.

**Selection Criteria for Participating Cooperatives:** For comments on selection criteria, see "The Cooperative Movement."

**Establishment of a National System of Decentralized Village-Based Training:**  
 The project documents call for training in "literacy, management, and accounting skills." Themes covered in the training sessions at the village level tend to fall within two broad categories -- technical skills, and procedural and process-related skills:

**Technical Skills:**

- Management practices -- documents;
- Administrative practices;
- Accounting practices;
- Preparation of bank applications and dossiers;
- Literacy and numeracy training, including calculator use;
- Activity-specific training (cow-fattening, agricultural information, etc.);
- Socioeconomic milieu studies and feasibility studies; and
- Marketing strategies.

**Process Skills:**

- Cooperative movement -- roles, rules, and responsibilities;
- Scheduling and conducting meetings;
- Group decision making;
- Group solidarity and group building;
- Communication techniques;
- Information flow;
- Planning and programming activities; and
- Monitoring and evaluation skills.

**Decentralization:** Most training occurs at the cooperative village center. The training is often decentralized even further with sessions held in the GM village and at specific activity sites such as in the village store, in the fields, and at the

warehouses. Occasionally, villagers will travel to neighboring cooperatives to compare and share experiences, and selected members will also travel to the department capital's banks to carry out financial affairs. Increasingly, cooperative presidents are also participating in regionally organized steering committees (comités régionaux de coordination). Typically, and ideally, the intensive daily training provided at the most local level by the component's field trainers (assistants) lasts 9-12 months. Some newer cooperatives have had only one month of training whereas older cooperatives are starting their second year of training.

In addition to the basic training in each functional area, the project also conducts refresher sessions in some themes for 321 villagers in five of the six departments concerned; this represents a 14 percent retraining ratio.

**Economic Activities:** The desired output of economic activities is that these be "viable businesses," and that the cooperatives will be "engaged in and managing economically viable activities."

The VBT is always based on village-chosen economic activities. As of October 15, 1987, these activities numbered 85 in progress with another 168 in the planning stages, again within six of the country's seven departments. This figure compares favorably with the 28 being implemented in November 1986. Another 189 activities have already been undertaken and completed. The project's two-year Work Plan for 1987-1989 calls for an estimated 525 economic activities by the end of 1989, counting on 150-200 activities being generated each year. Most cooperatives are expected to carry out three revenue-producing activities, one of which is permanent in nature, the other two seasonal; these then become the learning and training environment.

The income-generating activities fall within 24 different categories, ranging from agricultural activities such as production and sales of onions, millet, cowpeas, and peanuts to more strictly business-related activities such as village stores and pharmacies. The most successful activities in terms of permanency, revenue generation, and popularity have been the village stores, pharmacies, and grain mills. Tried, but not popular, have been tomato drying, seed multiplication, milk sales, and garlic production; there are no further plans for these activities. A table of departmental achievements follows:

TABLE 6  
ECONOMIC ACTIVITIES

Department	Number of Economic Activities
Niamey	170 or an average of 4.35 per cooperative
Dosso	36 or 3 per cooperative
Maradi	79 or 4.9 per cooperative
Zinder	49 or 3.76 per cooperative
Tahoua	47 or 2.04 per cooperative
Agadez	60 or 6 per cooperative

Thus, with the exception of Tahoua, all departments are reaching or exceeding their minimum of three activities per cooperative. In Agadez, the cooperatives are well above that average; however, only one quarter of their activities are permanent in nature, whereas one-third is the desired ratio.

#### Findings

Following are the major findings based on visits to cooperatives, review of documents, and interviews in the capital:

- **Technical Versus Process Skills:** Training has been oriented heavily toward the technical skills. The most commonly occurring theme has been principles of business management, with emphasis on documentation (usually 10 different forms being mastered).

Village managers and administrators typically receive up to 17 days of training on the forms and other tools of project management. This has most likely occurred to stimulate economic activities and bring early success to the cooperative. The process skills, with the exception of running meetings and perhaps cooperative movement principles, have not been dwelt on as heavily. In the rush to get installed and get economic activities launched, there has not been time for substantial processing, reflective feedback, or procedural analysis of activities. Perhaps by repetition and by increased attention to the self-managed development process, the cycle can start to be internalized.

- **Content:** The content of the training appears to be pragmatic, needs based, and village oriented. The approach is bottom-up and grassroots oriented. The method is participative, non-formal, experiential, and practical. The techniques used are consistent with the approach and method, and include role plays, skits, exercises, small group work, and peer learning. The component assistants provide merely the structure or format -- an empty form, an idea, an outline -- and the villagers determine the content from their years of experience. This approach is the essence of participative adult learning. It is descriptive rather than prescriptive.

In addition, the training for the villagers takes place in their milieu, for the purposes of their income-generating projects, in their language, with their members dictating the pace, the input, and the decision making. The team saw evidence of the pragmatism of the training -- from *fiches de stock* in Hausa to carefully maintained notebooks full of newly learned letters of the Hausa alphabet. Store managers had memorized the forms completely.

- **Economic Activities:** The economic activities are becoming firmly entrenched in the cooperatives and are regarded as entrepreneurial rather than social exercises imposed from above. Equally important, the villagers realize that the activities provide the forum in which the training can take place. (One banker did state his opinion that in one or two cases there is a bit too much of a "speculative spirit" among cooperative members; that is, that they are too bent on monetary profit and are not content to go a little more slowly to reap the pedagogical and social benefits along the way.) The villagers spoke particularly of the economic benefits, but a few also mentioned the social and pedagogical benefits of the activities.
- **The project team is trying to maintain the basic preoccupation of the project -- that it is pedagogical in nature.** The component is, above all, a training intervention and not a credit company. (This compares with the recent DANIDA experience up-country: it evidently invested heavily in the cooperatives but neglected to provide adequate training. After several years, the only project legacy is a group of 10 of the original 75 village stores still operational. Additionally, no national cadres had been involved, and there was little monitoring.)
- **Continuing Education Centers:** Only a few of the GMs within the cooperatives have made headway in establishing their own continuing education center for literacy training. Although many mentioned it as a priority, only a handful of centers had been set up complete with a core of fee-paying, committed students and a nucleus of well-trained instructors.
- **Non-Component Cooperatives:** These cooperatives often lack a sense of purpose and motivation. They appeared not to have clear economic goals. Many have had no financial backing for four or five years. Their objectives are still personal, not group oriented. One appeared to lack group solidarity, animation, or ambition. And they do not have the zealotry for achievement witnessed within component supported cooperatives.

- **Weaknesses in Training:** The two weakest functional areas appear to be (1) the preparation of loan applications, and (2) the ability to perform in-depth and comprehensive marketing studies before launching a particular activity. In the former, sometimes the component assistant prepares the bank loan dossier, and only the president and treasurer ever deal directly with the bank. In the latter, some projects such as sheep-fattening and selling have failed as a result of inaccurate measures of marketing potential and Nigerian markets and of superficial or hasty socioeconomic studies. Although a market study does take place, it lacks the scope and legwork necessary to guarantee success.
- **Training Development Plan:** The training events appear to have been rather haphazard, with little attention to an overall training development plan. Although assistants have recently been encouraged to prepare their own yearly plan, no comprehensive and articulated training cycle is adhered to. Sometimes literacy comes earlier in the intervention, sometimes later. Project team members indicated that there will be time to reflect and prepare this kind of design now that project activities are well grounded and self-run.
- **Trainer-in-Residence:** Chances of the training succeeding are greatly improved when the cooperative has its own resident trainer, one who lives and learns with them and not merely serves as an outside agent or bureaucrat.
- **On-the-Job Training:** Some on-the-job training and refresher courses are occurring in the cooperatives, but several indicated that not enough of it is taking place. Some shop managers mentioned that they had received one or two visits from the assistant as follow-up to their original managerial training, but mentioned little else in the way of retraining. One banker said he believed there was far too little monitoring and brushing-up of skills in project activities.
- **External Requests:** Six other projects or organizations in Niger have sought advice and assistance from the component about their particular cooperative training needs. The requests have been to train their respective trainers, to lend them a trainer for a time, or to help them form their own training unit designed around the component's model. (The component hopes to be able to respond to these requests in some 20 cooperatives around the country.)
- **Banker Involvement:** The Director of the BIAO in Maradi is sympathetic to the project's goals and ambitions. He has visited two cooperatives and has also sent his assistant to visit others. He has arranged for four cooperatives to open savings accounts, and feels there is the need for and interest in getting bankers involved in the training process.

## Conclusions

VBT is now implanted throughout the country in a wide variety of cooperatives, in both the agricultural and the pastoral zones. The reputation of the quality of its training and the ensuing success of the income-producing activities are becoming widespread. A buy-in is occurring at all levels concerning the process, content, and structure of the training model, from government cadres, through to the component team members, the assistants, and ultimately and most important, among the villagers themselves.

During the first year and one-half of project implementation, systems have been installed to ensure the quality and the quantity of the training. Although any training program requires time, this aspect of the component's program has in fact taken hold. It remains to be seen if this progress can be maintained and if certain gaps or insufficiencies, as described below, can be addressed to consolidate the quality of the work.

## Recommendations

- **Rhythm of Expansion:** The tempo of new cooperatives joining the component should be maintained if possible. The component may find that the externally set goal of 210 cooperatives seems overly ambitious. This number should be seen only as a ceiling. The final number reached should reflect the absorptive capacity of the assistants and the team. It is better to do fewer well than to do more less well. Certainly distances between the cooperatives and their 9-12 GMs will be an increasingly important factor as the project spreads and assistants attempt to cover more area.

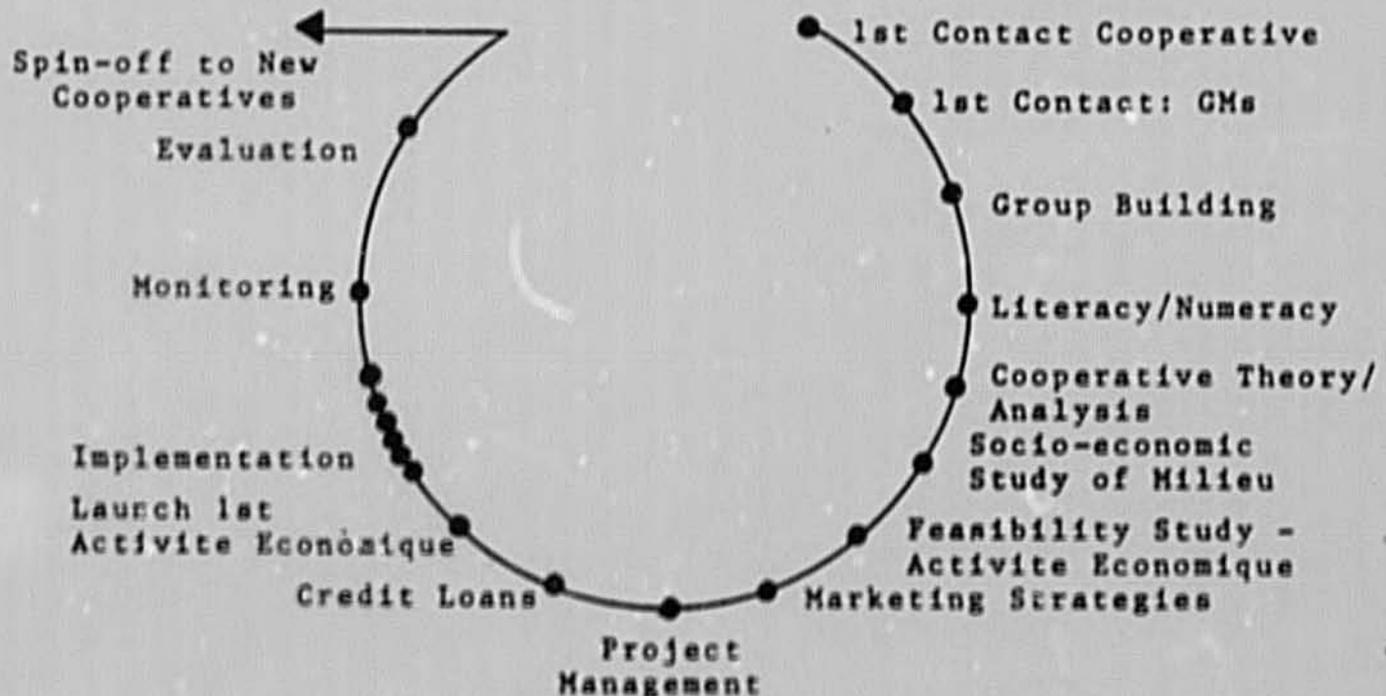
Additionally, external requests for technical and pedagogical assistance will have to be weighed according to resources and personnel available, without jeopardizing the quality of the component's primary obligation -- to its own cooperatives. Caution should be maintained not to spread themselves too thinly in its ambitiousness; the component team is well aware of this danger.

- **Literacy:** Literacy, numeracy, and national language transcription training should be considered earlier in the training cycle, and the emphasis on and support for continuing education centers in the GMs should be increased. The project's two-year Work Plan for 1987-1989 states that the component intends to "systematize the implantation of core units in the Mutualist Groups," and to "intensify the literacy training in the Centers." The idea of creating a core of committed, paying students should be adhered to and promulgated throughout the newer cooperatives. The project must continue to tie into existing national resources to avoid duplication of effort.

Instructors chosen to receive the two-week training should always be literate and well able to transcribe the national languages. More materials, including many visual aids currently used in literacy training, could be developed and presented to the instructors to encourage them to be more innovative.

- **Marketing:** Increased emphasis should be placed on in-depth marketing strategy training. This should begin to take off given the arrival of the CLUSA marketing specialist. Production should be deemphasized; instead, trainees should be encouraged to ask, "Is there a market for what we can produce?" Particularly in the departments that are profoundly influenced by the Nigerian markets, this kind of training and practice needs to be substantially improved.
- **Training Plan:** The project headquarters team is well aware that training events need to be consolidated into an overall training development plan with particular emphasis on sequencing of modules into a replicable cycle. This cycle would appear roughly as follows:

FIGURE 1  
TRAINING CYCLE



Additionally, all training-of-trainer events (of assistants, village assistants, national agents, and literacy instructors), all cooperative-level training events, all staff development retreats, all interdisciplinary meetings and roundtables, and all monitoring visits should be planned into a yearly time frame. This would help minimize the feeling that some events are happening independently of others, and would provide an informational packet useful to all staff and beneficiaries.

- **On-the-Job Training:** Step up the pace of on-the-job training. Now that the project is organized, it could afford the time to consolidate what skills have so far been learned. The two-year Work Plan for 1987-1989 states its intention to do this by intensifying its follow-up, developing a system of on-the-job training, and organizing retraining sessions for the cooperative managers.
- **Visual Aids:** It would be interesting pedagogically for the project to begin to use more visual aids in their materials. Heretofore, the *fiches techniques* elaborated by the trainers and the team members have not included any pictures, photographs or cartoons. Because the majority of the trainees are not literate, training devices such as these may be useful.
- **Materials Development:** It would also be helpful, soon, and consistent with what the overall training development plan projects, to consolidate the training *fiches* into bound documents for the component's trainers. At present, the trainers simply carry around a stack of loose-leaf papers that document each theme. These manuals could be grouped by module or functional area -- including marketing strategies, banks and loans, training skills, management practices, and roles and functions of cooperatives.
- **Targeted Recipients:** Provide training opportunities for the masses. The elite has always monopolized training events. Increasingly in Niger, the regular cooperative members-at-large are clamoring for some education, at least in literacy. Those who have received some control training stated so with great pride during our visits. The component should try to include more young people, some women if possible, and any others who are seriously willing to participate.
- **Internalizing the Process:** Continue to explore the pedagogical interest of the economic activities engendered within the cooperatives. Trainers can now afford to spend more time on the generic process to ensure that the steps necessary to arrive at self-management and self-financing are internalized to guarantee the continuance of the component.
- **Banks:** Ensure that bank directors and their agents get invited to visit the cooperatives, the staff development retreats, and the training sessions on loans, credit, responsibilities of repayment and risks run by each party. They are an underutilized resource. Work also has to be intensified on understanding these ideas, not only by the assistant and the cooperative President, but by as many people in the cooperative as possible. Furthermore, it should be mandatory that solid bank and loan training occur before any loan is granted (see the diagram on the previous page).

### Training of Trainers: Scope, Appropriateness, and Effectiveness

"Develop a cadre of qualified cooperative trainers across Niger . . . ." (Note that no recommended number of trainers is specified.)

#### Progress to Date

**Trainers:** To date there have been two recruitments of assistants -- one in June 1984 (12 trainers) and one in April 1986 (18 trainers). By department, the past, present, and future levels are as follows:

TABLE 7  
TRAINERS

Department	1986	1987	1989
Niamey	4	8	8
Agadez	0	2	5
Zinder	2	5	7
Tahoua	2	6	8
Maradi	2	5	6
Dosso	1	4	5
Diffa	0	0	3

Almost without exception, these assistants were recruited from the ranks of the now-defunct UNCC; they thus have had exposure to the cooperative movement, experience in the field, and some training or *animation* experience.

There have been no additions to this team for a year and one-half; however, the CLUSA team is testing and interviewing another 58 candidates to fill 12 more slots. For the first time, Diffa Department will be served by the component, thus incorporating all seven departments into its domain.

The assistants have received training-of-trainers (TOT) assistance from the project team since their hiring, but to varying degrees. Most have spent several weeks to several months in seminars held at the Institut Pratique du Développement Rural (IPDR) in Kollo. There, in 1985, the training was divided into five modules:

- Cooperative movement analysis/approach/work planning -- seven days;
- Needs assessment/feasibility studies -- seven days;
- Field experience -- three weeks spent in four cooperatives of the area;
- Profitability studies/bank loan preparation -- four days, plus field experience; and
- National language studies/transcription/numeracy/management training -- six days.

Since that time, staff development and access to professional refresher courses have been ad hoc, occurring typically among assistants who sit together to share experiences, or between CLUSA team experts and assistants during their frequent field tours. Most also receive one-on-one training attention by team members during their field visits on themes as needed and as they arise.

Each assistant, on average, works with three to four cooperatives, with the exception of Agadez where the two assistants have five cooperatives each. As the numbers of cooperatives grow, so too will the numbers of assistants, so that by PACD, the ratio will still be approximately four to five cooperatives per trainer.

**Assistant Village Trainers:** To date, there have been 38 assistant village trainers elected to serve and subsequently confirmed as understudies to the lead trainer. These assistant village trainers have typically received one or two intensive training sessions run by their mentor in their cooperative -- the CLUSA assistant. These sessions can last two or three days and cover such areas as responsibility, project objectives, running meetings, passing information, and time planning. Some have only been on the job for a month or two, whereas others have worked side-by-side with the CLUSA trainer for up to a year. The project assumes that the assistant village trainer should be ready to take over the functions of the CLUSA assistant after seven to ten months. This assistant village trainer is considered to be a cooperative employee and in fact is supposed to be paid from the cooperative's treasury.

**Others:** The cooperative training component has held TOT sessions that have included, but not been targeted at, national governmental agents such as literacy agents, agriculture agents, and animation agents, and a few URC and USRC agents.

These URC and USRC agents have received assistance mainly in understanding project goals, strategies, and objectives (a seven-day seminar in 1986 held at Kollo).

### Findings

- **Assistant Village Trainers -- Numbers:** Of 114 cooperatives engaged in the project, 76 of those have not yet confirmed someone as the assistant village trainer. By project end, with 210 cooperatives having joined, 210 assistant village trainers should be functioning. Thus, it appears the component is behind schedule in this particular aspect of the project.
- **Assistant Village Trainers -- Quality:** The assistant village trainers are often voted into place almost immediately after the cooperative joins CLUSA. The electors do not have a clear idea of what this person will do, what qualifications he needs, and what his role will be. Little selection criteria are involved -- only love of work, patience, and availability. Consequently, the quality of these assistant trainers may be lacking. Several are just starting on their literacy lessons; most do not have French; the evaluation team was not able to find out whether any had prior teaching or training experience.

What did become clear, however, was that even after 7-10 months of on-the-job training, some of these men may not be ready to become assistants. Few, indeed, appeared dynamic, and it seemed almost painful for one of them to even participate in the interview with the team. Another appeared to be little more than a messenger between GMs.

- **Effectiveness of Field Agents:** Most of the component's assistants have been able to reorient their attitudes and philosophies to this project's goals and objectives. That is, several of those interviewed appeared to have been sold on the bottom-up approach of development, and were content in their roles as advisers, facilitators, or consultants. Their former roles as bureaucrats, state agents, and instructors have been put aside. One informed us that he never gets involved in any cooperative decision at the village level, nor does he handle or interfere in any way with any cooperative resources. They firmly believe in the project's approach and methodologies and, to varying degrees, carry out their tasks with gumption.
- **Technical/Process Skills:** There has been more emphasis in preparing the trainers from a technical skills orientation -- document management, specific economic activity information -- than from the process skills side. Granted, they have been provided with or together have written up several *fiches techniques* (hand-outs) on adult learning theory, the techniques of good communication, leadership, and active listening skills, but practice of this learning has been limited.
- **Salaries:** About one-third of the cooperatives pay 100 percent of their assistant village trainers' salaries. CLUSA pays 100 percent of all the assistants' salaries, some of the cooperatives would like to begin paying them soon. These few recognize their duty to do so.

- **Development Retreats:** One impressive facet of the training program is that the assistants regularly, either formally or informally, convene in a professional retreat or two-day *collectif*. Niamey's assistants have convened twice this year, Dosso's twice, Tahoua's three times, and Maradi's and Zinder's once each. The assistants in Agadez have not yet met together. Governmental agents ("partners") also attend, mainly for informational purposes. This serves well the purpose of renewing strategies, sharing experiences, bringing up specific pedagogical or technical problems, and planning. At the same time, it frees up the Niamey-based headquarters team from having to go up-country to address individual needs; they are better able to attend to their planning and coordinating functions.
- **Selection Criteria -- Trainers:** During the third and final recruitment, a list of desirable qualifications was developed: ability to run economic activities, carry out research, analyze markets, facilitate a meeting, express oneself clearly, train, plan activities, and moderate a debate or discussion. In addition, candidates must have a creative and responsible outlook, good interpersonal skills, and a good knowledge of both French and their mother tongue. The test administered to the candidates is rigorous and includes interviews by union officials and cooperative presidents. A problem-solving task is run to gauge the candidates' personalities and abilities to function with others in groups.
- **Performance:** In at least one instance, the cooperative directors have decided to fire their assistant village trainer because of poor performance, and to hire another in his place. This is good evidence of the business spirit that is beginning to manifest itself in the cooperatives: If this person is hired and paid a salary, he must perform well. If not, someone else can fill the position.
- **Motorcycles:** Ten of the 30 motorcycles operated by the assistants are out of service; most of those 30 are two to three years old. There is a six-month delay in the arrival of their spare parts. Another 12 new motorcycles are needed almost immediately for the new trainers. These motorcycles are vital to the success of the component in that the assistants depend on them to travel to 40-60 villages within their four to five cooperative radius.

### Conclusions

The cooperative training component has made good headway in developing a permanent cadre of skilled cooperative trainers throughout the country. By the beginning of 1988, all 42 will be on the job and distributed throughout the country (based on numbers of cooperatives in each department). The department level appears to be the appropriate level at which to base the trainer units in that it allows for good decentralization of training; closer contact with regional; and subregional resources, and of course intimate knowledge of the needs, aspirations, and progress of the cooperatives themselves.

As in any human resource development project, the effectiveness of particular individuals may vary widely. The evaluation team was able to visit with five of the 30 assistants, but was unfortunately unable to observe any trainer in action, that is, running a training session of any kind with his cooperative. The team does know that the component has been meticulous in hiring the ex-UNCC agents, however.

A good indication of trainer spirit and initiative is evidenced by the retreats that they call and run among themselves. Obviously, they are interested in self-improvement, in solving their own problems with their help of their colleagues (and not always with the management), and in keeping the wider assistance community informed and engaged.

Although the transmission of information between trainers themselves and the home office has often been a stumbling block, given distances and the logistics of communication, it appears that the component is addressing this need, particularly by developing their upcoming newsletter. This will serve not only as a means for staff development, but will also convey information among the dozens of project staff.

Finally, and most important, the main reason the component is succeeding where others have failed is that the project trainers reside in the villages and work with the people daily. Few if any projects in the history of the cooperative movement in Niger have approached the task in this way. Weaknesses in the component as concerns trainer training are few and are highlighted below.

#### Recommendations

- **Selection of Assistant Village Trainers:** It is suggested that more stringent criteria be used in selecting the assistant village trainers. Their role should be more adequately explained to the villagers before someone is voted into office. It may prove helpful to provide them with a suggested list of likely qualifications the candidate should possess. Additionally, the project may want to consider whether these qualifications should include some degree of literacy, some fluency in French, and some experience in either teaching or animating or training in an effort to control the quality of these future community leaders. Thought should be given to whether this position could be filled by younger men or even by a woman.
- **Management Training:** The assistants could use more in-depth training themselves in management and administrative practices. At present, it

appears that management equals 10 forms, to run a shop or pharmacy. Notions of time planning, job descriptions, problem solving, evaluation exercises, employee interrelationships, or other village-appropriate practices have not been explored. Management as a discipline can and should be explored more fully, first with the project's trainers.

- **Video-taping:** If resources permit, and as a staff development technique, trainers should be able to observe themselves in action on video-taped recordings of their training events.

This could be accomplished during a village-based session or during a retreat. Presentation skills could be addressed and improved. By actual visual representation of notions such as presence, pace, animation, listening, and feedback, the whole concept of presentational skills could be demystified. The extension component's audio-visual unit should be approached for assistance.

- **Morning/Afternoon Applications:** Continue peer teaching strategies, and also consider conducting practice training sessions with a willing nearby cooperative to serve as trainees. For example, in the morning, the principles of marketing strategies -- pricing, product, promotion, and transport -- could be introduced in a TOT session for the trainers. In the afternoon, they could practice what they have learned in the morning by applying it at the cooperative level. Others would observe and critique. This avoids the problem of a memory lapse between the time the trainer is taught and the time he actually has to put into practice what he has learned (at present this can be a period of weeks or more).
- **Motorcycles:** The component should not under any circumstances allow procurement of new motorcycles, and spare parts for the older motorcycles, to be jeopardized. Lack of motorcycles will sharply reduce the effectiveness of the assistants within the radius of their cooperatives. Discussions should be opened on who will be responsible for the cost of maintaining the motorcycles if and when APS funds are no longer available.
- **Salaries:** Cooperatives, once on a comfortable financial footing, must be urged to contribute their share of the assistant's salary. Guidelines on what comfortable means, when payments should start to be phased in, and how much will be paid must be developed soon.

### **Institutionalization Issues**

\*Develop an organization (SAC, UNC, URC) whose primary mission is training and consulting and whose agents are accountable to the cooperatives rather than to its own administrative hierarchy.\*

### Progress to Date

In its original design the cooperative training component was inextricably linked to the UNCC. From the 1960s to its abolition in 1984, the UNCC was responsible for organizing villages into cooperatives or pre-cooperative organizations and for providing technical assistance in the management and operations of cooperative units. APS set out to train UNCC personnel as well as cooperative officials and members, thus strengthening an already-existing institution.

Since the redesign in 1984, however, and with the reorganization of the UNCC into the UNC, the component now articulates one output as the "training of the SAC, UNC, or URC trainers and other GON agents and cooperative members, and the provision of consulting skills, in order to effectively disseminate the above skills and establish a decentralized educational capability" and to "develop an organization whose primary mission is training and consulting . . ." . From this ambition springs the idea of eventually turning over this activity to Nigerien entities after PACD.

The component since its inception, says one APS staff member, "has been working in a sort of institutional vacuum." But this is not entirely accurate; the component is de facto functionally allied both to government and to the parastatally run UNC with its attendant decentralized infrastructure (regional and sub-regional offices throughout the country). It is intended that both the unions and the Ministry of Agriculture serve in an advisory capacity accountable to the needs of their member cooperatives and not to their own vertical structure. They are to be seen as consultants, as stated in the output above.

On the one side, the component's director maintains close working ties with the SAC, which is situated in the Département pour le Production Agricole (DPA) of the Ministry of Agriculture. This administrative linkage serves to help raise and solve issues needing technical assistance, negotiation and advice, and governmental support. The SAC says that it oversees the development of appropriate structures to assimilate the new training methodology. The director of this service has supported and actively engaged in the project from the beginning, and often travels with the component on field missions to visit the cooperatives.

On the other side, one of the component's mandates is to develop the country's union institutions and training capacities; the union then would serve as the structural home for the training model after the departure of the technical team. Since the beginning of the component's intervention, in fact, efforts have been made to develop and solidify the relationship, as explained below.

### Findings

- **Development of Unions at the Base:** The component has chosen to assist in the development of the unions by first encouraging a solidification of cooperatives at the base into a union at that most local level -- the Union Locale des Coopératives (ULC) at the canton site. To date, the project counts some 30 ULCs of their cooperatives. Their boards of directors constitute elected officials from member cooperatives.
- **Regional Master Trainer/Coordinator:** There has been an interest in placing a regional coordinator in each department; this person would sit either within the Direction Départementale d'Agriculture (DDA) as a functionary of the SAC or at the URC. It would be his task to provide coordinating services to the various project assistants in his zone, much as the Niamey-based team attempts to do now. This regional technical support person would be well placed to monitor project activities more closely than is possible now. Talks with the assistants revealed that they would welcome this idea, that it would help them solve pedagogical or technical questions without having to wait to come down to Niamey or for the component's team to come up-country.
- **Information Flow -- USRC-URC:** At present there is only one director in each USRC; he is appointed by the union and accountable to his regional director. There is some dissatisfaction at the URC level about the efficacy of this position as it now stands -- one person, it is claimed, cannot supervise all the cooperative groups in his arrondissement. Information provided to the regional director is poor and late.
- **Lack of Home-team Staff:** The component headquarters team has numbered one and one-half or possibly two people. They have accomplished an admirable amount almost single-handedly in a year and one-half. Only within the last few months have additional staff members have been brought on board to help bear the workload.

### Conclusions

It is too early to describe definitively the institutional home for the component, if indeed one needs to be developed. The existing fledgling structure simply needs more time to grow up from the strong base it is just now consolidating, and to catch

up with the already-established UNC structure being built down from overhead. It would behoove the unions at all levels to stand back from the budding groundswell of activity, to refrain from imposing taxation or other strictures, to keep their ear to the ground and respond accordingly to the cooperatives' needs and wishes.

By the same token, it remains to be seen whether the cooperatives of the component, from this tenuous beginning, will surge ahead as viable enterprises that can manage and govern themselves in a business-like fashion; certainly early indications are that this is beginning to happen.

Will they grab onto their newfound powers, especially given the rocky past and the legacy of previous cooperative efforts? Would it even be possible to suggest that a solidified cooperative union at the ground level might, after several years, be capitalized and empowered enough to assume its institutionalization itself? To become the institution? Provided that the lines of communication to the bank (access to credit) are cemented, and that the cooperative is knowledgeable enough to tap into other cooperatives and service partners as the technical resources available to them, this idea is not far fetched. (It does however only speak to the economic autonomy of the groups, and does not take into account the political needs that the cooperatives have to serve.) The UNC training director agreed -- perhaps a national superstructure is not what is needed at all.

It will be a time-consuming process -- the training, retraining, and acquiring of experience through the successes and failures of many economic activities. The cooperatives have yet to capitalize themselves to any significant degree, to take over salary payments of their assistants, to become totally legalized, able to open savings accounts, able to market at will; only then can they move on to the next step of diversifying their activities more, of using their money to send people out for training, of identifying their administrative hierarchical needs, which, then, may or may not include a unionized superstructure. And only then can serious decisions be made about the permanency of the current training methodology.

#### Recommendations

- Carry-over to Rural Organization Development (ROD) Project: USAID should carry over the component into the new ROD project, taking into

consideration recommendations in this section. Component activities should be given at least another several years to expand and mature. They are not ready to be turned over to any national structure; and no national structure is ready to take them on.

- **The issue of an institutional or organizational home for the component activities** should continue to be dealt with as the component moves to ROD. However, there should be no hurry toward this end; the cooperative movement definitely needs to continue growing and consolidating its gains.
- **Fresh ideas and alternatives should slowly be explored:** Could an already established indigenous private voluntary organization become the "training and consulting organization accountable to the cooperatives?" What about a private consulting firm? Is the IPDR a possible avenue to consider, especially given its several advantages: It already has collaborated with the project; it already has a training infrastructure and staff with available resources; the director used to be the NCP director; and USAID already provides support to the IPDR. Finally, what about the university, and specifically the Faculty of Agronomic Sciences, with which the cooperative training component has already been in touch? Or is their structure already too burdened to assimilate this effort as well?
- **ULC Facilitator:** At the ULC level there is probably a need for a facilitator who would help to coordinate the training with the assistants within that specific canton. This person could be appointed externally, but it would be preferable to have him nominated up from within. Like-minded or similarly engaged cooperatives ideally would write the job description according to their needs as they start to become evident.
- **USRC Network:** The project should work to strengthen the network of USRCs by PACD. The directors could be grouped in intensive seminar work to receive training on report writing; information collection, analysis, and dissemination; supervision skills; communication skills; and needs identification. They could also be trained in the newer techniques of cooperative training. This should happen only as the ULCs, as above, begin the formalization and consolidation process and achieve a sense of their own autonomy. It may turn out that cooperatives begin to nominate their own representatives to the USRC level much as they have started to do with the ULCs.
- **Regional Master Trainer/Coordinator:** More consideration should be given to installing a regional coordinator up-country. A vehicle and other needed logistical support would be imperative. A salary would have to be borne by someone. A clear definition of his roles and responsibilities would have to be understood by all, especially the URC, beforehand. More palatable to all might be the idea of a roving master trainer and coordinator, one who could fulfill the troubleshooting role now played by the component's home team. The person could spend one to two weeks cyclically in each department. His job would be to monitor project activities, continue sensitizing pertinent groups (especially bankers), lend a pedagogical hand where needed, solve logistical problems inherent in launching new cooperatives and new income-generating activities, and anything else as defined by the assistants, union officials, and cooperative members. If this is not feasible,

consideration should be given to bolstering the home office team in the interim by appointing a counterpart to the training adviser, who could then carry out some of the functions described above.

- The director of the component could also use an administrative assistant to free him up for more managerial functions. If that is not possible, he should be accorded more substantial administrative assistance from the project's Coordination and Management Unit.

### The Cooperative Movement

"...the establishment of more than 200 pilot cooperatives which are engaged in and managing economically viable activities" by training the cooperative members in skills that "will allow them to plan and run viable businesses as well as assume autonomous management of all cooperative activities."

#### Progress to Date

The history of the cooperative movement in Niger is interesting and complex, with failures as well as successes over the past two decades. Government policy and guidelines, notably during the Zinder Conference in 1982, have changed to give maximum responsibility for rural development initiatives to the villagers and to place emphasis on creating structures for which recurrent costs would be met with national resources.

Cooperatives have failed as a result of incomplete socioeconomic studies of themselves and their milieu, or of inappropriate model structures and rules, or because credit has been given outright as a gift. They have also failed because they had nothing to work on. As the 1982 "Etude COPAC" states:

It can be said that the key problem of cooperatives at this time is how to find profitable economic activities which correspond to the real needs of the cooperative members . . . . In the absence of profitable economic activities, there is no way a motivated peasant self-management can exist, given that volunteerism quickly reaches its limits.

The APS project contributes to the growth of the country's cooperatives. It helps them achieve their social and economic objectives by providing a training

model, making commercial credit available to them, and encouraging them to undertake a viable and profitable activity of their own accord.

At present, 114 cooperatives in six departments have been incorporated into the cooperative training component. The goal is to reach a maximum of 210 by PACD. In November 1986, only 14 cooperatives had joined the component. Approximately 20 cooperatives join in each quarter, a schedule that if adhered to, will allow for the envisioned target by the end of 1989. Thus, in terms of project expansion in numbers of cooperatives, the component is on schedule.

It can be argued that increasingly cooperatives are now in better health. Self-management arises only when there is something viable to manage, when there is a reason to work together. The component's cooperatives each have from one to three economic activities to manage. Some non-component cooperatives, it is said, are stagnating and lack a sense of purpose; they have no ongoing activities. All they have is a big debt to the CNCA for previous failed activities.

#### Findings

- **Training Beneficiaries:** To date, 1,100 administrators, managers of village stores, and managers of agricultural production schemes have received training from the component.
- **Bank Accounts:** Six cooperatives have opened savings accounts:

TABLE 8  
COOPERATIVE SAVINGS ACCOUNTS

Dan Keri	407,500 CFA	Tamrora	192,435 CFA
Babban Anne	271,360 CFA	Droum	870,000 CFA
Chadakori	875,911 CFA	Roukouzoum	1,575,000 CFA

Other cooperatives have generated good profits through their work in economic activities. (Additional financial information on other cooperatives can be found in the discussions on credit in this report.)

- **Unions Locales des Coopératives:** Cooperatives have started to assert their authority upwards (or horizontally, as the project team prefers to visualize it). The 114 cooperatives in the project are now collectivized into approximately 30 ULCs -- unions at the most local level. The ULCs are intended to be a nucleus of neighboring and similarly engaged cooperatives designed to serve the needs and interests of its members. They are to be service-oriented as opposed to bureaucratic in nature.

Cooperative members, upon the team's questioning, agreed that they would like their ULC to arrange for centralized collection points for goods, to call the delegates of member cooperatives together for meetings, to organize agricultural input supplies, and to assist in information flow. The cooperatives in fact elect and pay members to sit on the ULC Board of Directors. Certainly this activism and engagement bodes well for future cooperative self-determination. It also proves that motivations and interests within the coops have passed from being purely individual to being centered on the group.

- **Assumption of Salary Payments:** Few if any cooperatives assume the payments of the CLUSA assistants' salaries. Obviously this is a hoped-for step in the cooperatives becoming more self-managed and self-financed; however, it has not yet started to happen. The cooperatives do pay other salaries -- including those of the assistant village trainer, the managers, and the auditors.
- **Cooperatives' Sense of Purpose:** Most of the cooperatives visited exhibited a sense of solidarity, collegiality, and collective consciousness or awareness. This was particularly evident in the older cooperatives -- Chadakori, in particular, and also Roukouzoum. Not only the president, but other members, were voicing opinions in discussions with the team. This sense of purpose became particularly clear after the team's visit to a non-component cooperative (Gouna, in Zinder Department), which by contrast appeared lackadaisical and purposeless, and displayed little comprehension of objectives and strategies of a cooperative's role. In a UNC official's words, those kinds of cooperatives are simply made up of "school children" who "go to their school lessons because it is expected of them" but have little idea why they are going. Everyone is a member, but no one knows why. In Gouna, they had no bank account -- their money ran out and they appeared to have no initiative to seek additional funds.

Anecdotal accounts of recent actions also point to the component cooperatives' increasing sense of autonomy: One cooperative fired its assistant village trainer and replaced him with a better one. Roukouzoum members said they sought advice from a neighboring cooperative; last year they followed the advice and had great success with onion production and marketing. This year, however, they did not follow the advice and had a failure. In Droum, five different cooperatives have shared experiences through visits, and they plan to repay the visits for similar information exchanges. Twenty cooperatives have presented requests to component headquarters

in Niamey for additional assistance in establishing their centers for continuing education. One cooperative made a collective decision to spend 12,000 CFA on food to feed people who come from afar to meetings. Another refused to deal with the 16 different forms presented to them by former authorities (documents to control and supervise their stocks) and, of their own accord, pared the number down to six or seven -- which more clearly corresponded to their own needs and wishes.

- **Rotational Leadership:** Cooperatives rotate their elected leadership, sometimes every three years. This affords more members the opportunity of learning the principles of cooperative management and provides back-up for the years to come.
- **Diversification of Activities:** Cooperatives are diversifying their activities. In the 1960s and 1970s, practically the only activities cooperatives were engaged in were commercialization (cotton, rice, and peanuts) and credit. Now component cooperatives list over 20 different kinds of activities. Even non-component cooperatives, according to the UNC, are diversifying and can count six or seven different project activities.
- **Selection Criteria for Participating Cooperatives:** Selection criteria for admittance to the CLUSA program have been poorly articulated or confused. The criteria the component uses are: (1) the new cooperative must agree to join; (2) there must be some economic potential in the cooperative's area; (3) the cooperative cannot be too isolated; and (4) the members must accept to go through the training. One USRC director in Zinder also pointed out that the group must be motivated and dynamic. The midterm evaluation of 1985 mentions indirectly that (1) the GMs cannot be too dispersed; (2) there must be good "intellectual potential"; (3) the USRC and the technical cadres must be supportive and available to the assistant; and (4) there cannot have been and history of "conflicts between individuals or groups."

Cooperatives, it appears, just get selected, and sometimes with some political force behind it. However, no one interviewed pointed out any difficulties such as discrimination in the selection process. No one believed the criteria were either too stringent or too lax; in short, the criteria seem to function as an acceptable framework for signing on new groups. (One was rejected for reasons of distance, and one because too many other project interventions were already going on. All other requests have been accepted.)

### Conclusions

In the words of a UNC official, the component's successes are "spreading like oil all over the country." The evaluation team feels that critical mass pockets of cooperatives now exist in every department but one. Project efforts are not diluted by this kind of expansion; on the contrary, there is a pronounced increased interest in them countrywide.

In at least 114 of the country's 1,347 (UNC figure) cooperatives, there are visible signs of an emerging group of strengthened, well-defined, active, and prospering cooperatives, primarily in the agricultural zone, but to a certain extent, in the pastoral zone as well. They are no longer cooperatives serving purely social or political goals.

But it is far too early to expect that the cooperatives involved in this project are anywhere close to autonomy or complete self-management. They cannot yet stand alone. Their decision-making powers are in fact much more in evidence, but a year and one-half is too short a time span to expect self-sufficiency. They are still reliant on the training provided by their assistants, on the financial aid provided by the banks and other donors, and on government services. The economic activities are beginning to be self-managed, but the cooperative as a whole, with all its attendant services, has not yet reached that point.

#### Recommendations

- **Consolidating Gains:** The project and the GON must focus on appropriate phases of activities for the cooperative movement. The component should stop the expansion of its pilot member organizations at the targeted 210. Efforts then should be made to firm up the gains made so far. Plenty of retraining should be planned.
- **Earlier Literacy Training:** The project must insist on increasing the literacy activities, and situate them early in the training cycle of newly joining cooperatives.

Information channels between the cooperative and the Literacy Service must be improved so that the cooperative's need can be articulated and responded to in a more timely fashion. The professional talents of the "instructors" at the GM level need shoring up; as it stands, they are limited in their creativity. Seminars need to be arranged with them in mind: how to innovate, to deviate from the standardized government literacy texts to make the learning more useful in their particular activities. What are some techniques for making the reading and writing more functional?

- **Mastering Economic Activities:** Concerning diversification of activities, the cooperatives might well attempt to launch more types of activities. Although this should not be discouraged, a point can also be made for limiting the numbers of types of undertakings and for concentrating on the profitable few. Cooperatives should be encouraged to go through the process of studying, planning, implementing, and evaluating a particular activity several seasons (or years) in a row. Permanent mechanisms for project evaluation

should be installed. Lessons from mistakes can be corrected. Improvements in management and administration can be made. Soon the cooperatives will settle on a core set of activities that they have mastered and that provide considerable income gain for them.

- **Admitting New Cooperatives:** If, as a result of the component's success, too many cooperatives request to be taken in, more attention will have to be paid to the selection criteria. If it gets out of hand, the Assistant may have to intervene, or he may have to call upon the Program Coordination and Management Unit to lend its weight in staving off any potential political wrangles over who will be allowed to join.
- **Membership Fees:** The project should debate whether it wants to launch a campaign of membership fees for certain activities. In the 1970s, dues were the rule, but this practice was abandoned with the restructuring in the 1980s. Now everyone in the village theoretically is a member of the cooperative and has rights and privileges to its services and goods. Collecting dues was too time consuming.

Possibly it is time to reconsider. Starting with newly joining cooperatives, discussions on the reasons for paying dues would be explored. The advantages would be pointed out and a consensus on its desirability taken. A cooperative member, to express his sincere commitment, would then pay a small amount (100-200 CFA) into the treasury to obtain a membership card. Then once the economic activity is initiated (and this system would be particularly interesting in marketing schemes), those card-carrying members would receive concessionary prices or other benefits as determined by the group. This would be a way to bring in the members of the cooperative who stand uncommitted. The UNC has apparently talked about reinitiating membership fees. The project will need to wait and see what the UNC decides on as policy. If it rejects the idea, the time may be propitious for the component to take up the issue.

- **Savings Accounts:** Once the cooperatives have achieved official legal status from the GON, the project must encourage as many cooperatives as possible to begin to open their own savings accounts. Not only will this serve as an incentive to save money, but it will also increase the level of confidence and credibility that the BIAO and other banks demonstrate toward their client cooperatives.
- **Next Phase of Activities:** A logical next step concerning business activities in the cooperatives is to explore the appropriate technologies for food storing and conservation. Solar and other drying methods, canning, better storing, and other conservatory techniques will assist producers to capitalize on their gains in agricultural production; this then will contribute to the overall goal of the component.

### Special Issues

**Interaction With and Impact of Other Project Components and Other Projects and Programs**

### **APS Project Components -- Seeds, Extension Support, and Input Supply**

The cooperative training component has received few requests for training assistance by the other components within the APS project. The component team says that it attempts to respond to these requests as they occur. One example of this is the 1986 seminar for several directors of the seed multiplication centers. During this seminar, the basic training approach to involving peasants in extension work was explored. Coming up soon will be a program by the component's assistants for five cooperatives in Niamey and three in Dosso to delve into themes of extension participation: identification of existing problems, discussions, questioning, and marshaling resources.

Concerning the input supply component, the cooperative training component could assist in providing training to those cooperative members who deal regularly with USRC personnel in matters relating to input supply. Management techniques already elaborated for the storekeepers could be used as a basis for this training.

### **Niamey Department Development Project**

The Niamey Department Development Project (NDD) also works with cooperatives, but in the Niamey Department only. Ten cooperatives are beginning to capitalize themselves from internally generated revenues, and the project counts four trainers on the ground. Their approach is similar to that of the APS cooperative training component, but the primary emphasis is on initially training the cooperative leaders or influential elders of the cooperative, even if they are not functionally literate, to allay fears and to win them over. They choose and work with the managers later on.

Another difference between the APS and NDD projects, according to NDD staff, is that the component's training team of 30 assistants has more time, independence, and mobility. Consequently, they are better able to conduct and especially to follow up on VBT. One reason for this is the autonomy provided to them by motorcycles; the NDD project was not able to furnish their trainers with motorcycles. Whereas the component's primary and early emphasis is on training for the cooperative members, NDD just now, in its eighth year of operation, is beginning to dwell on the

delivery of training. Also, the component has tried to guarantee the continuity of the training in the cooperatives by conscripting an assistant village trainer and having him gradually assume the component trainer's functions; NDD was not able to do this due to the wider variety of responsibilities and obligations.

Both projects have run into some difficulty marshaling the timely support of the partners or technical line-ministry agents designated to provide technical input to the activities. This has been particularly true with the Literacy Service agents; the information is passed too late to the service and subsequent delays occur.

It is envisioned that the cooperative training component will take over the four NDD trainers to complement its own retinue of experienced trainers, and that they will have little problem of adapting to the component's training model and systems.

At present, NDD is working to publish training manuals in the local language for use in the cooperatives; it is strongly suggested that the component review and consider including them in its own program. NDD also hopes to write down its method of functional literacy training. The component could also profit from this work. It appears to be innovative and based on the premise that people will be more motivated to learn reading and writing if it is not done in a vacuum, but in the functional environment for which the skills will be useful and people can realize an income gain.

#### **Other Private Voluntary Organizations and Projects**

Several private voluntary organizations (PVOs) (for example, CARE and Lutheran World Relief) and national and international projects (BIT/ILO, Campagne Afrique Vert, ONAHA, DEMBOU, Projet Vallée de l'Air, Projet EIRENNE/Agadez, and Peace Corps) also work with cooperatives. To date, the cooperative training component has maintained good contact with them, even taking a field trip to visit several cooperatives of Lutheran World Relief in the Tahoua area.

At least six groups have requested assistance from the component in designing their training strategies in over 20 cooperatives. CLUSA contemplates helping in one or a combination of the following three strategies:

- Train the PVO and other project trainers in the principles and practices of the VBT model;
- Lend a component's trainer to one of the PVO or other project cooperatives to conduct initial contact sessions and planning and feasibility studies, to assist in internal organization, and to begin implementation of the training model; and
- Assist the PVO and other project home offices in setting up a unit similar to the component's cooperative training.

For Peace Corps, the director of the cooperative training component is contemplating designing and delivering a preplanned training module on cooperative training and movement for new recruits during their initial training.

With this kind of collaboration and mutual interest, the successful component-generated training model can be applied in a more standardized fashion across increasing numbers of cooperatives in the country, and can reach more groups than the 210 pilot cooperatives originally targeted by the project.

#### **Agriculture Sector Development Grant**

Under the fourth tranche of monies under the ASDG, there is an understood conditionality that the GON must accord legal status to the cooperatives and to the UNC. Draft statutes have already been prepared and are expected to come out in early 1988. USAID does not foresee any difficulties in the compliance with this precedent. The new legal status of the cooperatives will mean that cooperatives and private traders can become involved in more liberalized cereals and other agricultural produce marketing and in input supply (and particularly fertilizer) sales. Privatization legislation of the cooperatives will also allow them officially to open savings accounts at the banks.

#### **Involvement of Women in the Cooperative Movement**

By all accounts, one of the most striking untapped human resources in Niger's development projects is its women. Among the more than 1,000 cooperatives officially operating in the country, only a few have any women members. The evaluation team saw no women participants at any of the meetings; in only one cooperative was there a woman engaging in an economic activity. (She was the

assistant manager of a pharmacy in the Chadakouri cooperative and was being encouraged and trained by her husband, the elected manager.) The director of the SAC claims to have never seen any women attend any of the numerous meetings she has conducted in the cooperatives all over the country.

She did, however, explain that particularly in Agadez small sections of some cooperatives comprise women members. In one, the baskets handcrafted by the women have been so popular that countries such as France are arranging for imports. In Tahoua, a few female sections of cooperatives are active and motivated. All agree that it is better to have sections of women within existing cooperatives than either to mix interested women into male-run and dominated cooperatives or to create entirely new, entirely feminine cooperatives. And certainly training activities must be held separately to guarantee that women will speak up.

A consultant from the International Labour Organization recently conducted a feasibility study on the idea of support to women cooperative members. She enumerated a list of possible economical activities that traditionally and culturally are feasible for women to undertake. These included sheep fattening; artisanal works such as mats, weaving, and shoes; and grain-mill purchase and operation. She also was impressed by the women's widespread interest in receiving training. These findings tended to answer skeptics' charges that women either had no time for such extra-curricular work, that they simply were not interested, or that cultural restraints mitigated too heavily against their participation.

The GON should encourage wider participation for women in the country's increasingly flourishing cooperatives. The cooperative training component might be an appropriate partner to spearhead this idea and to be in the forefront of innovative strategies to ensure women's inclusion in at least its network of participating cooperatives. Most likely, it would want to start small, with a low profile, and work slowly toward building the numbers, allegiance, and interest of women, as well as the approval of their men, around the country. Sheep fattening might well be one economic activity that could create the first blush of success; in Senegal and other Sahelian countries this income-generating activity has been a huge success with women managing everything from purchasing the animal, building its shelter, supervising its feeding and watering, arranging for veterinary care, to the final sale.

In addition, the component could develop ways for women to receive managerial and administrative training in the cooperatives. The idea of electing a woman as treasurer of the cooperative is another avenue for consideration; it is widely known that women in Niger serve as the credit and lending agents in many villages and that they are better handlers of money in many cases than men. Finally, and perhaps most important, the component and its team of assistants could develop ideas to foster the participation of women in the centers for continuing education in the GMs (basic and literacy education). This, assuredly, would be one key underpinning to any movement of women into the cooperative structures.

#### **Cooperative Credit Subcomponent**

##### **Original and Modified Goals and Purposes, Expected Outputs, and Assumptions**

###### **Original Goal and Purpose**

In the original project design, credit for cooperatives was part of the CA's activity in that inputs were supplied under CNCA credit. No specific goal for credit was enunciated in the project design. Credit was a key element for the input supply component to achieve its purpose -- that is, that "increased amounts of agricultural inputs would be distributed to small farmers on a regular and timely basis." One necessary assumption was that the CNCA "would have sufficient funds" to finance the CA's operations.

###### **Modified Purpose**

With the financial deterioration of the CNCA and the 1984 redesign of the cooperative training component, the credit activity was shifted to cooperative training. Part of the redesign also entailed the shift of the guarantee fund from the redesigned input supply component to the cooperative training component. Today, the guarantee fund operates under the aegis of this component and through the BIAO. The fund totals 400 million CFA as a result of two injections of money: 44 million CFA in October 1985 (CLUSA) and 356 million CFA in December 1986 (ASDG).

Initially the guarantee fund was to provide credit to cooperatives to allow them to buy inputs from the CA, thereby contributing to its financial viability. The implicit assumption was that loans made to purchase agricultural inputs would generate enough funds to repay the loans. Given Niger's environment and the history of fertilizer usage, the assumption was weak. Thus, the concept of the guarantee fund was expanded by CLUSA (1985) and appears in amendment four:

The purposes of the Guarantee Fund are to (a) provide a mechanism to supply credit to the cooperatives for the financing of economic activities, (b) to develop a rural credit system based on the private and commercial banking system and (c) provide a credit mechanism for purchase of agricultural inputs if the cooperatives determine that this is an optimal use of their credit capacity.

This concept fits in with the overall purpose of the cooperative training component, which in part calls for "making rural credit available for supply of seasonal agricultural inputs and other viable economic activities." The emphasis, in reality, has shifted to other viable economic activities, as outlined later in this section.

#### **Expected Outputs**

The expected outputs of the revised credit activity were to happen in phases:

Phase 1 (years 1-2): credit availability, backed by the guarantee fund, on a pilot basis for cooperatives;

Phase 2 (years 3-4): expansion of credit availability to cooperatives to enable them, through their business activities, to become financially strong enough; and

Phase 3 (year 5) to "buy into" a cooperatively or privately owned CA.

The following two sections examine the guarantee fund and its management, impact, and conversion into cooperative capital.

#### **The Guarantee Fund: Management, Control, and Impact**

Outputs called for under amendment four are "the establishment of more than 200 pilot cooperatives which are engaged in and managing economically viable activities," and "guarantee funding furnished by cooperative training component (years

1-2) on a test scale to permit cooperatives access to bank finance on commercial terms to purchase seasonal inputs." The third output was "creation of an auditable system of control for the operation of the guarantee fund and cooperative funds."

While amendment four did not explicitly give a desired management output, one assumes that effective management of the guarantee fund is a desirable, although implicit, output. One also assumes that the BIAO as time passes would take an increasingly important role in managing the fund, as well as assuming a portion of the credit risk with its own funds.

#### Progress to Date

Of the 114 cooperatives making up the cooperative training component, 37 have economic activities financed under the guarantee fund. A total of 91.2 million CFA has been lent, 64.3 million as loans and 26.9 million as lines of credit (for cooperative stores). To date, only one<sup>1</sup> of the 37 cooperatives has employed guarantee fund credit to purchase and subsequently resell seasonal agricultural inputs.

#### Findings

##### Management

The responsibility for joint, effective management of the guarantee fund in phase 1, and for greater BIAO management in phases 2 and 3, was not clearly delineated at the outset. Day-to-day management was left to the cooperative loan advisor, with specific supervision and follow-up tasks for cooperatives' banking activities. In general, the BIAO adopted a passive stance with regard to management, contenting itself with final approval of the loan request and loan repayment monitoring from headquarters and agency offices. This passive, minimal role is understandable, given the small importance of guarantee fund loans in the BIAO's overall portfolio and the high transactions costs of closely following small clients.

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<sup>1</sup> 42,000 CFA loan for approximately 500 kg of fertilizer.

The project, and increasingly the BIAO, with two years of experience with the guarantee fund, understand the need for close, joint management of the fund. Both parties are working to develop timely, accurate information on the operations of cooperatives' economic activities, principally village stores. This information will give the project and BIAO better control over future financial activities.

Specific branch offices, however, differ widely in the degree of management responsibility undertaken. The degree of responsibility ranges from little (Tahoua) to a high degree (Maradi). The branch manager of Tahoua has a passive role, as he states that he is required to refer all matters to Niamey for decisions. He does a minimum of monitoring and follow-up, although he personally would like to be more involved. At the other end of the spectrum is the Maradi branch manager, who is extremely active in managing his portfolio of cooperative loans, and who has a sincere interest in the development and growth of cooperatives as part of Niger's development objective. Evidence of the degree of management undertaken is the following:

- The branch manager and his assistant maintain regular contact with cooperative clients, both in the office and in the field;
- Their close attention has helped the cooperatives attain a sound working relationship with the Maradi branch;
- Personal verification that cooperatives are doing what they said they would do in their loan applications.
- Personal verification of the management of village stores;
- An increasingly careful stance in analyzing and approving agricultural marketing loan requests;
- Assistance to cooperatives in the appropriate choice of economic activities. For example, the branch managers view village stores and pharmacies not only as financially viable activities, but also as viable strategically, in that the activities are small enough that they do not draw the attention of traders; and
- Willingness to direct village stores toward reputable, lower-priced sources of supply -- as a part of normal banking services for a client.

With respect to the management of village stores, the Maradi branch manager stated that they are satisfied with the training the component has given. Their satisfaction is confirmed by the evaluation team's reaction to village store

management -- in all cases seen, the training given has been appropriate and adequate, as evidenced by well-run village stores.

Finally, evidence that BIAO is taking a more active role with its cooperative clients is seen in their headquarters and branch attention to the desirability, or lack thereof, of certain agricultural marketing activities. Millet and cowpeas are the two crops of concern. Six cooperatives have been involved in millet marketing, three of which are partially in arrears in their loan repayments. The arrearage is due to the collapse of millet prices following the excellent 1986 harvest. Higher millet prices in 1987 are permitting these cooperatives to catch up on their loan repayments. The BIAO, however, is looking carefully at new applications for millet-marketing loans. With respect to cowpeas, even though the four cooperatives that went into cowpea marketing repaid their loan in full, the BIAO is not granting any new loans for cowpea marketing. This is due to SONARA's inability to pay for cowpeas purchased, and the current 48,000-ton overhang of cowpeas on the market. This figure is confirmed both by SONARA and the URCs of Zinder and Maradi.

The component's management role has been active, with close attention paid to cooperatives' economic activities and the use of credit for them. This close attention is borne out by the training of cooperative personnel in managing their economic activities. The credit subcomponent has good documentation of loan activities and a solid data base that will permit it to develop a system of control that can be audited. However, there are only 37 credit clients at this point and information is treated manually. As the number of clients grows, it will behoove the component to formalize (and computerize) its management information system. The subcomponent closely supervises the credit activity, as is borne out by loan repayment rates on current and completed economic activities:

TABLE 9  
LOAN REPAYMENT RATES

Activity	Aggregate Loan Amount	Aggregate Loan Repayment	Rate
	-----CFA-----		
Cowpea Marketing	19,200,000	19,200,000	100%
Millet Marketing	26,400,000	19,900,000	75%
Rice Marketing	3,800,000	3,800,000	100%
Onion Marketing	8,200,000 5,870,840 used	5,134,350	87%
Mills	3,000,000	not yet due	-
Sheep Fattening	3,300,000	3,300,000	100%
Pharmacy	263,000	not yet due	-
Village Stores	21,700,000	11,000,000	<sup>3</sup>

Early indications are that for village stores repayment is slow, and in the case of some recently established stores, there have been no repayments. Both BIAO/Niamey and the component are concerned about this, and the component is determining if this is just a function of slow start-up, if stores are reinvesting in inventory expansion in lieu of line of credit reimbursement, or if stores are selling products at a loss.

#### Control

This activity, an auditable system of control, falls under the aegis of the component. No formal system has been established, although all the elements are present, that is, type, date and amount of loan, by cooperative, by department, date loan due, repayments received, and reconciliation of project guarantee fund figures

<sup>3</sup> Cooperative stores open lines of credit upon which they draw according to need; thus rate of repayment is not an accurate measure of performance until several years of activity have passed. A better measure is the number of times inventory is turned over annually.

with those of the BIAO. Information is managed manually, in an unsystematic manner as was evident when requests were made for financial data. The component is formulating the procedures necessary for an auditable control system.

The BIAO does not audit or exercise internal control of the credit activity. The BIAO depends on the component for control because, according to the bank, it has neither the time nor the financial incentive to carry out the control function. The existence of the 100-percent guarantee fund renders cooperative credit free of risk and therefore obviates, in the bank's view, the need to control and audit the activity.

One potentially serious problem emerged. Examination of loan dossiers at the project show that many cooperatives have outstanding loans with the CNCA. Table 10 lists all of project cooperatives with outstanding debt to the CNCA.

The project and the CNCA did agree at the outset of the guarantee fund that prior CNCA loans would not impinge on guarantee fund activities. Certain legal and financial questions arise, however, with respect to the future. Which bank has first call on the profits and on the cash assets generated by future cooperative activities when the guarantee fund is no longer? Will these older CNCA loans be forgiven? Are they still accumulating interest? What will be the impact of the existence of these loans on a lender when there no longer is a 100-percent guarantee fund?

The establishment of the auditable control system should not require much technical assistance. All of the financial elements are present. By working in collaboration with the BIAO, it should be simple to establish a system that satisfies the needs of the project and the BIAO. Since the component's credit activities are still at an early stage, the system will need to be closely monitored. Ideally, as it gains experience with cooperative credit and as the portfolio grows, the BIAO will assume more of the monitoring function.

#### Impact

Although the cooperative training component started recruiting cooperatives in July 1985, it was not until May 1986 that the first of the member cooperatives availed itself of financing under the guarantee fund. Since then, 37 have or have

TABLE 10  
COOPERATIVE DEBT TO CNCA

Cooperative	Department	Amount	Amount
		Owed CNCA -----CFA-----	Owed BIAO
Baban-Anne	Maradi	1,696,649	513,351
Baboulwa	Zinder	691,088	540,000
Bakari	Zinder	469,644	530,000
Bakin Birgi	Zinder	1,400,489	700,000
Boussaragui	Maradi	2,625,294	450,000
Chadakori	Maradi	9,416,961	263,000
Dadin Kowa	Zinder	237,900	1,500,000
Dargol	Niamey	457,665	468,339
Dan Barto	Zinder	7,623,731	-
Dan Keri	Maradi	907,699	64,726
Debi	Maradi	520,448	235,796
Droum	Zinder	207,000	360,545
Fala	Niamey	5,761,686	-
Famale	Niamey	8,864,822	1,000,000
Fandou Beri	Niamey	447,261	187,988
Gangara	Maradi	11,316,833	380,000
Gogo	Zinder	21,980	600,000
Goube	Niamey	1,607,915	994,450
Guidan Ider	Tahoua	2,669,245	3,000,000
Hamdallaye	Niamey	1,979,651	176,850
Kaoura Abdou	Tahoua	369,795	-
Koure	Niamey	1,684,450	1,260,000
Kourni	Zinder	2,819,590	1,500,000
Lawandi	Zinder	80,128	640,000
Maigamdji	Maradi	8,873,722	500,000
Maikalgo	Dosso	747,966	280,000
Roukouzoum	Tahoua	1,868,212	not available: accounts mixed.
Sakin Haoussa	Maradi	13,930,338	1,000,000
Samiri	Niamey	133,349	733,326
Tamaske	Tahoua	2,114,656	1,000,000
Tibiri	Dosso	1,821,990	626,173
Toukounoss	Niamey	639,254	15,841
Total		94,007,411	19,920,385

had BIAO credit for economic activities, some undertaking more than one activity at a time.

The following table shows the various activities for which credit has been made available, the number of cooperatives in each activity, and the aggregate loan amount for each activity:

TABLE 11  
GUARANTEE FUND CREDIT(a)

Activity	Number of Coops.	Amt. Loaned (million CFA)
Millet Marketing	6	26.5
Cowpea Marketing	4	19.2
Onion Marketing	3	8.2
Rice Marketing	1	3.8
Grain Mills	2	3.0
Sheep Fattening	1	3.3
Pharmacies	1	0.3
Village Stores	34(b)	26.9
Total		91.2

a Source -- APS cooperative training component.

b Includes seven cooperatives that are about to receive bank approval for line of credit requests totaling 4.2 million CFA.

As the Table 11 shows, village stores have caught on extremely fast and are continuing to do so. The stores are a convenience and a money-saver for customers in that they do not have to travel to the nearest large town to make basic purchases. Loans for crop marketing are more important in total amount lent. They have been entirely successful, except for millet marketing, three cooperatives' loans being in arrears.

The table also shows that, to date, no guarantee fund loans<sup>3</sup> have been made for the purchase and resale of agricultural inputs. Indirectly, the existence of the guarantee fund may account for the 10.3 million CFA worth of fertilizer purchased (cash) by cooperatives for various activities, in that it allowed the cooperatives to free up this cash and thus undertake different activities.

TABLE 12  
CASH PURCHASES OF FERTILIZER

Activity	1986-1987 Number of Coops.	Amount	
		CFA	Tons
Seed Multiplication	2	6,228,000	92
Sale of Agricultural Inputs (Fertilizer)	6	2,115,000	30
Collective Fields	8	1,434,000	20
Sale of Trees	2	500,000	7
Totals	18	10,300,000	149

Of the 37 cooperatives that have obtained credit through the BIAO, six have opened savings accounts with it. Four of the cooperatives are from Maradi Department and one each from Zinder and Tahoua departments. The size of accounts ranges from 192,000 to 1,575,000 million CFA and totals approximately 4.2 million CFA. Fourteen other cooperatives have applied to the BIAO to open accounts, nine of which are from the Niamey Department and five from Tahoua Department. The accounts of the nine from Niamey Department will range in size from 45,000 to 562,000 CFA, all totaling 1.6 million CFA. The five from Tahoua will range from 36,000 to 188,000 CFA and will total 537,000 CFA. When the new 14 have opened their accounts, 20 cooperatives will have approximately 6.3 million CFA in savings. One problem is that bureaucratic procedures at the BIAO/Niamey have held up the opening of the nine cooperatives in Niamey Department for as much as two months.

<sup>3</sup> One cooperative training component document shows that one cooperative, Dan Keri, financed the purchase of approximately 500 kg of fertilizer with a 42,000 CFA loan from BIAO.

Legally, cooperatives can not join together across cantonal lines to take advantage of common economic and market opportunities. This restriction prevents cooperatives from developing stronger marketing positions with regard to buyers of farm outputs.

### Conclusions

Although amendment four did not specify how many cooperatives granted credit would constitute a sufficient test scale, the credit part of the component should be considered to be still in the pilot stage. Many economic activities for which loans were granted only began in mid-to-late 1987. Early indications are that with continued close supervision and guidance of the component into new, profitable activities, the credit subcomponent could become a success. Whether by the end of phase 3 the cooperatives will be financially strong enough and want to buy into a cooperatively or privately owned CA will depend on:

- The success of and growth in the economic activities the subcomponent adopts; and
- The prices it will be able to charge for the products it handles, and its ability to choose profitable markets and deliver its products on a timely basis; and
- Based on these conditions, if the future CA has a good enough business track record and is truly private so that member cooperatives share in the profits of their parent organization.

In the short time the guarantee fund has been operative, the component has done a credible job of introducing credit to a growing number of project cooperatives. Initial progress has also been made in the area of cooperatives' savings and, from them, the cooperatives' own capitalization. Two shortcomings of the subcomponent are its lack of an auditable system of control and the need for closer coordination with (and education of) the BIAO. The importance of an auditable system of control grows as the number of cooperatives grows. As the credit subcomponent expands and cooperatives develop sound track records, the BIAO should be better prepared, operationally and philosophically, to take on a growing share of the credit risk. The cooperative training component should take a lead in coordinating and controlling activities as well as in seeking out profitable

opportunities, whether new or expansion of existing activities, for the cooperatives to turn a passive, somewhat reluctant partner into an active, enthusiastic one.

The foregoing discussion bears on the questions of the prospects for expansion of guarantee fund operations. Currently, the BIAO feels that it cannot renew the fund protocol with anything less than a 100-percent guarantee. In brief, the concerns of the BIAO center on the riskiness of cooperative activities, its inability to measure risks, and its relatively high transactions costs of managing cooperative accounts (see "BIAO's Headquarters' Attitude Toward Cooperative Credit" for details). The prospects for near-term expansion of guarantee fund operations look good provided the BIAO's concerns are allayed. A key input required is an operative, computerized, effective control system that provides timely information and an early-warning system (the capacity to recognize problems before they become problems) to both parties. In the longer term, expansion of the guarantee fund operations and risk-sharing by the bank will depend on cooperatives' business success, cooperatives' expansion into new, profitable undertakings, the growth in cooperatives' savings (security for the bank), and competition from other lenders to obtain a share of the cooperative market.

#### **Recommendations**

Following are recommendations that should be considered as this subcomponent enters phase 2 (years 3-4) -- the expansion of credit availability.

- **Renew the guarantee fund protocol with a 100-percent guarantee for two years.** The credit subcomponent is a nascent success and should not be jeopardized in its infancy.
- **Create and make operative an effective computerized control system, visible and auditable, as soon as possible.** A control system will give BIAO more confidence in lending to the cooperative part of its portfolio and more confidence in the project, which should lead to risk sharing. Failure to institute a control system will lead to lack of control as the number of cooperative clients grows and to disillusionment on the part of the BIAO and eventual withdrawal from the activity.
- **Increase communications and coordination with the BIAO, especially in Niamey, where uncertainty about the credit component is the greatest and where the most severe bureaucratic bottlenecks exist, for example, the nine cooperatives that have been waiting for two months to open savings accounts.**

- **Work with the BIAO, structure cooperative activities, and the cooperative loan portfolio for profitability and safety (diversity and low or no default), based on markets and market opportunities. It is necessary to change the reigning production mentality to a market mentality, for without markets, production means nothing.**
- **Begin an intensive search for new low-risk market opportunities that cooperatives could profitably address. Look along the food chain from farm gate to consumer for opportunities and markets. The search should include food and food service activities for institutions, for example, hotels, hospitals, schools, and armed forces. Explore those activities that women traditionally undertake and at which they have a comparative advantage in relation to men.**
- **Consolidate the gains already made in the subcomponent through careful work with and further training of current credit recipients. Include more market analysis and marketing skills in the training. Expand the number of clients cautiously, based on sound, low-risk economic activities adopted. This strategy (go only with the winners) is to help ensure that the BIAO, and possibly other banks, will see the opportunity offered by this class of clients, and will be more disposed to undertake part of the credit risk.**
- **Institute a program in which cooperatives exchange information on regional price differences for crops in order that cooperatives may mutually take advantage of these differences.**
- **Explore the possibility of amending the forthcoming statute to legalize cooperatives to include the ability of cooperatives to group together across cantonal lines to take advantage of common market opportunities.**
- **Immediately resolve the status and possible future adverse consequences of the outstanding CNCA loans to cooperatives that now have loans with the BIAO.**
- **Explore the possibility of a widespread correspondent relationship between the Banque de Développement de la République du Niger (BDRN) and the BIAO, using the BDRN as the correspondent in areas in which it has branch offices and the BIAO does not.**
- **For the future, consider expanding the subcomponent to include some non-target group clients, such as urban cooperatives that will want to initiate non-agricultural activities. This would add diversity and safety to the overall portfolio.**

#### **Conversion of Guarantee Fund Into Cooperative Capital**

The desired output was stated as "part of the guarantee fund will be converted at the appropriate time to cooperative capital to assist cooperatives with capitalization of their business on a mutual contribution basis."

### **Progress to Date**

**This output has not yet been achieved.**

### **Findings**

**The cooperative training component has proposed the establishment of a capital fund of 50 million CFA from ASDG monies (additional to the guarantee fund) to permit cooperatives to establish necessary infrastructure (for example, building extensions, drying sheds, and equipment) for future economic activities. To date, how the fund will operate has not been detailed.**

### **Conclusions**

**Given loan activity to date that only represents one quarter of the value of the guarantee fund, and that a careful expansion of the credit activity is needed, the establishment of such a capital fund is desirable. Its source could easily be the guarantee fund since the total potential exposure of the guarantee fund at this point is only 26.8 million CFA (current loans outstanding, not yet due and overdue).**

### **Recommendation**

**The capital fund of 50 million CFA minimum should be established; however, its source should be the guarantee fund since so little of it is being used. Using the guarantee fund as the source obviates the need to go to ASDG funding, thus leaving ASDG funds available for other activities. Medium-term (one to two years) loans should be made by the BIAO from such a fund for infrastructure building and on such terms as not to undercut current cooperative activities covered by the guarantee fund. Interest should be charged and principal should be repaid over an appropriate period.**

**The advantage of running this fund through the BIAO is that it involves the BIAO in development lending, albeit in a minor way. It is also advantageous in that the fund's operations can also be incorporated in the auditable control system to be established. Moreover, the capital fund would activate more lending under the guarantee fund, and this fact could be used in negotiations to renew the guarantee**

fund protocol. Before the capital fund is instituted, however, the future status of cooperative debt to the CNCA should be resolved.

### Special Issues

#### BIAO Headquarters' Attitude toward Cooperative Credit

After almost two years of operation of the guarantee fund, BIAO states that it feels it is operating "in a fog." BIAO feels that it cannot accurately measure the risk of cooperative activities, other than to know that these activities are in the main risky. BIAO also states that its costs of managing cooperative accounts (transactions costs) exceed what it earns on them. These two factors underlie its statement that it will only renew the guarantee fund protocol provided the 100-percent guaranty continues.

Their specific concerns center on loans for commercialization of agricultural products, millet and cowpeas, and village stores. BIAO senior management feels that it is at the mercy of inaccurate, untimely price setting, climatic vagaries, and competition from Nigeria. In particular, the BIAO cites its reluctance to lend for the production and commercialization of cowpeas. Although cowpea production was good last year, in the BIAO's opinion the GON set prices too high, which drew in Nigerian surplus cowpeas and prevented Nigerien export of cowpeas to Nigeria. Because of the relatively slight consumption of cowpeas in Niger and the large consumption in Nigeria, GON price setting can make or break exports and help or harm local producers. BIAO's uneasiness regarding millet commercialization stems from what management considers inaccurate price setting (too high a base price) for a normal year. That was followed closely by a good harvest and a sharp decline in market prices. Beginning in 1987, uniform national pricing as well as floor prices will be abolished following GON action and USAID approval under the ASDG.

With respect to village store operations, the BIAO feels that stock turnover is too low, based on the amount of reimbursement it receives on the lines of credit opened. BIAO's desired yearly turnover is four times plus profit margins. BIAO says that it does not know whether the stores sell products at a loss or use sales proceeds to build inventories.

### BIAO Branch Offices' Attitude toward Cooperative Credit

Attitudes vary according to branch office manager and the personal interest he takes in the development of cooperatives. Interest ranges from extremely high (Maradi) to a passive attitude (Tahoua). The manager of the Maradi branch takes an interest in his cooperative clients, dealing directly with their president and secretaries to make them feel at home dealing with the bank. His assistant visits the cooperatives to verify that their activities accord with what they stated they would do in their loan applications, and to determine that the managerial training (for stores) offered by the component is adequate. BIAO/Maradi is satisfied with both the training and that the cooperatives are carrying out their stated activities.

The manager mirrored BIAO headquarters' concern about the marketing of agricultural products.<sup>4</sup> Nonetheless, he felt certain enough about stores and pharmacies as activities to say that his branch would pick up some of the credit risk provided a cooperative is profitable and has a good track record.<sup>5</sup> He even said that his branch would be willing to direct village stores toward reputable, lower priced sources of supply.

Finally, the manager stated that BIAO would be reluctant to absorb 30 percent of the credit risk if his branch had to undertake frequent monitoring of cooperatives, since transactions costs would become prohibitive. He also expressed concern about cooperatives with loans outstanding from CNCA, stating that CNCA loans must not compromise BIAO loans -- that is, that BIAO loans should not be used to repay CNCA loans. He felt that the existence of outstanding CNCA loans would jeopardize BIAO risk sharing.

The Zinder branch manager was more conservative in outlook, stressing loan repayment and its regularity as the most important factor. If a cooperative is two

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<sup>4</sup> BIAO/Maradi is withholding financing of cowpea marketing activities by cooperatives, given the situation with SONARA.

<sup>5</sup> He does feel, however, that inventory turnover is slow and therefore frequency of repayment is slow. He also does not know if cooperatives are withholding funds to expand their inventories.

weeks late in making a payment on its village store line of credit, the Zinder branch calls the cooperative in or goes to it to get payment. With respect to measuring the viability of a store, he stated that he has no standards such as the number of times an inventory should turn yearly. His loan criteria are the amount of the loan, its purpose, and the good character of the borrowers. His lending philosophy, in a word, is go slowly. Finally, he felt that the BIAO might accept a small fraction of the credit risk for those clients with whom they had at least two years of positive experience or if the cooperative had a sizable savings account, which in effect would double as a guarantee fund.

The Tahoua branch manager stated that he does not know his cooperative clientele since all lending decisions are made in Niamey. He states he has no lending authority, although he feels he should, and thus does not go out to his clients. Because of his lack of authority questions about the bank's attitude -- that is, cooperative credit -- the future of cooperative credit and potential new activities largely went unanswered.

#### Other Banks' Attitudes

Three other banks were interviewed to ascertain what interest, if any, they had in extending credit to cooperatives for viable economic activities. The Bank of Credit and Commerce Niger (BCC) said it was interested in any viable project that will repay its loan. The managing director felt that an interest-bearing guarantee fund was necessary, from which 90 percent could be lent to cooperatives, with 10 percent for interest application and transaction costs.

The Dar Al Maal Al Islami bank stated that it intends to concentrate on short-term loans to the commercial sector for the next three to four years. If, however, the GON offered certain guarantees, the bank might become interested in agriculture. Two factors are interesting to note: First, the bank has just started to finance artisanal activities via the Office for Promotion of Nigerien Enterprise backed by a 75-million CFA USAID guarantee fund; second, the bank realizes that it will not make any significant money now from artisan clients. Instead, its objective is to have solid clients in the future. Thus, this bank is setting a precedent that could mean future interest in cooperative activities. It would behoove the APS project to follow up on the interest these two banks have expressed.

Last the BDRN was approached, and it has no interest in financing cooperatives, other than those that are part of large irrigation projects. For the foreseeable future, occasional contact with this bank is probably the level of effort justified.

The BDRN did suggest it is possible to have a correspondent relationship between banks for fund transfer at very nominal cost. In fact, it is done often. This fact opens up the geographic area in which the cooperative training component can operate. The costs are as follows:

Telex	3,500 CFA
Commission	.001-.00015 percent depending on whether there is a Banque Centrale des Etats de l'Afrique de l'Ouest (BCEAO) branch present
TVA	17 percent on the commission

For example, an interbank transfer of 1 million CFA where there is no BCEAO branch would cost:

Telex	3,500
Commission	1,000
TVA	170
	-----
	4,670 CFA

#### Linkages With Other Projects/Programs -- Current and Future

The cooperative training component is principally involved with training assistance to three other projects, Campagne Afrique Verte, Projet Vallée de l'Air, and Lutheran World Relief.

The training component has helped set up a training system in inventory and financial management for the 16 cooperatives financed by Campagne Afrique Verte. Lutheran World Relief (10 cooperatives) receives help in training its assistants to work with village-level assistants, in an effort to establish a similar training framework as the component's. Assistance to Projet Vallée de l'Air (10 cooperatives) takes the form of training in managing economic activities on the cooperative level.

While training assistance to these organizations has a positive spread effect, the way in which they offer credit is detrimental to the component's credit effort. These PVOs offer credit mostly for marketing seasonal crops with a small remainder for village stores. Typically, credit is offered interest free with only the principal repayable -- usually over one year. In the areas in which these organizations operate, interest-free loans block any attempt by the cooperative training component to introduce credit on near-market terms. More important, there is a longer-term negative psychological effect in that these PVOs are spreading a gift mentality and a lack of credit discipline among the rural community. This mentality is contagious and difficult to change. The cooperatives benefiting from such loans will be loathe to enter the real world of commercial credit. Unfortunately, the majority of other donors (18 with cooperative clients ranging from one to four in number) and other organizations offer their cooperatives credit on the same basis.

The training component can combat its competition in two ways. First, if possible, convince those organizations, with which the component works, to introduce interest rates into future activities. Second, and more important, strengthen and expand training component's credit activities in areas currently covered. In addition, new geographic areas targeted should not be those in which credit is already given interest free by other donors and organizations. Finally, part of the consolidation of the gains made to date should include strengthening member cooperatives' economic activities to the point where it becomes evident that their activities are more profitable, even with an interest burden, than those of cooperatives receiving interest-free loans.

USAID's ABS for FY 1989 foresees that the cooperative training component, including the credit subcomponent, will become an integral part of the proposed ROD project. One indicative output called for is to "further expand and institutionalize links of cooperatives, and the regional and national federations with sources of credit through the use of private sector bank guarantee funds, and other components of the formal and non-formal financial markets."

Part of USAID's planned future activities includes pilot credit union activities. The recommendations of Ohio State University in its study, "Rural Finance in Niger: A Critical Appraisal and Recommendations for Change," calls for establishing 15 village-level credit unions at a rate of five annually over a three-year period.

USAID should consider establishing some of these credit unions within the framework of the APS member cooperatives, notably those cooperatives that have successful economic activities and that have grown sufficiently to have savings accounts with the BIAO or other banks. The Ohio State study envisages savings amounting to 200,000-400,000 CFA per credit union after a year's activity. Presumably, this average sum will grow in time.

The growth in cooperative savings accounts coupled with credit union accounts will represent a large step forward in the self-capitalization by cooperatives. Self-capitalization will reduce the need for bank guarantee funds since savings will serve as collateral and security for future bank loans. Moreover, such self-capitalization will help meet the objective of integrating cooperatives, and their members, into the country's formal financial system.

## SEED MULTIPLICATION COMPONENT

### Original/Modified Goals and Purposes, Expected Outputs and Assumptions

#### Original/Modified Goals and Purposes

The seed multiplication component is a direct continuation of activities that were started following the droughts of the mid-1970s, specifically, the Niger Cereals Project that began in 1975. In this latest extension of the component which dates from 1982, there are elements that reflect the thinking of the mid-1970s, most notably in the expected outputs and goals. The original program called for large GON and donor investments in agricultural inputs and research. The program was based on the premise that these investments would result in the development of technical packages that could somehow stabilize agricultural production in Niger's high risk environment. The overall goal of the seed multiplication program is food self-sufficiency and increased agricultural production.

As it evolved, the technical package included three major elements: animal traction, fertilizer, and improved seed. The efficacy of two of these elements, animal traction and fertilizer use, have recently been called into question. Faith in the role improved seed could play in increasing production, however, has never wavered. The seed multiplication component has been the most expensive part of the APS project, commanding the largest infrastructure and personnel.

The logical framework of the project paper states that increasing the quality and quantity of seeds produced at already established seed multiplication centers is the principal purpose of the component. The assumptions underlying the purpose include GON willingness to ensure quality control at the seed multiplication centers and at the contract farmer level, as well as the design of multiplication centers appropriate for efficient, cost-effective seed production.

#### Expected Outputs

It is apparent that when the project paper was being drafted, management of the multiplication centers was a major concern. The outputs expected from the

component seem to focus mostly on management and administrative goals. The list includes:

- "More effective national-level management and coordination of the seed program";
- "More efficiently run seed centers and contract farmer production";
- "A wide range of varieties being multiplied resulting from better liaison between research and extension"; and
- "A more effective and standardized system of quality control.

It is interesting to note that although the word "quality" is used frequently in the project paper there is no real definition of it. The logical framework calls for "a more effective and standardized system of quality control" while the objectively verifiable indicators of this were to be "an effective system of quality control . . . ." This tautology does not give any idea of what type of standards were expected.

The increases in production envisaged by this design are quantified. Each of the five centers would have a regular annual production of 50 tons of quality seed at the M-2 level and a system of contract growers near each center producing 60 tons of quality M-3 seed. Another 10,000 tons were to be produced at now defunct training centers.

Three other outputs have been added to the component as it evolved. The first of these was the creation of a national security seed stock for millet that called for 10,000 tons of millet to be stored at government expense.

The other two outputs comprised a crop diversification program and a cost reduction effort aimed at reducing recurrent costs. So far, although these outputs are part of the new national seed policy document, there has been little project activity involving them. The new AD SG grant will address these goals however (see section on "Modification of the Seed Multiplication Component").

#### Assumptions

The assumptions underlying the outputs were:

- GON's establishment of a council and a seed office in the Ministry of Rural Development to manage the National Seed Program;

- A successful research program that could develop more productive varieties;
- The centers' management would have the ability and means to "address the problems that are currently causing low production efficiency"; and
- Demand for improved seed is adequate for the seed multiplication program to become viable once the management problems are resolved.

This last assumption indicated that the seed multiplication centers, with the aid of short-term technical assistance and Peace Corps, would have a role in refining varietal selections. Some sort of feedback to INRAN, on the success or failure of different crop types, an active interest in how farmers use the new genetic material provided, and other problem-solving approaches are implied in the language presented in the logical framework.

Most striking about this list of assumptions is what is not listed. Several assumptions that must have been part of the component's design are not part of the logical framework. For example, the design of the component implies that if such seed were available farmers would have both the interest and means to adopt them into their farming practices. The design of the project also implies that there are agronomic and economic reasons for farmers to replace seed frequently. There is little discussion of these two factors within the component's design and subsequent implementation, and these omissions have greatly affected the component's outputs.

Another assumption in the design was that the centers were the suitable location for the multiplication of seed. The design also assumed that it was technically possible to expand production at all sites.

#### **National-level Coordination and Management**

##### **Progress to Date**

Improving national-level coordination and management was considered as one of the most important outputs of the 1982 extension of the component. A National Seed Council was created to set seed policy for the country. A national seed office was also created to carry out these policies, oversee operations at the seed centers, and promote coordination between the research and extension units. Neither of these objectively verifiable indicators has carried out its functions. The National

Seed Council meets irregularly and has a fluctuating membership that so far has made no significant national-level policy decisions. Both the Mississippi State report of 1986 and the Internal Evaluation of 1987 make note of the council's inactivity and ineffectiveness.

The National Seed Service, created in 1985, has yet to function as originally intended. The service does not have either the human resources or the logistical support to carry out those functions.

### Findings

A lack of direction at the top of the seed component's management is creating problems at the production level. Control and supervision of the multiplication centers' activities theoretically come under the DDA. Several of the DDA's said that they had neither the logistical support nor the trained personnel to carry out these functions. They said that they and their staff were basically administrative, with no training in technical aspects of seed production. Therefore, the technical inspections that were expected in the original design have not been done in most cases. The Seed Service representatives at these locations were not really qualified to do this type of work.

Even administratively, the multiplication centers' management had to by-pass the DDA's office to make sure that routine requests were done in a timely manner. Usually such requests went from the centers to the project headquarters in Niamey, with the DDA's office being informed of the fact. The highly centralized character of Niger's administrative system does not allow for such a timely response. This is of course critical in any agricultural production plan, where the seasons and rains do not wait for bureaucratic delays.

An example of this highly centralized system was given by one official. A request to sell seed that was being downgraded to grain, as a result of the length of time that it had been in storage, took five months and clearance from the Minister of Agriculture himself.

An area in which the DDA's office did seem to take an active role was in formulating the annual work plan that is submitted to Niamey. There seemed to be general agreement that this is working well. The evaluation team found no evidence,

however, that the Department Seed Committee, listed as part of the organizational structure, functions in a meaningful way.

In general, the seed centers' programs were not coordinated with the other activities taking place in the various departments. Instead, they seem to be a discrete activity that, with their own resources and a self-defined group of beneficiaries (the M-3 growers), did not make up any part of the wide policy objectives that were expected in the original project design.

### Conclusions

The expectations that many functions can be decentralized will have to take into consideration the highly centralized administration. The restructuring required to make the DDA's office truly in control of the multiplication centers may not be possible. Making the project a coordinated part of overall agricultural policy and development strategy will require that the central authorities have the means and interest to carry out their functions.

The action plans that are to be developed to bring about the restructuring of the seed component will be difficult to implement. How can a national seed certification and quality control regulating system function when even minimum human resources do not exist to carry out more limited functions?

Previous recommendations concerning the National Seed Council have apparently been ignored. Dr. Reusch of North Carolina State University in 1984, and MSU in 1986, urged that the council be activated without giving specific ideas on how to do so.

### Recommendations

- The GON, APS, or AID must find a way of forcing the National Seed Council into action, or transferring its responsibilities to some other organization. Perhaps either higher-level representation is needed to emphasize the importance of the Council's work or, as a temporary measure, increased expatriate participation.
- The National Seed Service will need to be expanded to take up its new functions. ASDG has planned transfer of trained manpower to the service as a means of accomplishing this. The evaluation team does not agree with the Mississippi State recommendation that control of some of the seed

component's resources is implied in these new arrangements. This would appear to be a premature move, given the service's unproven abilities. Logistical support to the Seed Service should remain separate from regular seed component activities.

- The stocks of old seed should be sold. Old seed at Hamdallaye, Guecheme, Magaria, and Kouroumgoussaou should be tested for germination, and that which is suitable for seed sold as seed. The remainder should be sold as grain. At Doukou-Doukou, some of the old stocks are infested with insects and contaminated with pesticides and thus cannot be sold.

### Technical Considerations

The technical outputs of this project included two important expectations: an increase in seed quality through a more effective system of control and a wider range of varieties being multiplied. This latter output was to be the direct result of greater liaison between extension research and the project. The assumption that seed quality would improve during this phase of the project is the basis of many of the other outputs of the project, including plans for pricing and demand.

### Progress to Date

The technical level of seed production at the foundation seed farm and the seed multiplication farms has caused considerable concern. A review of available documents indicates that seed quality is a major problem. The low quality of the seed produced has had a negative effect on other aspects of the project. The five most recent documents that examine the seed component of the project all are highly critical of the quality of the seed produced.

It is important to summarize three of these previous studies in the technical discussions since most of their conclusions are valid. In its report of October 1986, Mississippi State University (MSU) started its critique of the quality of seed produced with an assessment of crop improvement research. The MSU team believed that in strict terms of crop variety improvements, only limited progress had been made. No significant breakthroughs had been achieved with any of the four major crops under consideration (millet, sorghum, cowpeas, and peanuts). One type of millet, CIVT, had been released early in the project. Other than this, they concluded that actual contributions in terms of improved varieties available to the project were negligible.

From the narrow basis of genetic improvement and what they believed to be poor physical quality of the seed, MSU stated that these were probably the reasons for the low rate of adoption by local farmers. Project seed was neither clearly nor consistently superior to local types. Deficiencies of output and research were more to blame than marketing strategies or distribution plans.

The internal evaluation completed in July 1987 concurs with this opinion. The section of this report that addresses the question of low adoption rates lists farmers' skepticism about seed performance as a major factor in limiting demand. In support of this statement, section 4.4 of the internal evaluation outlines the numerous problems encountered with seed quality, starting with the lack of purity of the M-O seed provided to the component by INRAN. Lack of controls at the M-1 and M-2 stages at the Lossa Foundation Seed Farm and the seed multiplication centers was criticized. Notably, disrespect for the isolation requirements and the absence of, or poorly done, roguing were said to "reduce the chances of good quality production." There was less criticism in this report of the physical conditioning of the seed. Cleaning practices were said to be sufficient. Bar graphs presented indicate that over 70 percent of the seed produced in 1983 and 1984 could be classified as first choice.

The report of the seed technologist (April 1987) gives even further details on seed quality. His comments are generally harsh, citing evidence of impurity rates of up to 50 percent and an absence of quality control at virtually every step of production. For example, he states that a simple naked eye examination of the cowpea variety CB-5 brought in from Senegal showed over five different types of cowpeas mixed into one lot, the majority of which were not CB-5. The seed technologist went on to say that almost no roguing was being done prior to his arrival and that station managers preferred to separate off-types and wild millets just before threshing.

### Findings

With the deficiencies of seed quality so thoroughly spelled out in previous reports, the evaluation team attempted to look for evidence that the seed produced was at least more productive than that produced by local farmers. In addition team members examined seed at all of the seed multiplication centers and the Lossa farm.

At Lossa a field of sorghum of obviously differing maturity times was mixed together. No roguing had been done. At Guecheme seed that was awaiting processing was a mixture of several varieties and wild types. Coloring, length of seed head, grain size, etc. expressed different characteristics. The team was told that seed heads would undergo further selection before processing to remove off-types. This approach shows a lack of understanding of varietal purity. Roguing is most effective if done before flowering, if that is possible, or during flowering, if flowers are the indication of an off-type. Anything done after this means that the crop is genetically mixed.

Seed examined at Doukou-Doukou was even more mixed. There no roguing had been done because the visit from INRAN had been delayed. No explanation was given for why the center could not proceed on its own.

Another problem was the farm workers' and presumably the contract growers' resistance to roguing. Farmers resist tearing out healthy plants that could produce food, especially the extensive roguing that is necessary. Wild types of millet mature quickly and are viewed as a source of food during the difficult times before the main harvest. The new emphasis on quality should help this situation. Currently M-3 contract growers are paid by the amount of seed produced; this discourages tearing out off types.

Both agronomists on the evaluation team concluded that at Guecheme over one-half the millet crop should have been torn out if the fields had been properly rogued. Other problems with quality control observed were insufficient distances for isolation and growing different varieties of millet in the same field one season after another.

In spite of these problems, GON employees, project staff, and farmers agreed that the millet seed produced by the component out-performed local types. This better performance was attributed to earliness of maturity by most observers. Several groups of farmers noted that project varieties had produced in recent years of light rainfall where local types had failed. When asked to quantify the yield increases on a per-hectare basis, most respondents said that in a normal year project varieties could increase millet yields from 100-200 kg per hectare, bringing the usual per-hectare yield into the 500 kg per-hectare range. These estimates are in line

with the on-farm testing program run by INRAN. Here yields for improved millets run in the 500-700 kg per-hectare range.

Opinions concerning cowpeas were not as clear with much criticism of the CB-5 variety. In some of the drier parts of the country, it had failed completely in the last season. Some types of sorghum seemed to be doing well and drew favorable comments. The same could be said of peanuts. It must be emphasized that this is anecdotal information, and as in the case of millet, no studies have been done demonstrating the productivity of the varieties chosen in farmers' fields.

Another area where the documentation concerning the seed project is silent is on the appropriateness of the varieties used and whether other crops might do better. Although variety selection is the responsibility of INRAN, it would seem natural that those multiplying out the seed might comment on variety performance or the possibility of using other crops. This does not seem to be the case. The documentation and discussions with component personnel reflected a lack of curiosity about such things.

Another factor that is affecting quality is the emphasis that farmer-managers placed on production figures. In the belief that a high level of production would make the center's management look good, station directors resist discarding or roguing out low quality seed.

### Conclusions

Although crop improvement research has been repeatedly criticized, 10 years is not that long in a crop-breeding program. For comparison, if one looks at the University of Maryland's soybean breeding program in the United States, the time between making the original cross and release of a soybean variety is seven years. This is starting from a good selection of breeding lines and the almost ideal growing conditions of Maryland's Eastern Shore.

In Niger, starting with an entirely new program, the fact that one line has been released already and selected local types identified represents considerable achievement. The process is a long one that will eventually pay off, but at this time the genetic basis for crop improvement for Niger's staples is limited.

There is wide agreement that seed quality poses a major problem for the component. Although the physical quality of the seed might be sufficient, there have not been significant genetic advances and the genetic purity of the seed available is doubtful.

The question then is whether the component has anything to offer farmers at all. Is the component's seed any better than that produced by the farmers themselves? Discussions of subjects such as pricing, distribution, and marketing have no meaning if seed quality and productivity are not competitive with farmer-produced seed. The performance of the component's seed on the farm has not been evaluated. This is perhaps the most surprising omission of the component. The documentation is silent on how farmers will profit from use of the seed. The M-3 growers are considered beneficiaries of the component. Estimates of their productivity using the seed have been reported. However, for those who are not part of the program, indeed for the average farmer who is the intended beneficiary of the seed production, no figures or estimates are available of how well the component's seed would perform. Furthermore, there do not seem to be any parameters by which to judge seed quality.

There appears to be little component feedback to INRAN on variety performance and on the possibility of using other crops. Needless to say, these issues are addressed by INRAN, but the research basis of the program could be improved if the seed project personnel took a more active interest.

#### Recommendations

- The means to produce quality seed exists within this component. The technical controls and outputs need to be restructured in two ways. First, the amount of seed produced needs to be reduced to ensure a more thorough control of it. Second, the performance of farmers' seed in the field needs to be monitored, including the rejection of mixed seed lots.

To some extent this second factor is addressed in the ASDG. This new phase of the project will emphasize decentralization and autonomous decision making in pricing, production levels, and cost reductions. Presumably this new autonomy will require information about on-farm results of the seed that the project is providing farmers. Managers of the seed multiplication centers will have to take a more active role in obtaining information about the surrounding farmers.

- The quality of the seed produced will have to be subjected to outside control. At this time, this would in theory be the responsibility of the National Seed Service, but there are reasons to doubt that it has either the trained human resources or logistical support necessary to carry out this task. Somehow the project will have to provide this. The standards that were developed at the 1981 Dosso conference might serve as a reference point until the national standards have been fully developed for seed quality.
- Reduction of the amount of land used for multiplying seed at the centers will permit tighter control of genetic purity. It appears that the amount of land now under cultivation is too much for the component's staff. At Guecheme, for example, over 80 hectares of millet needed to be rogued last year. Maintaining isolation requirements are also more difficult with such large plots. Closure of two of the centers as unsuitable will also help quality control (see below).

#### Operation of the Seed Multiplication Centers and Foundation Seed Farm

Establishment of the seed multiplication centers and the seed foundation farm was one of the most important outputs of the first phase of the project. One major unspoken assumption of this component is that the location of each center is suitable for the production of quality seed. Technically the infrastructure and trained personnel along with adequate land would establish "a growing importance for the role and importance of improved seed" according the 1982 amendment.

#### Progress to Date

Since 1987 the infrastructure of the six farms has been completed and the equipment necessary to perform all of the required functions has been in place. Facilities that are found at each multiplication center and the foundation seed farm include:

- Drying floor	30 X 40 m
- Seed conditioning plant	15 X 20 m
- Seed storage room	15 X 20 m
- Offices and laboratory	10 X 20 m
- Work and equipment sheds	about 360 m <sup>2</sup>
- Homes, animal shelters and other smaller buildings.	

Other than the quality of the seed produced, the MSU report is generally favorable concerning day-to-day operations. The internal evaluation does not mention any great technical difficulties in the operation of the farms. The seed technologist commented that training in use of the seed-conditioning equipment was

good with the level of operators' comprehension of how to use it high. Others have commented that the training done was perfunctory.

### Findings

The evaluation team's one-day visits to the seed farms were not long enough to make any judgments about day-to-day operations, but most of the farms seemed well run and were observing proper seed storage practices. The physical cleanliness of the seed examined bears this out.

The Doukou-Doukou farm was the exception, with much of the seed stored already attacked by insects. Broken bottles of pesticides were thrown on top of seed. The general appearance of the farm was one of neglect.

Another problem observed at several farms was the storage of fertilizer outside, where it could easily get wet. Moreover, the seed laboratories were unused at most of the multiplication centers.

One of the most important technical questions concerns the location of the centers themselves. Although mention is made frequently of the problems of climate and soils, they seem to be accepted as givens with no changes possible. The new ASDG documentation takes note of the tremendous variability of production costs at the centers, and sees this as an indication that costs can be reduced overall ASDG-PAAD, page 36). What is not discussed is the unsuitability of two sites that contribute to the high production costs and increase the project's vulnerability to rainfall problems. Table 13 shows rainfall at the Doukou-Doukou multiplication center for the past four seasons. The figures speak for themselves. Production figures at Doukou-Doukou on a per-hectare basis were difficult to judge due to abandonment and reseeded of different plots during the 1987 season. It appears, however, that of the millet fields that produced stands of plants, yields were somewhere below 300 kg per hectare. In 1986 over 1 ton of millet per hectare was produced, but this demonstrates the vulnerability of this site.

The light rains and short seasons also have contributed to the low quality of production at these sites. At Doukou-Doukou the same fields were being used to plant different varieties of millet one year after another because of the limited areas where soils are suitable. Similarly at Hamdallaye, isolation requirements were not

being respected due to the problem of soils. Seed at both locations appeared to be low quality mixtures. The team noted considerable soil erosion problems at both places, further suggesting their unsuitability for row cropping.

TABLE 13  
RAINFALL AT DOUKOU-DOUKOU

Year	1984	1985	1986	1987
Precipitation in mm	271	412	385	250
Duration of rains in days	25	24	26	21

#### Conclusions

Some other use should be found for the centers at Hamdallaye and Doukou-Doukou. Continuing multiplication activities at these locations will be a financial drag on the project and probably will defeat the effort to improve the overall quality of the seed.

Reorienting the purpose of these two centers will lower overhead costs without compromising the original goals. Furthermore, this could be a first step in moving the project away from the production of large quantities of low value seed. Simply closing the centers would mean a savings of 30-40 percent of the seed component's operating budget. Overall productivity could actually increase if manpower from these two farms were moved to the three remaining ones.

Critics of closing the two farms might point to figures that show that production costs at Hamdallaye per kilogram of seed are not the highest, and that per-hectare costs are about the same at all farms (ASDG-PAAD, Annex D). This would be countered by these figures not taking into consideration the quality of the seed produced, the probability that seed quality cannot be improved at these sites, and the environmental damage being done. Costs at Doukou-Doukou are indefensible. For 1983-1985, they are between 1,248 and 2,597 CFA per kg depending on the methods of estimate. This is over 10 and 20 times the current retail price of seed.

### Recommendations

- If these centers are not closed, the considerable infrastructure at these two locations could be used for other activities, such as cleaning seed for farmers in the area, training, or other sorts of community activities. The project might also want to use the land at these two sites for forestry and village wood-lot programs. Those areas that are already fenced could be part of natural regeneration tests or soil conservation measures that are sorely needed in both places. Recent soil samples at Hamdallaye show excessive acidity and the potential for aluminum toxicity.
- The agroforestry activities that have been started at Hamdallaye should be expanded and perhaps could serve as a model for Doukou-Doukou. These activities include wind breaks and other soil conservation measures.

### Management Considerations and Cost Effectiveness

The original design of this component was very ambitious, in that it intended to create an entire seed infrastructure from scratch. As such, the project encompasses functions that in a developed country would be spread over several different levels of government and the private sector. In the United States, for example, research and extension require federal, state, and county funding, whereas distribution and input supply are functions of the private sector. Attempting to estimate the cost effectiveness of the seed multiplication component is obscured by these multiple functions. The verifiable indicator of improved cost effectiveness given in the logical framework of the project design was a 30-percent reduction in production cost for M-2 and M-3 seed.

### Progress to Date

If one assumes that the original decision to create this infrastructure was valid and in the public good, how can one estimate the cost effectiveness of such a program? Frankly, it is difficult to imagine any attempt to provide a regular supply of high quality seed to subsistence farmers without having the local ability to multiply out improved types and link distribution to extension. Other alternatives such as simply buying seed from Nigeria are not reliable and do not take into consideration the special and marginal nature of agriculture in Niger.

Data prepared by MSU for the ASDG indicate that the seed multiplication unit could generate substantial economic benefits. Financial analysis, however, showed

that with a 90 CFA per-kg price for millet seed over 5,419 tons of seed would have to be sold to break even.

Per-kilogram figures in the ASDG-PAAD indicate that the 30-percent reduction in production costs has not yet occurred. The figures also indicate that the cost effectiveness of using the improved seed to local farmers is not known due to the low quality of the seed produced.

### **Findings**

The ASDG-PAAD economic analysis, although in some ways encouraging, appears theoretical. For example, the assumptions for millet include a 25 percent yield increase each year for those using improved seed. Nothing is said about the years of poor rainfall when these increases would not be realized. Of the past five seasons, two of them have had been poor enough to diminish the gains of improved seed.

Nothing is said in this model about the necessity of reseedling. A fixed 10 kg per-hectare rate is used. The team was told that reseedling as a result of erratic rainfall is necessary at both the multiplication centers and among the contract growers. Two or three reseedings are not unusual.

No solid analysis of the program's cost effectiveness has been done. In his 1985 report, Dr. Couvillion of MSU states that no really good basis exists for estimating production costs.

### **Conclusions**

Whatever economic models might be used, it seems to be plain common sense that no realistic measure of the component's cost effectiveness can be made until there is proof that the seed being produced is worth planting. The lack of evidence of this and the small amount of seed distributed make analysis of the cost effectiveness of the seed multiplication component unrealistic. A combination of cost reduction measures, improved quality, and greater distribution of seed would allow a meaningful analysis of this question.

### Recommendations

Suggestions for cost reductions are incorporated under recommendations in the "Technical Considerations" section.

### Contract Farming

#### Progress to Date

Contract farming is an area in which the project administration deserves much credit. Management of such a program is complicated.

In this setting, the contract farmers need considerable training. The extension effort appears to have been successful although there is room for improvement. In spite of initial skepticism on the part of the farmers, they use fertilizer, plant at recommended densities, and harvest at the correct time. In talks with farmers, the team found that they had taken a lively interest in varietal performance (more so than the component staff it seemed) and were generally favorable about the contract growing system. Large quantities of seed are being multiplied out in this way, and farmers are being exposed to new techniques.

#### Findings

Problems with the management of the component's contract grower program are related to the difficulty of supervising so many participants (over 8,000 farmers). At most locations only nine or ten *aide-encadreurs* were available to supervise over 1,000 farmers at each site. This has inevitably led to problems with the quality of seed produced. Component staff faulted the contract growers for not thoroughly roguing seed plots. The team believes that the impurity of the seed provided to them is more to blame for this. There is little control at the M-2 level, so it is inevitable that the M-3 seed is not genetically pure. Fertilizer application also appears to be a problem. Farmers frequently attempt to apply the dose intended for the seed plots to all their fields, thereby reducing the overall dosage.

### Conclusions

The assumptions upon which the component is based are not oriented toward the end users of the seed. Moreover, although this is basically a technical activity, outputs are viewed in terms of administration and management. It is not surprising, then, that comparison of the original expectations with the current component finds that, although many administrative and management goals have been met, the technical side remains weak and passive. The active role in technical progress in the design has not been achieved.

The productivity of the use of the seed by local farmers has been ignored. This is not to down-play the component's many accomplishments. In spite of these difficulties, it demonstrates that investments in Sahelian agriculture can pay off. The component has established a solid, functioning infrastructure, extension services, and provision of inputs to over 8,000 contract growers. It also offered credits for contract growers. Those who participated in the seed exchange program in 1986 established a security stock of millet and handled emergency seed programs following the 1984 drought. Over 4,000 tons of seed has been sold since then.

As noted in the MSU report, the implied assumption that there were agronomic or economic reasons to replace seed frequently has proved to be untrue. Unfortunately the component has taken on a life of its own, seemingly divorced from the major part of Niger's food production system. The challenge in the next few years will be to integrate the more successful parts of the component down to the farmer level. If in absolute terms the component has not achieved its original goals, the evaluation found it has made clearly demonstrable progress toward them.

In spite of these problems, the team's impression of the contract grower program and its management was favorable, given the human resources. Additional support for this program will be an important factor in the eventual ability of the component to become self-financing.

### Recommendations

- Improving the contract grower program will require greater supervision. If the reduction in recurrent costs that is to be called for in the next phase of the project is to be achieved, there is little possibility that the personnel

available can be increased. At the same time, simply reducing the number of participants in the component will diminish the important extension component's outreach. Ideally, the number of contract growers would be scaled back to improve management while extension and credit for inputs would continue for farmers outside of the project. Perhaps these "M-4" growers could serve as monitoring units to see how, without all the incentives of the contract growers, farmers would benefit from improved seed.

- Using contract growers to multiply out seed on the M-2 level, as suggested by MSU, should be explored. MSU suggested that some of the multiplication center land be turned over to contract growers, since their proximity would ensure a high level of control. This should be done after tighter management at the centers themselves has shown progress in improved seed quality.
- Allow intercropping of cowpeas with millet. This soil conserving technique has shown progress in on-farm trials and would offer farmers another example of improved methods.

## Special Issues

### Relationship with INRAN

Throughout the original design of the seed component, there were expectations that the seed multiplication unit would have a close working relationship with INRAN, presumably based on a greatly increased number of new varieties being released by INRAN. Field results, farmer reactions, and other types of information generated by these introductions would establish an ongoing working relationship between the two. The lack of many new releases has undermined this assumption. Furthermore, the multiplication centers have not monitored farmer use of the seed distributed, nor taken any interest in the seeds' performance outside of their own operations. Given this situation, there is not much to discuss between the two centers and INRAN.

INRAN does make periodic field visits to the centers, but these do not seem to be regular. At Kouroumgoussaou only one visit from INRAN had taken place last year. At Doukou-Doukou no roguing had been done because INRAN had made no technical visits -- a poor excuse, but indicative of the problem.

The relationship between INRAN and the seed component seems to be mostly on the personal level. The INRAN staff know most of the centers' directors and appear familiar with what is going on. Most of the constructive discussion between the two

units seems to be done in this informal way. Although this is helpful, it does not substitute for a strong institutional framework. The lack of documentation and institutional memory means that most of the exchanges are lost over time, and are not shared with other centers, as personnel shift.

The principal contact between the seed component and INRAN is at the Lossa foundation seed farm. Here, where seed directly from INRAN is multiplied to the M-1 level, there were complaints about the purity of the seed received from INRAN. The team observed unrogued plots of INRAN sorghum at Lossa that were obviously mixtures of two different types, and was given the impression that complaints about seed quality went unheeded. No mention was made of how the seed multiplication component handles what it considers unsatisfactory seed deliveries.

The interactive relationship between the seed multiplication component and INRAN does not yet exist within an administrative framework where it would have an effect on decision making.

#### Suggested Action

If the decentralization that is planned for the next phase of the component is to succeed, some sort of formal information gathering must take place. A work plan that would set out reporting goals for the seed multiplication centers could give some direction to the relationship between INRAN and the seed multiplication component. Reporting on a regular basis would put feedback to the research component on a sound footing.

INRAN needs to upgrade the purity of the seed provided to the component. One method of upgrading the seed while increasing communications would be to require INRAN to label seed. Such labeling would not only describe agronomic characteristics, but, as in the case with other seed programs, the inclusion of information about the percentage of off-types would also help the Lossa and seed multiplication staffs judge how much attention each lot of seed requires in the field. This program might start with millet and sorghum, cross pollinated crops that most easily lose their purity.

### **Privatization and Self-Financing**

The possibility that some aspects of the seed component's operations might be turned over to private concerns is one of the best ways to ensure that the progress made so far will continue. Two areas that seem most appropriate for private operation are the M-2 and M-3 multiplication steps and seed distribution.

Expanding the cooperatives' involvement to the M-2 level could be accomplished in the near future if the problems of quality control can be resolved and the seed produced by the project is perceived as clearly superior to that which is available locally. Starting this process by leasing land at the centers to M-2 growers, as suggested by MSU, is a good idea that could start in the next few growing seasons. Eventually some cooperatives might specialize in seed production as a money-making activity.

The low level of seed distribution needs to be addressed. Distribution through the cooperatives, although a logical part of the program, is apparently not enough. Distribution of seed through traditional private traders needs to be explored.

Concentration of multiplication activities in areas of greater rainfall should reduce production costs and will, it is hoped, lead to the component's operations being able to finance themselves.

### **Modification of the Seed Multiplication Component**

In the coming years, the new ASDG will continue the seed multiplication component of this project. As such, the ASDG has set out a new series of goals. These include establishing national-level certification and quality control standards and achieving the two goals that were added to the 1982 amendment, crop diversification and the reduction of recurrent costs.

Although the concept of national standards is a laudable goal, the newest phase of the project should emphasize local capability to ensure quality control. Currently the seed laboratories at the multiplication centers are going unused and the control that is coming from the foundation seed farm at Lossa is not adequate. Along with emphasizing national standards, additional training for multiplication center personnel

and the insurance that independent quality control be carried out would be good investments to achieve the goal of producing high quality, marketable seed.

Crop diversification plans should be as broad as possible, going beyond traditional market garden crops and, perhaps in experimental trials, testing the acceptability and feasibility of new staple crops that have done well in other dryland areas. The much greater yield potential of sorghum and its apparent success in many parts of the country make it a likely candidate for expanded production. Sweet potato, which grows down to 500 mm of rainfall, might be explored further since it dries and stores well in the Sahelian climate. Another possibility might be sunflowers. Tuber crops seem to be grown in many parts of Niger. Crops such as manioc do not require seed, but the production of new types of disease-free cuttings might be of interest to the multiplication centers.

Crop diversification should not be viewed as a quick fix for the slowness of breeding programs for staple crops. Making an impact on Niger's agriculture requires that millet and cowpeas continue to be the center of this component's activities for some time.

The reduction of recurrent costs is an important goal in achieving a self-sustaining seed industry. Concentrating production in areas of greatest potential is the best way of doing this. Financial analysis done by Dr. Couvillion in 1985 and 1986 indicates that over 5,419 metric tons of seed would have to be sold by the project to meet costs. Bringing down production costs as suggested by Dr. Couvillion requires that overhead be reduced. The elimination of centers where poor rainfall and soil conditions limits both the quality and the quantity of seed produced will greatly advance this goal.

The security stock program, however, has been successfully completed in terms of tonnage stored. There are currently about 1,500 tons of millet of first and second class seed available. Although this is much less than envisaged, it represents a much more realistic goal. If estimates made by the MSU team are correct, the original goal would have meant the storage of about one-third of Niger's entire seed requirement for millet.

There has been some criticism that the national security stock program was created as an afterthought to explain the lack of sales and distribution to farmers

outside of the M-3 growers. Whatever the origin of the program, the evaluation team agrees with the MSU team's assessment that this is a valid government function that will lessen the effects of drought. Although extended family members and other community sources can usually make up for lost seed in bad years, the high price of grain and seed following truly catastrophic years places extreme hardship on small farmers and can contract hectarage planted in the following years. The experience in neighboring Chad bears this out. There a series of poor harvests and civil unrest had diminished seed supplies to the point that farmers were not able to take advantage of the following season's good rainfall.

Efforts to privatize at least some aspects of the component should be attempted during this next phase. Above all, a wider distribution of higher quality seed will make this project worth the effort and funds expended so far.

## THE EXTENSION SUPPORT COMPONENT

### Original/Modified Goals and Purposes, Expected Outputs, and Assumptions

#### Original/Modified Goals and Purposes

As a sequel to the Niger Cereals Project (1976-1980), the APS project is to continue to develop the capacity of the Ministry of Agriculture to extend improved technology to Nigerian farmers. This will contribute to the long-term goals of food self-sufficiency and increased incomes for rural people. The role of the extension support component is specifically to strengthen the capabilities of the National Extension Service to provide support to field extension personnel. This component also serves to provide linkage to other national services, in particular, agronomic research.

Some assistance was directed toward strengthening extension in the earlier project, consisting of material assistance and funding for increased village-level staff. Little was done, however, to reinforce and strengthen the institution at the national level. The current project provides for four distinct but closely related outputs integrated into an extension support center (ESC).

Critical to the successful attainment of the extension component's goal are the following:

- A continuous flow of useful and adaptable information from research programs;
- Agricultural inputs and implements available on a timely and dependable basis; and
- Government policies with respect to input supply and the marketing and pricing of agricultural products providing adequate incentives to motivate farmers to adopt productivity-increasing technologies.

The component's purpose was to increase the effectiveness of the agricultural extension program via an ESC designed to:

- Increase the flow of information to the field staff;
- Raise the qualifications of the extension staff;
- Improve extension methodologies; and
- Make research more relevant and responsive to farmers' needs.

Achievement of the component's purpose is based on the following factors:

- Effective collaboration will take place between the ESC and other services in the Ministry of Agriculture;
- Trainees will be available to conduct training programs, and field staff will be freed from their jobs for periodic short-term training; and
- Policy-level staff in the agricultural services and INRAN will be committed to a more effective liaison.

#### Expected Outputs

The expected outputs are as follows:

- Creation of a documentation center that would collect, collate, reproduce, and disseminate information;
- Development of a regularly programmed and supported in-service training program for agriculture extension staff;
- Development of a continuing program of evaluation and experimentation with extension methodologies; and
- Institutionalization of a process of joint participation of research and extension in the design and evaluation of their respective programs.

The first goal -- the creation of the documentation center -- has been modified to include an audio-visual studio and graphic arts section. This modification allows for the transfer of information directly to the farmer since radio, television, and newspaper infrastructure exist on a national basis.

### Assumptions

The assumptions underlying the four outputs proposed for the extension support component are:

- Departmental and productivity project leadership are prepared to accept a more centralized and structured approach to in-service training;
- Departments and productivity projects are willing to cooperate with the extension support unit in the evaluation of extension methodologies;
- Effective working relationships between INRAN and extension will be established; and
- GON will provide personnel and funds to support the extension center.

### The Documentation Center

The documentation center proposed for the ESC has as its primary function the preparation and dissemination of information materials for field personnel at several levels. The field staff suffers from a lack of access to useful information based on valid research on farmers' needs. Although a library in the Ministry of Agriculture exists, there is no central facility for preparing and distributing information and instructional materials such as teaching aids. The documentation center was designed to fill that need. The center would rely heavily upon other national services such as INRAN and IRSH as well as on external sources. The center will endeavor to ensure a regular flow of information to all elements of field staff in terms that are appropriate for the planned use for each group.

The plan for the documentation center also includes a library. The continuous acquisition of materials related to agricultural research technologies and extension will constitute a resource base. These materials will be available for the analytical work of the personnel, not only of the ESC but also for the personnel of other government entities. The center is designed to be staffed by seven local-hire employees supported by an information specialist who consults intermittently.

In May 1986 the original component design was modified to add an audio-visual section to the center. To defray this additional expense, plans for the printing facility were dropped from the documentation center design. The rationale for this modification was that the transfer of information directly to the farmer would be increased through the use of the national TV and radio infrastructure, which was already in place. Similarly, it was pointed out that a number of printing establishments exist in both the public and the private sectors, and that these could be used to provide the printing services envisaged for a similar facility at the documentation center.

#### **Progress to Date**

The documentation center's output to date has consisted of the production of three newsletters (AGROGRAM), the distribution of several project-related documents such as the results of the training sessions, the production of a bibliography on soil and water conservation practices, and the purchase of copying machines for each departmental office.

The audio-visual section at the center has produced the following:

- A prize-winning display for the NCP at the National Agricultural Fair in Niamey;
- Three 30-minute radio documentary interviews on the national cereals program;
- Two hundred and fifty spot radio announcements in the Zarma and Hausa languages designed to increase farmer awareness of improved seed varieties;
- Five 90-second television commercials on improved seed production; and
- Five 30-minute instructional radio programs.

#### **Findings**

- The documentation center library and the audio-visual section are operational. The library is barely one year old, and is a quiet and pleasant area well suited for study and work. The computer-programmed cataloguing system is operational. The collection of both archival and periodical

materials is modest and oriented toward the activities of the project. The librarian, according to project personnel, needs further training, and it has been suggested that consultant assistance be procured for this purpose.

The audio-visual section is operational on a provisional basis. The sophisticated equipment required for media-quality production arrived on May 31, 1987, and was placed in operation in late June. The building housing the section was originally designed to provide facilities for the printing shop. It has been modified to provide studio space, a darkroom, and office, but the equipment has yet to be permanently installed. Air conditioning background noise is a problem, and funds are not available to correct this through the installation of a split system. Also, some light infiltrates into the darkroom area. These are minor problems that can be easily corrected.

A specially equipped vehicle is needed to transport the delicate equipment to the farmers' fields and research stations where it will be often used. A vehicle is on order and can be expected in 60 days. After arrival it will be equipped with cushioned compartments to protect the electronic equipment while it is being transported.

- A consequence of the decision to proceed with the audio-visual system rather than a print shop is that the flow of information from the center is now in a form that requires special equipment for diffusion. If this information is to be used by field staff, slide projectors, videotape recorders, and television sets should be provided. At present, there are no plans to do this.
- The three employees of the audio-visual section are highly trained individuals who were formerly with the public television and media-information agencies in Niger. Their services were provided through a seven-month contract that expired at the end of September 1987. Discussion is under way regarding the retaining of their service for an additional year. The permanent solution to the staffing of this facility, according to the project coordinator, will be to assign three individuals to the section who are in degree-level training programs in the United States. Two will return in December 1987, and one will return in June 1988.
- The information specialist consultant served 18 months in Niger. He departed in September 1987. It has been suggested that he return for two two-month consultancies, but it is not certain that funds exist for that purpose.
- The flow of information to field agents, which was to have been ensured by the documentation center printing facility, has been but a trickle. With the exception of the three newsletters prepared by the seed production consultant, it is difficult to find any documentation in the field that came from the center. The most visible output is a small desk-top document copier in each departmental extension office. The copiers were provided to the field by the ESC to enable the field offices to copy and distribute materials sent from the documentation center.

One DDA said that this system is too expensive and time consuming. In his case, when a document is received, 25 copies are needed for distribution to the agents in his area. A recent mailing from the ESC contained nearly 100 pages, which necessitated the making of 2,500 photocopies. In addition to the cost of the paper, there is an additional cost of replacement toner cartridges, which are required every time 1,500-2,000 copies are made. These cartridges cost the equivalent of \$250 each. The field offices have not received additional funds to cover these costs.

### Conclusions

The primary function of the documentation center was to have been the preparation and dissemination of informational materials and teaching aids to the field staff. This objective has not been realized. The investment in the audio-visual facility now precludes the achievement of this objective. The desk-top copier is not an acceptable substitute for preparing and distributing information and instructional materials to extension agents in the field.

The library probably does not fulfill its intended purpose. This is due to its physical isolation from the Ministry of Agriculture as well as the lack of Nigerien professional cadre at the APS headquarters.

The television and audio facilities are in danger of becoming an embarrassing white elephant. The reason for this is two-fold. First, there are no individuals undergoing training to operate the audio-visual section on a long-term basis. The current staff are under contract and are considered a temporary solution to the long-term problem. The information specialist's own reckoning states that a minimum of three years will be required to train the permanent staff. The individuals identified by the project coordinator as the eventual occupants of the posts at the audio-visual center are degree-level participants who will still require additional specialized training in the techniques of media information capabilities. There is currently no guarantee that they will be assigned to the center, and more important, there is no indication that they possess the aptitudes to become information specialists.

The second cause for preoccupation with the future of this facility is that the evaluator's inquiries at the Ministry of Agriculture in Niamey produced little interest

in this audio-visual unit. The Office of Agricultural Production states that no funds are budgeted for this service and that it will be difficult to obtain them principally because of the high costs involved.

One must conclude that the substitution of an audio-visual facility for the printing and reproduction unit was a slip in judgment. One cannot rationalize the establishment of this unit in the context of the principal mission of the ESC. This mission is to strengthen the capability of the agricultural extension service to provide support to field personnel by improving the management of the national service and improving the flow of information and technology to the field agents.

#### Recommendations

- The library at the ESC should be integrated eventually with the library at the Ministry of Agriculture. The same computer-based cataloguing classification is in use at both ESC and the ministry. This alone will facilitate the integration. It may be useful to maintain a library at the ESC through the 1988 growing season and schedule the integration during fall and winter 1988-1989.
- When the extension manual has been prepared, it should be put out for contract printing. Copies should be distributed to all extension and research personnel in Niger. With that act, the distribution of materials to the field will be ended except for teaching aids and instructional materials used in the in-service training programs.
- The audio-visual section presents special problems, and USAID and the GON must work together to find a solution. This unit would be a desirable addition to the Ministry of Agriculture if funding can be arranged. If it appears difficult or impossible to institutionalize the section within the ministry, it may be considered as a useful tool for a broader spectrum of government agencies. In this regard, the project coordinator has suggested the possibility, that under some circumstances, the audio-visual section could become self-financing if it were to charge agencies for its services.

#### In-Service Training Unit

The role of the in-service training unit is to establish a regularly scheduled in-service training project for Class B personnel at the arrondissement level and for Class C personnel at the district level. The training unit should be staffed by specially trained instructors, and should be supported by information materials and teaching aids. Training is to be held at existing facilities -- for example, Centres de

Perfectionnement Technique (CPTs), Centres de Perfectionnement Rural (CPRs), or other centers servicing cooperatives or literacy programs.

Seminars will be programmed for department-level senior staff at the ESC. This will bring together senior personnel of the related services, and especially those from research (INRAN), cooperatives (UNC), and training (IPDR) institutions. An extension training advisor will assist the chief of the in-service training unit to analyze and develop training programs for agricultural staff. A small support staff will assist in coordinating the various training programs.

These outputs were to be achieved by:

- The collection of data and information on existing in-service training programs for agricultural personnel;
- The analysis of existing training programs in terms of extension's needs, and the development of programs to satisfy those needs;
- The coordination of training programs for agricultural extension agents with the training given by UNC and IPDR;
- The planning for, and the coordination of, multi-disciplinary, high-level seminars aimed at achieving greater integration of the different entities whose actions impinge on the extension program;
- The provision of feedback to IPDR on the performance of extension agents, with a view to improving the teaching program at IPDR; and
- The planning for, and the coordination of, third country training programs.

#### Progress to Date

The following training programs have been carried out by the in-service training unit:

- Fourteen participants visited research stations and other projects in an effort to bring extension workers into contact with research personnel. This training was conducted in the last quarter of 1986;
- Four short-term trainees attended a three-week workshop on farming systems research and extension (FSR/E) in Bamako;

- Twenty-two field agents from seven departments in Niger participated in a training session at the Lossa foundation seed farm and the Hamdallaye seed multiplication center. Training was conducted February 16-March 6, 1987. The ESC collaborated in this jointly-sponsored training session, which included the assistance of INRAN, NDD, and the IPDR;
- Organized and initiated a national FSR/E workshop in Niger. This was a cooperative effort among the ESC, the NDD, and IPDR. The NDD paid dollar costs for two trainers from the Farming Systems Support Project of Florida State University, and provided one trainer from its staff; IPDR furnished one trainer and the facilities for the seminar; and ESC provided the overall planning and paid the local costs. A total of 32 individuals attended this seminar; and
- Participated in the technical training of agents in managing trials and demonstrations.

Other accomplishments of this unit include:

- Collected data and information on five in-service training programs for extension personnel organized by other institutions;
- Identified seven shortcomings of current training programs and inserted remedial materials in ESC-sponsored training;
- Coordinated the collection and cataloguing of extension-related materials developed by other organizations;
- Conducted two evaluation missions within the ESC to diagnose agent performance following attendance at a training meeting;
- Set up a training monitoring data base to contribute to the development of monitoring and evaluation of training methods; and
- Prepared bound copies of the FSR/E seminar at Kollo, for distribution to agricultural research personnel country-wide. These were being distributed during this evaluation.

Findings

- Five institutions in addition to the ESC offer structured in-service training opportunities for extension agents. These are the IPDR, Project Maradi, NDD, and INRAN. An in-service training program of the Food and Agriculture Organization (FAO) is oriented toward dry-season farming. Of these only the IPDR can be considered a permanent institution.
- An analysis of training needs within the extension service has been performed. The in-service training program of the ESC has been coordinated

with departmental-level authorities; the IPDR; the seed multiplication centers, and, to a lesser extent, INRAN. The training supports the targeted objectives of the extension methodology unit and the IFDC component of the APS.

- The GON has failed to support the in-service training through the assignment of instructors, counterpart personnel, or support staff. One qualified counterpart was assigned in November 1986, and transferred to other non-related duties one year later. Other than that, no cadre have been assigned to this activity.
- The National Extension Service at the level of the Ministry of Agriculture in Niamey has been by-passed insofar as the training programs are concerned.
- Instructors have been borrowed from the IPDR, the NDD, and other units integral to, and outside of, the ESC.

#### Conclusions

The Ministry of Agriculture is either unaware of the in-service training program of the ESC or places a low priority on its work. The training sessions have been well received by the field personnel, and the training has been timely and appropriate. The progress that the in-service training component has made is due almost entirely to the work of an energetic expatriate advisor.

The lack of Nigerien staff means that the training activities will terminate when the advisor departs. The team was told that a new counterpart for this program was on the way. In addition to that individual, support staff is also badly needed.

#### Recommendations

- If the individual serving as the training advisor within the ESC will to extend his stay in Niger beyond June 1988, and if funds are available for that purpose, the position should be continued through March 1989. This will allow for the continuation of the FSR/E training programs in other departments, as well as for the training of trainers at the IPDR and within other institutions working in the fields of agriculture and rural development. This work is important to the successful launching of the similar activities in the new Niger Applied Agricultural Research (NAAR) Project.

If the individual now serving as the training advisor in the ESC elects not to extend his stay in Niger, the evaluation team cannot recommend the continuation of the in-service training program after his departure. With but 12 months remaining, there will be insufficient time to allow for a change in advisor personnel.

- Every effort should be made to ensure that the GON assumes its obligations to provide counterpart and support staff for this program. It is the responsibility of the project coordinator to spearhead this drive.

#### **Assessment of Extension Methodologies**

A detailed assessment will be undertaken of existing extension models. Analysis and evaluation of these models will lead to a synthesis of improved models for field testing. The improved models will deal with a clearer definition of the role of the extension agent with regard to the farmer, and his relationship to other action entities in the field, particularly research. These will be reflected in both the formal and the in-service training programs for agents as well as in training programs for village-level trainers. The end result will be a more effective extension service expediting the downward and upward flow of information.

During the project, period a system of extension will be developed that will harmonize the elements of existing models into a national system. This system will eventually become dominant as the productivity projects are terminated.

In addition, there are numerous approaches to agricultural extension utilized in various countries including the United States that might serve as the appropriate model for the modification of current practices. A U.S. extension methodology advisor will assist in these efforts.

#### **Progress to Date**

The work plan for the ESC envisions the production of an extension manual that will serve as a reference for the agricultural agents. A first draft of the methods section has been completed. The section deals with :

- Rapid reconnaissance techniques for farm surveys;
- The farming system perspective in extension; and
- The definition of extension activities.

The methodology unit has reviewed the experience of the NDD project with the Centre Villageois de Formation (CVF) model. It concludes that this has been a cost-effective system, but that it still suffers from the top-down approach through the imposition of a technical package with little latitude for accommodating farmers' needs.

The framework of the extension methodology being developed by the ESC is in place and includes the following major points :

- A greater responsiveness to farmer's needs and constraints;
- The promotion of a wider range of technologies;
- Closer alliance of extension with farmer groups; and
- Integration of soil and water conservation practices into the technical package.

The methodology unit prepared a proposal for the postharvest care of cowpeas.

#### Findings

- With the naming of a Nigerian Director for the ESC in March 1987, the work of the expatriate methodologist was diverted to a new assignment. The methodology section (which is composed of a single individual) was given the responsibility for designing and implementing a nationwide system of demonstration plots. These plots were designed to acquaint the farmers with INRAN research and fertilizer usage.
- This unprogrammed activity has been a source of concern to the ESC because:
  - It is a contradiction of the farmer-oriented approach that is being developed;
  - It is the repetition of an extension approach that has been used for many years and that has generally been ineffective;

- The ESC technician's primary function is to identify and analyze various extension models and to develop new proposals. The use of technical staff to oversee the implementation of demonstration plots diverted them from their assigned mission.
- A system of paying bonuses to extension workers who assisted with conducting these demonstrations was started. This established a dangerous precedent, which has already adversely affected the conduct of INRAN trials for which the extension agents were not paid a bonus. (Note: Although bonuses were paid and some gasoline for vehicles was distributed, the practice was stopped by the project coordinator. Many of the agents are still expecting payment, while others feel they have been duped.)
- Work on the extension manual goes forward. The manual is awaiting the approval of the Ministry of Interior before it can be published.
- Since the APS project was designed seven years ago, USAID policy has also evolved to place greater emphasis on the use of FSR/E as a preferred model of extension methodology. The extension system that is being developed by the ESC is an FSR/E model that is compatible with the extension/research strategy proposed for the new NAAR project, due to begin operations soon.

#### Conclusions

The work undertaken by the extension methodologist is progressing satisfactorily in spite of his having been temporarily diverted to overseeing the demonstration program and his serving as chief of party for the contract specialists.

The new NAAR project can profit significantly from the work that the ESC has performed in extension methodology. Field testing and in-service training of the revised model are scheduled to begin in January 1988.

The first direct involvement of the National Extension Service in the work of the ESC has had serious adverse consequences. The individual named as the chief of the ESC did not have a clear understanding of the program. His directives to undertake large-scale programs of demonstrations stemmed from his previous experiences and not from a study of ESC objectives.

### Recommendations

- The demonstration plot program initiated in 1987 should be terminated as of December 31, 1987. Senior staff of the APS should visit each department and clarify the fact that no further bonuses are to be paid. They should also explain the reasons why.
- The individual who serves as the extension methodologist should be extended through March 1989. This should provide for ample overlap with the new NAAR organization. The purpose of this overlap will be to provide NAAR with information, data, and experience regarding ESC's evaluation and testing of extension methodology.
- The chief of the Agricultural Production Service in the Ministry of Agriculture and the project coordinator of the APS should acquaint the new chief of the ESC with the strategies and objectives of its mission and with the models of extension methodology that it is developing. Perhaps a visit to a developing country where a FSR/E project is under way would be helpful.

### Research and Extension Liaison

A process for the joint participation of research and extension personnel in analyzing and planning their respective programs will be institutionalized. The extension staff will participate in an annual evaluation of the research program and in the definition of research objectives. The research personnel will participate in an annual evaluation of extension results and in the design of the extension program.

A system for close interaction between research and extension at the field level, which is essential to the concept above, will be established. The final result will be a more problem-oriented research program that will integrate the socioeconomic restraints of the setting into the research program. More direct participation of the extension personnel as well as the farmer in the applied aspects of research results, testing, and demonstration will also be achieved.

A U.S. applied research advisor will maintain a continuous liaison between extension operations and the research activities of the project at INRAN. The advisor will undertake analysis of the applied research programs and their relation to extension.

### Progress to Date

The research-extension liaison unit has performed the following functions:

- Undertaken a study of factors affecting liaison for the purpose of creating an awareness of liaison constraints among Nigerien decision makers;
- Prepared an inventory of research institutions in Niger and a similar inventory concerning their respective areas of interest;
- Participated in an ISNAR-sponsored study of agronomic research in Niger;
- Presented a paper for discussion at the annual national agricultural conference in Agadez in March 1987;
- Assisted with the preparation of a lexicon of soil and water conservation terminology and practices; and
- Is assisting with the preparation of an extension agent's manual.

### Findings

- At present the research liaison advisor is the only consultant in the ESC with a full-time Ministry of Agriculture counterpart. The counterpart is from the staff of the director of the national Extension Service.
- The applied research advisor, whose technical assistance position was to be funded for four years, was originally scheduled to fill the post of the liaison officer. The incumbent is an agricultural economist, and his period of service has been cut to two years. Apparently these arrangements have the approval of USAID although the documentation approving these changes was not found.
- The work of the four components of the ESC -- the documentation center and audio-visual section, the methodology unit, the in-service training unit and the research-extension liaison unit -- are interdependent and all working toward the same objectives. The liaison office as well as the other offices of the ESC contribute to the work of one another.

### Conclusions

The reason for substituting an agricultural economist for an applied research advisor is not known. An applied research advisor would have been a better choice since the disciplinary ties to research would have been a valuable resource. The ESC is heavily oriented toward the extension system, and that is consistent with its

assigned mission. Lacking, however, is an individual to present the researcher's point of view.

The extension manual that is being prepared will help improve research and extension relations. The manual will provide the field agents with the modalities of implementing research trials and recommendations. The manual will also explain the reasons behind the work that is undertaken. This will improve the understanding and the dialogue between these two agencies.

#### Recommendations

- The incumbent research-extension liaison advisor services are scheduled to end in June 1988. Given the importance of the global activities of the ESC, to which he is a major contributor, it is recommended that his tour be extended until March 31, 1989.
- Given the relatively short time remaining in the life of the project, an applied research advisor should not be hired.

#### Special Issues

##### Linkages to Other Project Components and Other Programs

The formal linkages between the project components through the Project Coordination and Management Unit have never been implemented. The unit was to provide the forum for inter-component coordination through a body of *chargés*, one from each of the four components. These individuals were to have a special relationship with the project coordinator and were to serve as a conduit for the coordination of overall project objectives.

No record was found explaining this omission from the original project design. It would appear that the project coordinator has preferred to deal with the components on the basis of individual relationships and not through a structured organization.

As regards other institutions and programs, the ESC in-service training unit has forged strong linkages with the IPDR. This has been accomplished through the use of IPDR instructors and facilities for ESC seminars or conferences. The ESC has also drawn the University of Niamey into the FSR/E arena. Both the university and the IPDR plan to include FSR/E methodology in their curricula at a later date.

At the level of the departmental agricultural institutions, there appears to be a better relationship between the research stations and the seed centers and the Ministry of Agriculture personnel than exists in the capital. There are annual reciprocal discussions of activities, and there is joint planning to conduct each year's agricultural campaign.

The weakest linkage exists between the ESC and the very organizations the ESC was designed to strengthen, that is, the National Office of the Extension Service and the National Office of Agricultural Production Service in Niamey. The evaluation team, after discussing the problem with both the ESC and the national offices concerned, believes that this weak link exists because a rivalry has been created because of the parallel objectives of each group. The National Extension Service views the ESC as a threat to its existence. The ESC in turn, is convinced that the national extension agency is too frail to reinforce, and has by-passed the Niamey office and carried its own brand of extension activities directly to the field. The result is that the measure of accomplishment proposed in the project agreement, that is, that the agricultural extension staff will be better managed and more effectively supported by the Ministry of Agriculture, has not occurred.

Much of this problem lies in the original project design. Although it is stated that the ESC would be implemented under the authority of the National Agricultural Production Service, it was physically and administratively placed in an institution outside of the ministry.

Similarly, the ESC arrogation of the national extension prerogatives has been a mistake. Ideally the relocation of the ESC within the Ministry of Agriculture should be given consideration during the 18 months remaining in the project. Time is needed, however, to resolve the psychological constraints to this transaction. Given

this relatively short period of time remaining in the life of the APS project, the current arrangements should be maintained.

Efforts should begin to develop new attitudes in both the ESC and in the Office of Agricultural Production. It is strongly suggested that any future assistance for the Extension Service be institutionalized directly within the Ministry of Agriculture, and not be placed under the direction of a third party or another agency.

#### **Exogenous Factors**

Niger has been in the grip of a prolonged period of below-normal rainfall. This condition has now existed for 17 years. In only one year following the great drought of 1970 has the rainfall exceeded the average annual precipitation as measured between the mid-1950s and 1970. Two of the last four growing seasons have been characterized by rainfall that was far below normal and that was late in arriving.

The motivation of farmers toward the use of new technologies is stifled when the risks of climate overwhelm the risk of undertaking new agricultural practices. Viewed from the level of the village extension worker, the continuing inability to motivate the risk-wary peasant can only be discouraging. Evidence of this can be seen in the declining use of agricultural inputs, principally fertilizers and insecticides, and in the pessimism of farmers and agents alike.

#### **Conformity to Current USAID Policies and Strategies**

The project is judged to conform with USAID/Niger's development strategy for the agricultural sector and with current USAID policy insofar as this component, extension support, is concerned.

#### **Modification of the Extension Component**

The APS project coordinator has proposed that the technical assistance staff serving with the ESC extend their contracts through the PACD, that is, June 30,

1989. Aware of the financial constraints of the APS, the evaluation team suggests that contracts be extended through March 31, 1989. This extension will permit the continuation of the in-service training program, in particular, to be carried out through the dry season, which falls between the 1988 and the 1989 cropping seasons.

Of the three technical assistance positions staffed within the ESC, the priority for retention recommended by the evaluation team is: 1) the in-service training advisor; 2) the extension methodology advisor; and 3) the extension/research liaison advisor.

Prolonging the contracts of the technical assistance personnel will provide the necessary overlap time with the NAAR project and will allow for the orderly transfer of activities that may continue under the new research program.

This modification is subject to two conditions:

- That the GON provide counterpart personnel for the technical assistance staff for the time remaining in their contracts; and
- That consultant staff agree to extend their period of service. Little will be gained by recruiting replacement personnel for the approximately nine-month extension that is proposed.

APS and the evaluation team agree that the IFDC component, which provides for the fertilizer trials, should be completely redesigned. The reasons for reaching this conclusion are documented in other sections of this report.

## THE FERTILIZER USE AND EXTENSION COMPONENT

During 1982-1986, IFDC conducted a research program with ICRISAT in Niger. This research demonstrated that little can be produced on semi-arid soils in the absence of phosphate fertilizer. According to the project agreement: "Quantities as low as 30 kgs. of P<sub>2</sub>O<sub>5</sub> per hectare are effective for increasing production." Single super phosphate was shown to be more effective than triple super phosphate; diammonium phosphate; or blended compounds of nitrogen, phosphate, and potash. The research also showed that, in the chemically fragile eco-systems in Niger, management systems such as the use of crop rotations in proper sequence, and the proper use of crop residues enhance the use of fertilizers for sustained increased crop production.

### Goal, Purpose, and Expected Outputs

The goal of this component of the APS is to increase food production through the judicious use of fertilizer, working through the extension service and with farmers to identify and eliminate constraints to fertilizer adoption.

The purpose of this activity is to eliminate constraints to fertilizer utilization. The new component is designed to test and extend the results of the fertilizer program of IFDC and ICRISAT in Niger. It provides for collaborative research with national agencies, INRAN, in particular. The project will strengthen the Extension Service's ability to promote fertilizer use.

The goal and the purpose will be achieved by:

- Extending the current farm trial and demonstration program through the Extension Service to 20 agricultural zones;
- Focusing on a broader farming systems perspective in the design of the trials by emphasizing economic evaluation of fertilizer use, and defining the optimum economic use of fertilizer;
- Placing emphasis on rotation and intermixed cropping systems;
- Working with farmer groups to resolve fertilizer supply problems and develop applicable solutions to supply and credit problems;

- Using methodology developed by the IFDC to improve the extension agent's ability to conduct trials and demonstrations;
- Introducing, where possible, cowpeas or other legume trials to expose farmers to a wider choice of legumes for viable rotation and other schemes; and
- Maintaining liaison with ICRISAT and INRAN to feed new technology to the extension services.

The project's expected outputs include:

- Twenty agricultural agents trained in fertilizer use and extension;
- Eighty percent of the farmers participating in the program, surveyed to obtain attitudes toward on-the-farm research programs and to assess their ability to incorporate fertilizers into their farming systems;
- Evaluation and testing carried out on a continuing basis. Alternative fertilizer use strategies tested on 25 percent of the participating farms in each ecological zone; and
- A cost-benefit survey made on each farm to improve the farmer's knowledge of the economics of fertilizer utilization.

#### Progress to Date

- Ninety percent of the extension personnel in five departments have been trained in conducting IFDC, INRAN, and ESC trials;
- The design of the demonstration plots has been completed and 236 demonstrations were initiated, of which 18 later withdrew for various reasons.

#### Findings

The results of the 1987 fertilizer trials are of little value. There are two reasons for this: First, the drought and the late start-up of the annual rains were especially hard on the millet in the trials; and, second, the seed, fertilizer, and insecticides arrived late in the demonstration areas. In many of the areas, the inputs arrived after the farmers had planted their crops. The latter problem can be equally attributed to the IFDC and the ESC. To the best of the evaluator's knowledge, little if any economic evaluation was performed in 1987, which marked the first year of a two-year program.

In the evaluator's opinion, the demonstration protocol was flawed. The ICRISAT/IFDC trials from 1982 to 1986 show that optimum use of phosphate fertilizer is attained at rates as low as 30 kg per hectare. The protocol for conducting these trials called for the application of fertilizer at a rate of 22.5 kg per hectare, which was lower than the low, established during the five preceding years of research.

ESC personnel stated the lower rates were justified because they felt that farmers could not afford to apply P2 O5 at a rate of 30 kg per hectare. The demonstrations and trials are a top-down extension approach, and directly conflict with the model of extension methodology being developed by the ESC.

Extension agents were promised bonuses if they would participate in the IFDC demonstrations. The bonuses were to be paid in cash and in gasoline. A first installment was paid, and the second has been withheld. The extension staff is frustrated by these events.

During a tour of the demonstration areas in October 1987, the IFDC specialist found that many agents reported they had been too busy to follow the trials. The reasons for this included their participation in the anti-grasshopper campaign, the need to gather statistics, and other trials and demonstrations to care for. When similarly queried by the evaluators, the agents stated that the IFDC trials were time consuming and difficult to install, that the plots were too large for many farmers, that the inputs had arrived late, and that many farmers needed extra labor just to maintain the demonstration plots.

The farmers were generally impressed by two aspects of the demonstrations. One was the performance of the improved varieties of millet, which mature more quickly than the traditional lines; the other was the good performance of the cowpeas, which exceeded farmer expectations given the poor rainfall.

### Conclusions

Although some visible observations of the trials may be of value, the data relating to comparative yields, cost-benefit, and relative benefit of the fertilizer applications are of no value. Five years of research notwithstanding, the ESC/IFDC

designed a protocol that did not include the recommended rate of phosphate application.

The project agreement regarding the fertilizer trials states that FSR/E perspectives will guide the conduct of this program. If this is true, what has been the farmers' contribution? The conclusion is reached that this is a traditional top-down extension methodology. In retrospect, it is difficult to believe that one individual could have successfully conducted this number of trials and demonstrations over a vast area while following the precepts of FSR/E methods and systems. The principal output of this work to date may have been an opportunity to identify individual farmers who will become good candidates for the initial phases of the NAAR project.

Finally, the activities envisaged for this component cover too broad a spectrum. For example, the output relating to the resolution of fertilizer supply problems and to finding solutions to the problems of input supply and credit seems far removed from the demonstration and trials planned as the principal thrust of the program.

#### **Recommendations**

The IFDC trial and demonstration program should be redesigned prior to the 1988 planting season. The protocol should be based upon the previous ICRISAT/IFDC research on phosphate fertilizers in Niger. Feedback from farmers who participated in the 1987 trials should be evaluated and included in the new protocol design. A smaller number of plots from which meaningful data may be collected is to be preferred to large numbers with uncertain results.

**The payment of bonuses to extension agents should be terminated.**

Unless these changes are incorporated into the 1988 IFDC component, the GON and USAID should give considerable thought to terminating this component of the APS project.

## PROGRAM COORDINATION AND MANAGEMENT UNIT

### Coordination and Management

The project's logical framework did not specify a purpose or output indicators for the Program Coordination and Management Unit (PCMU), although a design of its structure was presented. The PCMU has attempted to ensure the coordination and management of APS, each of its components, and NCR project.

The structure of the PCMU, as implemented, has affected the degree to which it has been able to provide coordination and management for APS. In the project agreement, the PCMU was to include support and accounting staff, a management specialist, research and extension liaison and evaluation officers, and three chargés (Figure 2). The chargé-cooperative operations was to work directly with the head of the cooperative training component and the director of the CA on matters of routine implementation. The chargé-agricultural operations was to be the director of the ESC, resulting in particularly close ties between that component and the PCMU. The chargé-research operations presumably was to be the contact for the NCR project.

The PCMU was to have "primarily oversight and problem-solving responsibilities" according to project documentation. The PCMU itself was to be overseen by an Inter-Ministerial Executive Committee (IMEC). This committee was to be created to set broad guidelines for the project. It was to "define policy and set broad substantive directives," as noted in the project agreement.

### Findings

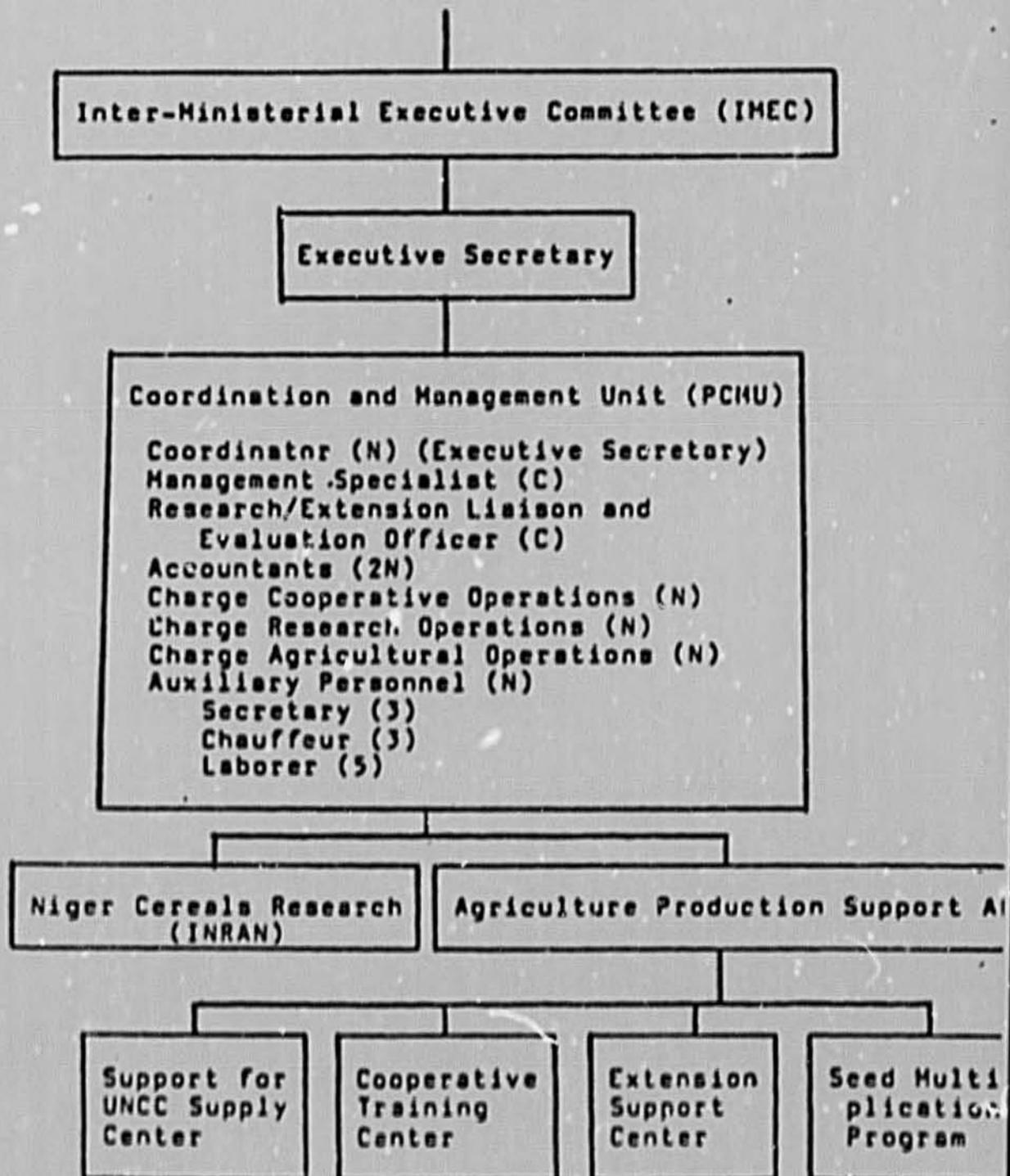
The PCMU's organization bears little relationship to that which was proposed in the project agreement (Figure 2). The IMEC, of which the PCMU was the central element, was created in 1982. It designated members and met only once. Gone was the coordinating structure of the original design with the chargés who were to represent the project components within the PCMU. This loss eliminated a potential forum for discussion of relationships and common problems.

FIGURE 2  
 ORGANIZATION CHART FOR ADMINISTRATION OF THE  
 COMBINED APS AND NCR PROJECTS

HESR  
 MP

MDR

USAID



N = Nigerien  
 C = Contract Technician

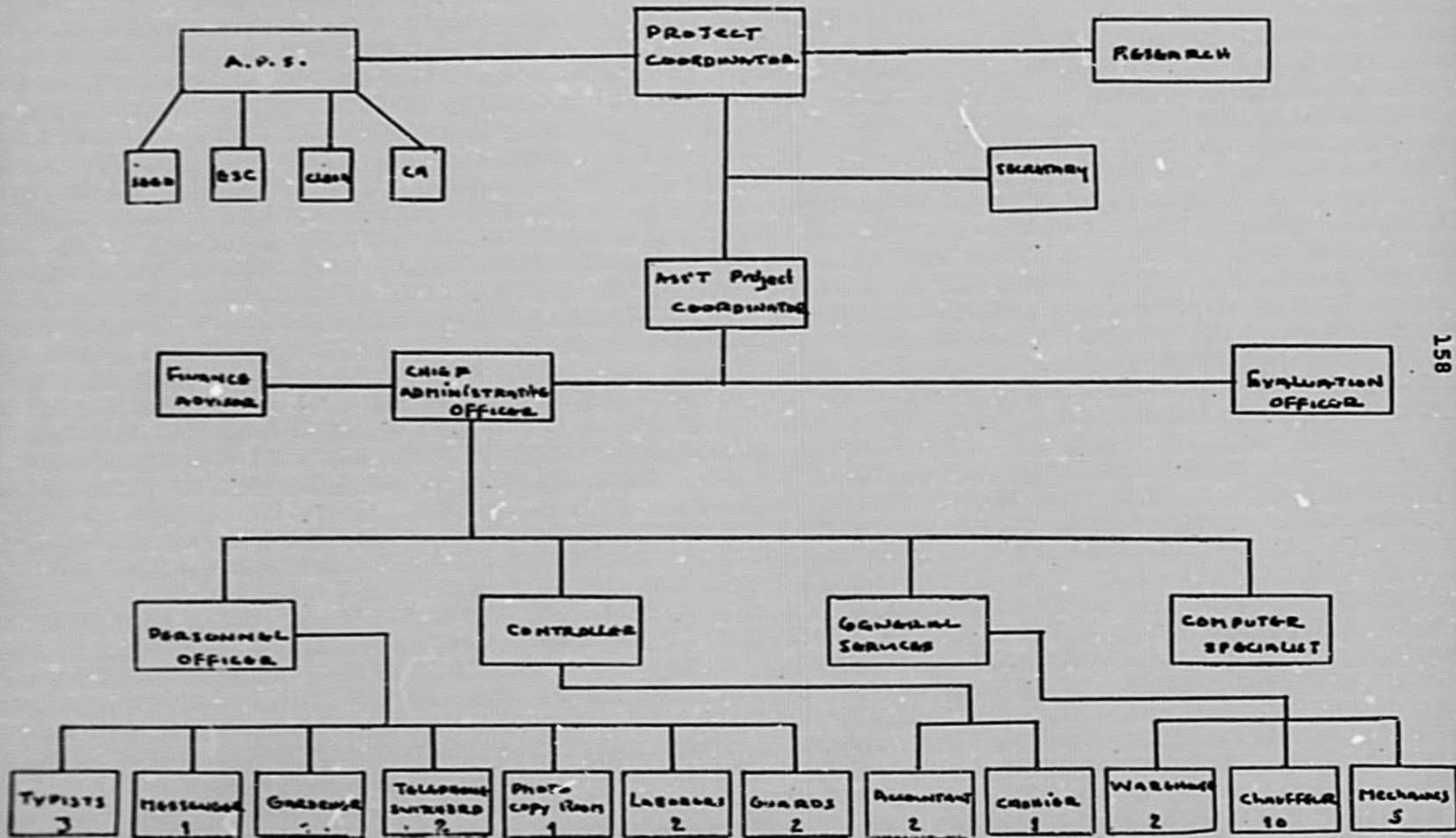
In place of the original design is the project coordinator working with a management specialist (evaluation officer), his counterpart, and the research/extension liaison and evaluation officer (head of the extension support component). This unit, although it does not appear on the APS organization chart (Figure 3), is part of an organization that is heavily line oriented on the administrative side reporting to the project coordinator. The technical components, including research (NCR), are in a staff relationship reporting to the project coordinator. As a result of this organization of the project, the project coordinator's office is the only point of communication, decision, and coordination between the technical/implementing components and the administrative/support side.

#### Support of Technical Components

Although the support activity would logically exist to expedite the work of the technical staff, the technicians report that it is cumbersome and inefficient. The following examples make this clear. If local currency funding is needed to conduct a training session in order to pay per diem costs of participants and to purchase training materials, a request must be prepared and presented to the Ministry of Plan. There, seven signatures are required to approve the expenditure. With the authorization in hand, the materials must be procured by the general services section of APS. Although the routing of the requesting document is the responsibility of the technical component, the components themselves are not authorized to make local purchases. According to the technical and implementing units, the general services unit is notoriously slow and inefficient; however, the organization of APS makes it responsible only to the project coordinator and not to the technical staff.

The availability and use of automobiles were also common problems expressed to the evaluation team. As an example, the fertilizer component received two new vehicles in September 1987. These were placed in the motor pool and often have not been made available to the rightful user.

FIGURE 3  
APS ORGANIZATION CHART



### Allocation of Funds

The input supply component, in several of its reports, expressed dissatisfaction with the process of allocating funds by the PCMU. Both the CA's Annual Report for April 1986 through March 1987 and its Third Quarter 1986 Report cite large discrepancies in budget requests and appropriations. According to these reports, the CA's FY 1987 budget request from the project was reduced from 492 million CFA to 132 million CFA. The quarterly report states that the 361 million CFA difference was transferred to the seed multiplication component without the CA having been informed or consulted.

The CA's Third Quarter 1987 Report refers to the transfer of approximately 12 million CFA from the CA component to another unspecified component. According to the report, CA proposed expenditures of this amount were at first approved by the PCMU, but were later refused. The quarterly report states that one result of the transfer of funds was to delay repairs of the truck responsible for deliveries in the Niamey Department, the site of the CA's largest clients. The delay lasted at least three months because 1.3 million CFA was not available for repairs.

The cooperative training component noted that because of the lengthy monthly budget approval and allocation process for counterpart funds it has been necessary to prefinance certain expenditures from its CLUSA dollar budget. Reimbursement from counterpart funds has been slow, but recently has started to accelerate because of PCMU assistance.

### Coordination of Project Activities

The PCMU coordinates report writing for the project, soliciting contributions from the various components. It is also responsible for formal internal evaluations of the various project components.

In addition to its reporting and internal evaluation roles, the PCMU has responsibility for coordinating participant training and for implementing staff training in areas common to the various project components. Participant training is dealt with in detail in Annex C. The PCMU also had the responsibility of supporting the

Rural Engineering Service of the Ministry of Agriculture with technical assistance, training, and logistical support to carry out project-related construction. The PCMU provided Rural Engineering with sufficient technical assistance and logistics support to help strengthen this department, one that is increasingly involved in rural development. PCMU support to the Rural Engineering Service is covered in Annex B.

The PCMU prepares the overall budget based on component budget requests, monitors the various components' budgets over the fiscal year, and evaluates budgetary results. The PCMU also interacts with the Ministries of Agriculture and Plan, USAID, BIAO, UNC, and the various research institutions. In this area, the PCMU feels that it lacks executive power, that is, it can review progress and point out weaknesses, but cannot change project direction. These executive decisions rest with USAID, and the Ministries of Agriculture and Plan. The PCMU feels that executive decisions take place in an isolated fashion and hurt its ability to make appropriate changes in project actions on a timely basis.

#### Coordination of Components

The PCMU has greater coordinating ability (control) over some components than over others. To the extent that a component has its own budget, it is more autonomous in activity and escapes coordination. This is the case of input supply and cooperative training components, and also the NCR project. The PCMU thus occasionally finds itself confronted with a *fait accompli*, however, it does say that it is informed by the component. The PCMU puts the matter of coordination succinctly: "Without the power to control finances, it is hard to control their activities. You can't tell them, if you don't do this, you won't get money."

Thus, the PCMU sees itself as rendering the following assistance to the various components:

- Facilitating the acquisition of funds, materials, and personnel;
- Reviewing components' programs to ensure they fit with national and USAID priorities;

- Evaluating each component, including the PCMU itself, to determine results obtained versus desired objectives;
- Serving as an early warning system, spotting problems before they become problems and advising the appropriate parties so that decisions can be taken; and
- Facilitating contacts with the exterior, that is, other ministries, agencies, and USAID.

#### **Collaboration with Components**

The amount and quality of collaboration between the components and the PCMU varies according to component. For example, the PCMU requires the CA to furnish a large number of reports, which the CA considers burdensome, given its small staff. Despite the reporting, little, if any, effective communication takes place between the two parties. In July 1986, the CA was asked to respond to a 14-page questionnaire to be used as the basis of an internal project evaluation. The answers furnished were essentially a rehash of the contents of previous CA reports. One wonders if the reporting exercise is useful in resolving substantive implementation issues.

With respect to assessing the attainment of its outputs, the CA is not equipped to generate such data. The input supply component has received no assistance from the PCMU in this matter.

The PCMU has provided administrative assistance to the cooperative training component in:

- Getting training assistants' contracts regularized and signed;
- Maintaining rapport between the component and the ministries;
- Defining the guarantee fund within the context of the ASDG, and obtaining approval from the Ministry of Plan;
- Establishing relations with the BIAO; and
- Accelerating counterpart funds for component use, thus obviating pre-financing certain expenses from the component's CLUSA funds.

For its part, the cooperative training component has never appealed to the PCMU for assistance in formulating or reforming agricultural policy as it relates to the activities of cooperatives. There is little or no feedback concerning problems of policy implementation on the part of either party.

The cooperative training component would welcome more active participation of the PCMU in field trips to cooperatives so that technical advice and feedback could be provided. The component would also like to see more coordination meetings take place, particularly between the components whose activities overlap the most.

Collaboration with the seed multiplication component has apparently been a priority for the PCMU. From discussions with managers at the seed multiplication centers, it became apparent that the PCMU has given more support to this component than to the others.

The support of the PCMU, even to this component, is limited to responses to material needs. The policy role that was originally envisaged for the PCMU has not taken place. The evaluation team found no evidence that the unit was participating in evaluation of seed policy such as crop choices and crop varieties, or other elements of policy that would affect seed production. Day-to-day matters are taken care of, but the major problems, such as low quality of the seed produced and its lack of use by farmers, until recently have not been addressed.

The major document that the PCMU has produced concerning the seed component is the internal evaluation completed in July 1987. The final recommendations do much to analyze the component's problems and present policy recommendations.

#### **The PCMU and Policy-related Issues**

Other than the production of a draft policy paper on seeds and the recent evaluation of the seed component, which contains policy recommendations, the PCMU has had little activity in the other component areas. For example, there is no feedback concerning policy issues related to either the CA or the cooperative training component. Through the ASDG, USAID funds a policy-related group, DEPSA,

in the Ministry of Agriculture. There is no evidence that any linkages have been formed between the PCMU and this organization.

#### Coordination with Research

The seed multiplication component is a logical area in which productive coordination between the APS and research should take place. The PCMU, however, has been only partially successful in establishing collaboration with NCR project. The midterm evaluation prepared by the PCMU points out some of the most important problems that exist between research at the national level and its coordination with the seed multiplication component. These problems relate to the lack of frequent technical visits by research to the Lossa foundation seed farm, and to the absence of quality control at the seed multiplication and research centers. The report also recommends strengthening the links between research and extension.

#### Weaknesses the PCMU Perceives

The PCMU cites three major weaknesses:

- It lacks decision-making authority, especially where individual components have their own budgets;
- It lacks staff to follow each component closely, and has only one expatriate and his counterpart in its management unit; and
- It sees improvement in its administration of internal finances, but feels it is still too tied up in finance and administration to carry out its primary mission of management and coordination.

It cites the lengthy budget approval process and circuit through the GON and USAID to obtain monthly funds. Reportedly, the circuit takes at least six weeks and usually two months for each component to receive funds. The financial control is excellent, but timeliness and flexibility are not. The rigid approval system can hinder a component's efforts, particularly when time is of the essence -- as with input delivery for planting.

A final note on financial control is that any expenditure over 20,000 CFA (about \$66) requires the approval of the Minister of Plan or his Secretary General.

## Conclusions

The relationship between the PCMU and certain components is not overly collaborative. This is not surprising. The lack of responsiveness noted relative to the administrative and support function, the control-by-budget philosophy, and the elimination of the *chargés* as vehicles to handle implementation questions have shown the potential for creating conflict between the components and the PCMU. Furthermore, the absence of the IMEC eliminates an important avenue of feedback to policy makers.

The implementation of the input supply component is closely tied to national policy issues and especially to the ASDG reform program. For this reason it is especially unfortunate that effective dialogue concerning the impact of policies on the CA has not been instituted.

The monthly budgetary approval process, including the justification of the previous month's expenditures, appears to be cumbersome. At certain times in the agricultural cycle, timely availability of the various factors of production is key. In Sahelian agriculture, timeliness is absolutely critical given the vagaries of rainfall.

## Recommendations

For the remaining time under the APS agreement, the PCMU should consider undertaking the following actions:

- Develop methodologies that will help the several components and the project as a whole measure the attainment of outputs. This could be done by the PCMU itself, or in collaboration with DEPSA. To the extent that project outputs are related to policy objectives, systems to measure the attainment of outputs would provide data to serve as the basis for policy dialogue and decisions.
- Use the internal evaluation of the seed multiplication component to gain a much needed role in policy formulation. With this as a stepping stone, accompanied by the development of the above-mentioned methodologies, the PCMU should then embark on the formulation of agricultural policy as it relates to cooperatives, input supply, extension, and credit.

- Alleviate the financial rigidity of the monthly budget allocation system by adopting a quarterly allocation system. Quarterly allocations should give the components sufficient flexibility, and should obviate the need to negotiate with USAID controllers when not all of a previous month's justifying documents are available.
- Increase the authority of the project to spend without Ministry approval from \$66 to \$500. Make post-expenditure justification rigorous, with the condition that abuse will result in return to the current level.

## CHAPTER THREE

### LESSONS LEARNED AND REPLICABILITY

This section sets forth the lessons, positive and negative, that have been learned over the life of the project to date, as well as during the evaluation. It addresses those elements that AID could consider replicating in future projects and those that should be avoided.

#### THE PROJECT

The APS project was designed to help expand and improve national-level services supporting agriculture. To date, the project is still far from achieving this purpose. The lack of progress is in large measure due to the weakness of those institutions the project is to strengthen. Moreover, the project ends in June 1989, 18 months from when the evaluation has taken place.

The project itself underwent changes in two major components, input supply and cooperative training. Changes in policy, both in Niger and the United States, altered the project's design and timetable. The input supply, cooperative training, and extension support components were all delayed in start-up, and the fertilizer use and extension component was just recently added. Certain components have not demonstrated a high degree of progress toward achieving their purposes.

The project thus appears as an umbrella over six components, rather than a completely coherent activity. To date, there does not appear to be much cross-fertilization between components. Components with their own budgets and the ability to undertake actions on their own aggravate the situation. Finally, the project depends largely on USAID for its funding, with little of the planned GON contribution.

The changes in design, delays in implementation, fundamental problems of certain components, financial dependency on USAID, lack of GON contribution and participation, and overall lack of coherency point toward three lessons.

First, the design, organization, and staffing of a multicomponent project must be given top priority from the outset. Part of the delay in implementation was caused by inappropriate key personnel and an organizational structure that did not adhere to the design. The lesson learned is that the organization of a multicomponent project must ensure rigor and focus on the ultimate objectives. Moreover, a team effort, with formal links between components, is key to overall success.

Second, the government's participation at the national level must be ensured, even enforced, if such an institution-strengthening project is to succeed. Integration of the project at the national level is necessary to avoid the creation of a competitor, which can, by virtue of its own resources and separate activities, weaken the very institution it is supposed to strengthen. Once the project ends, the government must have the experience, human resources, and operating organizations in place to assume the outputs of the project.

Third, the design of such a project must address sustainability once funding is ended. This project is highly dependent on AID funding; thus recurrent costs become a major question. What will happen to the extension and the input supply components once the expatriate advisors leave? The answer is that most likely these components will wither. Thus, early on, what should be sustained and what will be sustained must be decided.

### REPLICABILITY

As the APS project is constituted and performing today, it is not a project to be replicated. Simply put, it has too many fundamental shortcomings to be considered as a model to be used elsewhere.

The cooperative training component and its credit subcomponent, however, are replicable. Certain elements of other components are replicable such as the seed multiplication component's contract grower program, the extension support component's in-service training activity aimed at low- and middle-level extension personnel, and the financial management assistance package for the input supply component.

## Input Supply Component

### Lessons Learned

In the design of this component, the most important issue that should have been addressed is whether the CA could be run as a business. This question goes straight to the issue of marketing. Does a sufficient market exist for the products and services provided by the CA? If so, how can this market best be served and how should the CA be organized to serve it? Can the CA compete with its competition?

To run as a profitable business requires a change in mentality. It is not enough simply to decide that a parastatal organization will operate henceforth as a business. A business mentality must be instilled not only in top management, but also throughout the entire organization.

If an entity is going to be run as a business, it must be given the ability to do so. This entails action in two areas: (1) making the mission of the CA correspond to the reality of operating like a business; and (2) giving it the chance to do so. Giving the CA the chance to operate like a business means providing it with certain resources, including start-up capital, infrastructure, and personnel. A certain period is required for a newly privatized organization to become self-financing, and it is necessary to allow for a transition period. This lesson is especially important given that potential investors (cooperatives) will not be likely to invest in an entity that has not demonstrated a history of profitability.

It would be easier to accomplish the project goal of having the cooperatives own the CA if the cooperatives themselves were actually self-financing. The lesson here is that the goal of moving a parastatal toward self-financing is difficult enough even without the issue of whether the ability to purchase the entity exists in the private sector. One should be sure of the latter before proceeding with the former.

### **Replicability**

Many of the conditions necessary for successful privatization of a parastatal organization are not necessarily areas that can be directly affected by projects. It is necessary to have programs in place that reorient policies in the directions necessary to achieve project goals, such as the privatization of the CA. Turning the CA into a business requires a policy consensus that this is a worthwhile endeavor, and from that consensus flow the necessary actions and resources to make the change happen. Without this consensus, and ensuing actions, it is doubtful that the CA can be turned into a business. Turnover of the CA to the UNC does not ensure that the CA will run as a business and be profitable. Thus, replicability, not only in Niger but also elsewhere, will be constrained by the absence of the consensus and the necessary actions.

### **Cooperative Training Component**

#### **Lessons Learned**

Although the cooperative training component is still in its early stages, it can be considered a nascent success. It is still fragile. Following are lessons learned from its first year and one-half of implementation:

Allowing the training design and content to be determined by the cooperative members themselves (bottom-up approach) ensures that the design and content will be most effective and appropriate to their particular needs and desires. Moreover, there is greater chance for buy-in at the most local level among the cooperative members.

Training should take precedence, chronologically and in terms of priorities, over granting loans to the cooperatives. Credit should be seen as only one of several training environments, and not as the primary intervention.

Carefully thought out and planned income-producing activities are vital to the well-being and growth of any cooperative in Niger. Success in these activities will allow cooperatives to begin acting as businesses.

Numerous planning and familiarization meetings are necessary to initiate a cooperative's training and economic activities. Two-way channels of understanding and communication between the project's trainers and the villagers about mutual expectations, desires, ambitions, and realities must be wide open from the beginning.

The self-image and philosophical attitude of the trainers are crucial to the success of the training. They must see themselves not as official extension agents, or teachers of children, or bureaucrats sent down from on high, but as facilitators, consultants, and advisors who can guide the cooperatives through the learning process. Careful selection of dynamic and energetic individuals willing to live among the people with this new mentality is crucial to the success of the work.

Marketing studies must be undertaken early and done thoroughly to ensure that economic activities have a better chance of succeeding.

Above all, cooperatives must be made aware early on that they alone are responsible for their own learning. This entails active participation in financial terms, and in terms of their time, ideas, and initiative, throughout the entire process.

At the outset of a development project-bank relationship, involve the bank in loan selection, monitoring, and control to increase its confidence in lending to development clients.

Working with the partner bank, develop an auditable control system satisfactory to both partners at the beginning of credit activities.

In the design of such credit subcomponents (or components), structure the overall loan portfolio for profitability, diversity, and safety, based on markets and market opportunities. These portfolio characteristics make the portfolio more attractive to commercial bank partners.

In the design stage, make certain to find and resolve any legal impediments, such as the outstanding CNCA loans to cooperatives, before committing funds to a credit activity.

**Prepare the field properly:** Do not lend too soon. To lend money and have it repaid, the bank must understand its client and the client should understand its bank. By carefully identifying the needs of the client cooperative, the correct loan criteria and progress measures can be selected -- case in point, village stores.

**Use banking standards.** Credit is a private-sector-oriented subcomponent, geared toward being accepted into the formal banking sector. If this subcomponent is to be accepted, it must be rigorous enough to meet banking criteria in addition to development criteria.

### **Replicability**

The cooperative training component, including its credit subcomponent, is a distinct entity in the APS project. It probably could be separated from the APS project tomorrow and placed in another institution, or even in other Sahelian countries that have targeted cooperatives as a development vehicle.

The training model has been well thought out, tried and tested, modified accordingly, and now runs smoothly. Its proven autonomy, self-sufficiency, and lack of dogmatism make it flexible enough to succeed in many settings. That other projects in Niger are looking to CLUSA for assistance in their own cooperative training efforts proves that the model is successful and replicable.

### **Seed Multiplication Component**

#### **Lessons Learned**

**Crop breeding takes time and is very much a long-term activity.**

**Quality and genetic improvements must come first if there is to be any real program. They can not take care of themselves or be treated as after-thoughts.**

**The quality and agronomic advantages of improved seed must be evident if farmers are to adopt the seed.**

Contract growers can be trained to follow proper techniques, but the level of supervision must be high.

### **Replicability**

Of all the activities that have been conducted by the seed component, the contract grower program is the one that might merit replication in other parts of the Sahel. The program combines extension with seed production, an attractive combination that could help hasten the pace of technical transfer. In this component, the low quality of the seed has undercut the benefits of the contract grower program. In another setting, however, or as quality improves in this component, contract growing can be an important way of providing seed in the Sahel.

### **Extension Support Component**

#### **Lessons Learned**

The extension support component is a classic example of the violation of a basic rule of technical assistance. This rule states that one should always work within an existing institution, no matter how weak, rather than creating a new one. Therefore, since one objective of this component was the strengthening of the National Extension Service in Niamey, the technical assistance should have been located physically and administratively in the Ministry of Agriculture rather than in a coordinating unit at the project. Tempted as project planners may be to circumvent national institutions, for whatever reasons, their efforts will be short lived and will eventually disappear.

The lack of counterparts for most of the U.S. advisors during the major period of time they have worked on this project is a serious and lamentable deficiency. There can be no strengthening of an existing host country institution if the advisors are placed in operational roles without counterparts. When a host country covenants to provide the necessary personnel to ensure the proper functioning of the project, they should be held to that covenant by the USAID. The longer USAID waits to bring this to the attention of the host country, the less certain it will be of eventual success.

### **Replicability**

This component's in-service training has proven to be a valuable means of introducing technology to small farmers, while recognizing and rewarding village-level extension agents for their efforts. In the end it is the motivator who will exert the most force on the small farmer to bring about change. Other projects would benefit from similar in-service training, particularly at the low and mid-levels of extension personnel.

### **Fertilizer Use and Extension Component**

#### **Lessons Learned**

This component suffers from two significant problems. First, five years of experiment station research into the minimum quantities of phosphate fertilizer that will produce increases in crop yields in Niger was ignored. This was based on a subjective judgment that the research was not applicable to small farming systems because of its cost. There is no evidence to prove that this is true. The evidence is, however, that the rates of phosphate recommended by this project component will not result in production increases because they are too low. Disregard for valid research results should not be a part of any future project or program.

Second, the payment of bonuses to extension agents to perform the trials and demonstrations related to this activity amounts to payment to place one institution's work before that of another's. This is a no-win situation and has set a dangerous precedent for the future. This payment of bonuses has no place in this or any other project or program.

#### **Replicability**

Replicability should be considered only if this component is redesigned for the 1988 planting season, using the protocol of the previous ICRISAT/IFDC research on phosphate fertilizers, and if the 1988 results show promise.

## Program Coordination and Management Unit

### Lessons Learned

A project such as APS, with diverse components and with direct linkages to other projects and government services, requires a true coordinating body, with both adequate and appropriate staff and with the authority to ensure that coordination does take place. This lack of a coordinating authority is a principal weakness of this project, as evidenced by the lack of collaboration between some components and the PCMU, by the weak links between the project and its companion cereals research project, and by its fragile relationship with the National Extension Service.

### Replicability

The PCMU bears little resemblance to the organization that was presented in the project agreement. The most significant modification as it relates to replicability is the elimination of the *charge's* role. The *chargés* were to provide forums within which problems of implementation could be discussed among the various components of APS. It is unfortunate that the opportunity to test the coordination model as outlined in the project agreement was lost. The evaluation team feels that the PCMU, as currently implemented, does not represent a management model that should be used in other projects. Its defects include a lack of flexibility in providing for support to the various technical components and its inability to contribute to the formulation and execution of agricultural policy as that policy relates to project components.

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**ANNEX A**  
**ACRONYMS**

## ANNEX A

## ACRONYMS

ACREMA	Atelier de Construction et Réparation d'Équipement et de Machines Agricoles (Agricultural Equipment Manufacturing and Repair Workshop)
AE	Activité Economique (Economic Activity)
AEPRP	African Economic Policy Reform Program
AFMA	Atelier de Fabrication de Matériel Agricole (Agricultural Material Manufacturing Workshop)
ASDG	Agriculture Sector Development Grant
BCC	Banque de Crédit et du Commerce de Niger (Bank of Credit and Commerce Niger)
BCEAO	Banque Centrale des Etats de l'Afrique de l'Ouest (Central Bank of the West African States)
BDRN	Banque de Développement de la République du Niger (Rural Development Bank of Niger)
BIAO	Banque Internationale pour l'Afrique Occidentale
BIT/ILO	International Labour Organization
CA	Centrale d'Approvisionnement (Input Supply Center)
CAV	Cellule d'Appui à la Vulgarisation (Extension Support Unit)
C/DARMA	Centre de Division d'Artisanat Rural et de Mécanisme Agricole (Divisional Agricultural Equipment Center)
CFA	Communauté Financière Africaine (West and Central African Monetary Unit)
CLUSA	Cooperative League of the U.S.A.
CNCA	Caisse Nationale de Crédit Agricole (National Agriculture Credit Bank)
CPR	Centre de Perfectionnement Rural (Rural Training Center)
CPT	Centre de Perfectionnement Technique (Technical Training Center)
CVF	Centre Villageois de Formation (Village Training Center)

DDA	Direction Départementale d'Agriculture (Departmental Agricultural Office)
DEPSA	Direction des Etudes et de la Programmation des Statistiques Agricoles (Agricultural Statistics Department)
DPA	Département de la Production Agricole (Department for Agricultural Production)
ESC	Extension Support Center
FAO	Food and Agriculture Organization of the United Nations
FSR/E	Farming Systems Research/Extension
FSSP	Farming Systems Support Project (Florida State University)
FY	Fiscal Year
GM	Groupement Mutualiste (Mutual Group)
GON	Government of Niger
ICRISAT	International Center for Crop Research in the Semi-Arid Tropics
IFDC	International Fertilizer Development Center
IMEC	Inter-Ministerial Executive Committee
INRAN	Institut National de Recherche Agronomique du Niger (National Agriculture Research Institute)
IPDR	Institut Pratique du Développement Rural (Rural Development Institute)
ISNAR	International Service for National Agricultural Research
LWR	Lutheran World Relief
M - 0	Seed from Research Center
M - 1	First Multiplication (Seed)
M - 2	Second Multiplication (Seed)
M - 3	Third Multiplication (Seed)
MA	Ministry of Agriculture
MDR	Ministère du Développement Rural (Ministry of Rural Development)
MINPLAN	Ministry of Plan

MSU	Mississippi State University
NAAR	Niger Applied Agricultural Research Project
NCP	Niger Cereals Production Project
NCR	Niger Cereals Research Project
NDD	Niamey Department Development Project
OJT	On-the-Job Training
ONAHA	Office National des Aménagements Hydroagricoles (National Office of Irrigated Projects)
OPVN	Office des Produits Vivriers du Niger (Food Marketing Board of Niger)
PAAD	Project Agreement Amendment Document
PACD	Project Assistance Completion Date
PARA	Projet d'Appui à la Recherche Agricole (Niger Cereals Research Project)
PCMU	Program Coordination and Management Unit
PRO-AG	Project Agreement
PSC	Personal Services Contractor
PVO	Private Voluntary Organization
ROD	Rural Organization Development Project
SAC	Service d'Appui à l'Action aux Cooperatives (Cooperative Support Service)
SONARA	Société Nigérienne d'Arachides
TOT	Training of Trainers
UCOMA	Unité de Construction de Matériel Agricole (Agricultural Equipment Manufacturing Unit)
ULC	Union Locale des Cooperatives (Local Cooperative Union)
UNC	Union Nationale des Cooperatives (National Cooperative Union)
UNCC	Union Nigérienne de Crédit et de Coopération (Nigerien Credit and Cooperative Union)

**URC**            **Union Régionale des Coopératives (Regional Cooperative Union)**

**USAID**        **United States Agency for International Development**

**USRC**        **Union Sous-Régionale des Coopératives (Sub-Regional Cooperative Union)**

**VBT**         **Village-based Training**

**ANNEX B**  
**SUPPORT TO RURAL ENGINEERING**

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**ANNEX B**  
**SUPPORT TO RURAL ENGINEERING**

**Implementation of Construction Program**

The attached table summarizes the project's executed construction contracts and their status. The construction was carried out by local contractors under host country contracts. The buildings were designed and built under the direction of the AID funded PSC Civil Engineer in full collaboration with the Rural Engineering Services Department of the Ministry of Agriculture. The project implementation schedule for construction called for all buildings to be completed by October 1985.

As the table implies, the construction program suffered from delays and builder incompetence. Except for the Project Headquarters and its perimeter wall, all the remaining construction has been delayed. For example, the construction of two warehouses at Guecheme and Doukou-Doukou did not start until after the end of the contract construction completion date. The work is not yet complete. Also, the access road at Kangue Bague is still unfinished.

**Building Design**

In general the buildings are structurally sound. The headquarters building, however, is too long and should have had an expansion joint (against temperature displacement) placed at the point of the building's diverging hallways. In terms of layout, buildings are well ventilated, airy and functional, except for the animal traction stable, which does not provide enough space for its intended usage.

**AID Inputs and Cost Figures**

As planned in the Project Paper, AID's initial input to the project construction component was estimated at \$3,868,000. During the first year of project implementation, the construction component was reassessed and AID's contribution

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was limited to the construction of headquarters' buildings and the staff houses at two seed multiplication centers. Cost-wise, the overall estimate per square meter constructed varies according to the type of construction and its location. In Niamey, the office building and annexes cost CFA 97,800 (\$326), while the warehouse cost CFA 63,383 (\$211). Cement and reinforcing rods were free of taxes. Surprisingly, the overall per square meter cost of construction at the seed multiplication centers (located more than 300 km from Niamey) was below Niamey figures: CFA 71,380 (\$240, free of taxes) for the housing unit and CFA 56,135 (\$187, including taxes) for the same warehouse plan as in Niamey. For both Niamey and outside Niamey, construction professionals consider these costs to be low.

### **Workmanship**

In general, the quality of the work completed is good and follows standard practices. The quality reflects regular supervision and inspection of the work. Some buildings still show minor defects which will be corrected. These defects are reported in the various "proces-verbaux" for provisional acceptance of construction.

### **Seed Multiplication Center Buildings**

The buildings built at the seed multiplication centers are a substantial investment that must be protected. Routine maintenance of buildings and equipment at some centers (Kouroungoussao, Guecheme and Magaria) is relatively well performed. The other centers should follow this example.

### **Support to Rural Engineering Services**

#### **Effectiveness**

PCMU support to Rural Engineering was effective to the extent that Rural Engineering was provided with the necessary means, in a timely manner, to carry out technical assistance and logistical support. Architectural plans were prepared and construction was controlled and supervised at both central and departmental levels.

## Output

### Buildings

In spite of delays, completed buildings are a solid output of project support:

- The headquarters office building, with annexes, which houses the PCMU and other project components;
- Six warehouses (two remain to be completed) built for the storage of seeds and fertilizers, one at each seed multiplication center; and
- Two staff houses and two animal stables, at the Hamdallaye and Kouroungoussao seed multiplication centers.

### Training

To date training has been successful:

- For on-the-job training, the project-funded PSC engineer worked closely with Rural Engineering to design the buildings and monitor all on-going construction work, thus providing his counterpart with necessary practical experience. As a result of this training, the Rural Engineering counterpart took over the project construction management work in August 1987, when the PSC engineer's contract expired; and
- For academic training, two members of Rural Engineering were sent to the US for Civil Engineering undergraduate studies. One has completed his degree and is awaiting administrative notice to assume his new responsibilities; the scheduled to return to Niger next year.

## Conclusions

Project assistance to Rural Engineering Services was appropriate because it strengthened this department, an integral part of the Ministry of Agriculture. Not only will Rural Engineering be increasingly involved in rural development, but also

there is no other qualified architectural/engineering organization for construction, design and supervision in Niger.

#### Recommendations

- Incomplete construction should be consolidated in a single package contract awarded on the basis of a restricted invitation for bids. The contractor selection procedure should give higher priority to competence;
- For all newly built warehouses, install smaller size wire mesh on the interior between roofing and perimeter walls; and
- For repairs and maintenance needs at the various multiplication centers: see Engineering Evaluation, page 7, by Modibo Sangare, REDSO/WCA, ECCS, dated November 4, 1987.

EXECUTED CONSTRUCTION CONTRACTS

CONSTRUCTION/LOCATION	CONTRACT NO.	SOURCE OF FUNDING	TOTAL AMOUNT (CFA)	CONTRACTOR	CONTRACTUAL COMPLETION TIME (MONTHS)	CURRENT / STATUS / COMMENT
Extension Support Center (PCMU) in Niamey	85/10/GR	USAID	97,473,430	CHAIBOU	6	Completed on time. Work started June 1, 1986 and interim acceptance 21/01/87. NO DELAY
1 Warehouse + 1 stable at Hamdallaye and Lossa	86/08/GR	CON	31,010,930	ENCENIBAT	4	Interim acceptance on Feb. 16, 1987 while work started on May 27, 1986;  All construction works have been completed, but beyond contractual date. 5 MONTHS DELAY.

CONSTRUCTION/LOCATION	CONTRACT NO.	SOURCE OF FUNDING	TOTAL AMOUNT (CFA)	CONTRACTOR	CONTRACTUAL COMPLETION TIME (MONTHS)	CURRENT / STATUS / COMMENT
2 warehouses each - at Guechemé						<u>Incomplete Construction</u>  Guechemé: Not completed. Main structure completed, doors and windows remain to be installed although building has been occupied.
- Doukou-Doukou	89/09/CR	CON	25,171,275	CHAIROU	4	<u>Incomplete Construction</u> Wall elevation completed. Roof trusses are on site. Contractor has abandoned work for over 8 months. Work has started after end of contractual completion date. Work done is estimated at CFA 15,800,000.
- 1 Warehouse + animal stable  at Kouroum-goussao	86/10/CR	CON	36,963,039	KANGUEY BAGUE	4	<u>Completed Construction</u>  Eight months after targeted completion date. Interim acceptance was performed on Feb. 10/87, while contractual completion date was October 20, 1986. Work started on June 20, 1986.

CONSTRUCTION/LOCATION	CONTRACT NO.	SOURCE OF FUNDING	TOTAL AMOUNT (CFA)	CONTRACTOR	CONTRACTUAL COMPLETION TIME (MONTHS)	CURRENT / STATUS / COMMENT
1 Warehouse + access road (1.6 km long) - at Angoual Gambil (Maradi)	86/10/CR	GON	36,963,039	KANGUE BAGUE	4	<p><u>Completed Construction</u></p> <p>- Warehouse: - Access Road:</p> <p><u>Incomplete Construction</u></p> <p>Contractor had stopped work after first layer of embankment was put into place. Layer not compacted because of lack of equipment to do the job. Work completely delayed for over 4 months. Work done for access road is estimated at CFA 1,625,000.</p>
1 Housing unit at - Mandallaye	86/25/CR	USATD	24,269,268	AMBOUTOU IDRISSA	3	<p><u>Completed Construction</u></p> <p>Work started on December 26, 1986 7 months after contractual completion date.</p> <p>Good workmanship.</p>
1 housing unit at Gouroum goussao	86/25/CR	USATD	24,269,268	AMBOUTOU IDRISSA	3	<p>Contractor was given additional 1 month extension for material shortage. Interim acceptance performed on July 14 1987</p>

CONSTRUCTION/LOCATION	CONTRACT NO.	SOURCE OF FUNDS/L/C	TOTAL AMOUNT (CFA)	CONTRACTOR	CONTRACTUAL COMPLETION TIME (MONTHS)	CURRENT / STATUS / COMMENT
Perimeter wall at Extension Support Center	84/18/CR	USAID	7,973,095	ENGENIBAT	4	Construction work completed. Work started on 09/17/84 and was completed on 2/11/85. NO DELAY, but additional work was necessary

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**ANNEX C**  
**PARTICIPANT TRAINING**

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ANNEX C

PARTICIPANT TRAINING

Cooperative Training Component

Long Term:

- Three participants for 3 years each, U.S. study; and
- Fourteen participants for 1 year each, technical training in Africa.

Short Term:

- Twelve person/months of short-term U.S. study; and
- Twelve person/months of short-term third-country training.

Progress/Findings

No participants have been identified or chosen for long-term training.

Three participants were tentatively selected to attend short-term courses in late 1987, two in the United States and one in Germany. None of these people have departed for the courses identified, and one man no longer works for the project. No other candidates or courses for either short or long term studies have been identified.

Conclusions

The small size of the CLUSA staff limits the number of employees who can be sent out for training. As there are only a few Nigerien professional staff at headquarters, the absence of any one employee could result in considerable disruption of operations.

### Recommendations

- Participants could be chosen from the ranks of the various national, regional, and sub-regional Unions, as well as from the team of CLUSA Assistants. Eventually, the Component could consider sending active and promising cooperative managers or members out for training.

### Seed Multiplication Component

#### Long Term

- Six three-year scholarships, BS or MS in Seed Technology in the U.S.

#### Short Term

- Ten short-term programs in seed program management, quality control, seed processing and/or equipment operations in developing countries.

### Progress/Findings

As of this year, five participants have been selected for long-term degree level training in the United States in seed technology. Four of them were sent to Mississippi State, including the Project Coordinator who successfully completed his M.S. program in 1984. The three other MSU students will complete their training at the end of this year and in 1988. The fifth student, who is at Texas Tech University, will complete his program in 1989.

Long-term third country training has focused on horticultural studies at ENCR in Bambey, Senegal. Two individuals have finished their programs and two others will return in 1988.

### Conclusions

Short-term training in third countries appears to be doing well. Project administrative staff and technical personnel have attended seed-related training in Tunisia, Zimbabwe, Benin, Nigeria, Togo and in France.

In-country training has been conducted regularly with mixed results. This training is directed at seed multiplication managers, farm managers and aide-encadreurs.

While the results of the long term training are not really known at this point, the choice of individuals for inclusion in the participant training program appears to have been appropriate so far. All but one are reported to be doing well in their programs and should complete their programs as scheduled. (The exception, a BS candidate at Mississippi State in seed technology is reported in 1987 by USAID to be having "academic difficulties.") Even though "social factors" had played a large role in the ultimate selection of candidates, this does not seem to have harmed the program's results.

Of those studying seed science, three of the four are attending Mississippi State, as did the Project Coordinator. Mississippi State's long involvement with the seed component, with seed programs in Africa, and in general with the design, training and technical assistance in Sahelian seed projects makes this university a logical choice. However, perhaps programs at other Universities might offer new perspectives on seed technology and bring a different viewpoint to the Seed Component activities and planning.

As noted earlier, in country training results have been mixed. Training of seed multiplication center managers in the use of seed equipment was successful. Farm manager training, however, was mostly a programming exercise, i.e., planning for the next season. Reportedly, training of the aide-encadreurs was weak.

More training is needed for all levels of project field personnel. There are technical problems with seed quality, the lab equipment provided each center is not being used, and at two centers, improper pesticide storage poses a hazard.

### Recommendations

- With the considerable investment that has been made in participant training, optimizing their activities will be an important step in establishing meaningful and carefully thought-out programs in the future. More planning needs to be done if this is to be accomplished;
- A specific workplan needs to be elaborated for returning participants. In this plan four major areas of activity could be spelled out for each participant:
  - technical specialization as it relates to project activity,
  - specific training duties within the Component and related agencies,
  - specific individual contributions to seed quality control,
  - post-project transfers and integration of participants into government services or privately-run concerns;
- For in-country training, the following is necessary:
  - additional training in the use of lab equipment to help assure quality control,
  - more training in the proper use and storage of agricultural chemicals,
  - training in soil conservation practices - to offset declining yields at multiplication centers and to extend these practices to M-3 growers, and
  - a two-week training session should be organized in Niamey for the aide-encadreurs (already recommended by the seed technologist).

### Coordination and Management Unit

#### Long Term

- Two three-year scholarships; and
- Two four-year scholarships for Rural Engineering.

#### Short Term

- Two six-month technical training scholarships for Rural Engineering.

**Progress/Findings**

Two participants have gone to the U.S. for Civil Engineering undergraduate studies (long term). One has returned but has not been posted anywhere as yet. The other returns next year.

As for short term, two participants have gone to Ouagadougou for associate degrees in Civil Engineering. One has returned and has been posted as the Chief of Service in Rural Engineering for Control and Supervision of Construction Works in Zinder. The other has also returned and has been named as Deputy Chief of Services in Rural Engineering for Control and Supervision of Construction Works in Niamey.

Several participants have attended short-term courses in the U.S.: project management for administrators in Francophone countries (Texas Tech University, for a member of the Monitoring and Evaluation Unit); Project and program management at Arthur D. Little Management Education Institute in Massachusetts; and a USDA course at the University of Minnesota (for the Project Coordinator), according to USAID documents obtained from the Education and Training Office.

**Input Supply Component****Long Term**

- Two participants for three years in business administration in the United States; and
- Three participants for long-term management training in Africa.

**Short Term**

- Two participants for 6 months in inventory management and financial analysis.

### Progress/Findings

One of the former Directors of the Centrale d'Approvisionnement received short-term training in management as well as in issues related to fertilizer and its use. He also participated, along with the current Assistant Director, in an observational tour of agricultural equipment workshops in Togo. The Chief of the Inventory Management Division has attended a symposium on fertilizer, as well as a seminar on inventory management. The current Director is scheduled to attend a four-day seminar on fertilizer procurement and distribution in late November 1987.

The Component currently has one employee in long-term training in Abidjan. He is scheduled to receive a BTS degree in accounting in June 1989, and will become to the CA's Financial Controller when his studies are completed, but there will be no overlap with the APS project.

### Conclusions

The level of training undertaken so far is substantially below that projected by the CA in January 1987, and also below those outlined in the logical framework, as above. But all participants who have received training have returned to the CA upon completion of their program. Programs have been appropriate to trainees' job responsibilities.

The small size of the CA staff limits the number of employees who can receive training. As there are only six professional staff at CA headquarters, the absence of any one employee could result in considerable disruption of operations. Frequent personnel changes have limited the extent to which the CA has profited from the training investment.

One case of inappropriate selection was noted. Attendance at a seminar was refused to a CA employee after being recommended by the Project Coordinator. It appears that someone from outside the project was sent to the seminar instead.

## Extension Component

### Long Term

- Twenty participants for 3 years each in the United States; and
- Ten participants for 3 years each in Africa.

### Progress/Findings

A total of 20 participants have been sent to the United States for degree-level training. Two of the participants left in 1983; seven in 1984; seven in 1985; and four in 1986. Two of the participants are graduate students working towards or have already received, their M.S. degree and the other 18 are candidates for, or have already received, a B.S. degree.

### By discipline:

- Eight studying agricultural extension/education;
- Five studying seed technology;
- Two studying agricultural economics;
- Two studying agricultural mechanics; and
- One (1) each in the fields of agronomy, general agriculture, and natural resource management.

Four of the participants have returned, one of whom is the Project Coordinator who was awarded a M. S. degree in seed technology from Mississippi State in October 1984. The other three participants who have returned have been assigned functions outside of the APS.

One student studying for a BS in agricultural education/extension has been transferred to the University of Georgia because of academic difficulties at Baldwin University.

No additional long-term training in the U.S. is planned because of insufficient time remaining in the project for achievement of a degree.

Ten participants are presently enrolled in third-country university-level institutions. Two are studying accounting, one in Abidjan and the other in Dakar. The remaining eight students are enrolled in the Ecole Nationale (ENCR) at Bambej in Senegal. Four are enrolled in the Horticulture Department and four are pursuing a diploma in agricultural extension.

No further training in third countries is anticipated for reasons of a lack of time remaining in the project and a lack of training funds. None of the students being trained in African institutions have completed their academic training.

#### Conclusions

Thus, the thirty students studying for university-level degrees fulfill the training needs exactly, as these were proposed in the project planning documents and the project agreement. Upon their return they are scheduled to be assigned to a multi-disciplinary agricultural service team in six of Niger's seven Departments. The teams will have the responsibility for establishing an effective extension service at the Department level.

#### General Comments on Participant Training

Participant training for some of the project's components, especially extension and seeds, is judged as effective in supporting their specific goals and purposes. In most cases the trainees selected appear to have had the appropriate educational level and skills, although several have had difficulty meeting the English language requirement for U.S. study. A GDO document of 1986 reveals that one Accounting candidate, one extension candidate and one seeds candidate were unable to achieve English levels for U.S. training and so were sent to Dakar or Bambej, Senegal for their training. Another candidate identified for U.S. long-term training was terminated in English training and subsequently his program was cancelled altogether. Still others were cancelled because the candidate did not have 5 years of tenured

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service (3 U.S. long-term candidates), or because the nominations were withdrawn by the GON or not cleared by the Civil Service. One Third-Country short-term candidate was cancelled because the waiver for French training was not granted.

A Summary Table from July 1987, Education and Training Office of USAID/Niger reveals the following generalized statistics:

Long Term:	33	targeted
	7	completed U.S. long-term
	15	in process U.S. long-term
	0	completed third-country long-term
	11	in process third-country long-term
Short Term:	49	targeted
	6	completed U.S. short-term
	5	in process U.S. short-term
	40	completed third-country short-term
	0	in process third-country short-term
In-Country:	19	targeted (usually English language)
	19	completed

Costs of the training total \$2,103,297.

It will be noted that of all long-term participants receiving training outside the country, only one has returned directly to the APS project as of this writing - the Project Coordinator. The bulk of the participants are due back in 1988 and 1989; it remains to be seen where they will be posted, especially given the fact that APS terminates in 1989.

It appears that there is little coordination and information flow between the three implementing and decision-making entities involved in the participant training process: the GON, the Coordination and Management Unit of APS, and USAID (Liaison Office and Education and Training Office). Information gathering was difficult at best. It is recommended that the three groups meet more frequently to share vital information, especially as concerns return of candidates, staff postings, and decisions on appropriate candidates.

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**ANNEX D**

**AGRICULTURAL PRODUCTION SUPPORT PROJECT/NCP  
EXTERNAL EVALUATION**

by

**A. Daous**  
**Director, Nlamey Department**  
**Development Project**

## ANNEX D

AGRICULTURAL PRODUCTION SUPPORT PROJECT/NCP  
EXTERNAL EVALUATION

## Support for Agricultural Extension

## Summary of the Objectives of this Component

The objectives of the Agricultural Extension Support Unit of the Agricultural Production Support Project were as follows:

- To strengthen the ability of the agricultural services to intervene in the field, by providing assistance in the form of adequate numbers of qualified staff;
- To establish close links between agricultural research and the national agricultural extension services;
- To set up a documentation center for preparing, reproducing and distributing documents and other teaching materials to be used by the agricultural extension staff; and
- To develop and evaluate methods of agricultural extension.

Reaching these objectives should make it possible to increase the dissemination of new agricultural technologies designed to improve farmer productivity.

## Results

In comparison with the other components of the project, it should be noted that the agricultural extension programs started late and remain behind schedule due to difficulties in recruiting qualified staff. Indeed, the programs got off to a slow start in 1986 with the activities analyzed in this report.

## Documentation Center

The documentation center was created in 1986. A few activities have been organized, including the following:

- The translation and distribution of technical documents relating to research on farming systems;
- The production of audiovisual materials; and
- The publication of an agricultural bulletin called "Agro-Gram".

In addition, the project has undertaken a study of the documentation needs of the agricultural services in order to establish satellite centers within each department. For this purpose, some departments have already received materials, including a small photocopier, but without operational support. The photocopy machine remains largely unutilized, except for the limited needs of the service. Clearly, no departmental office can devote its entire share of the national budget to reproducing technical documents in sufficient numbers for its extension workers.

In contrast, the center itself has performed well and has adequate material means at its disposal, including, in particular, the necessary audiovisual equipment, for meeting the needs of the various services of the Ministry of Agriculture. Access to the center is, however, difficult, insofar as it is located within the Yantala coordination unit.

#### Recommendations

To solve the problems with which the center is presently faced, the following measures are recommended:

- Staffing Requirements: The temporary staff members whose contracts are drawing to a close should be gradually replaced by individuals who have been trained in the various aspects of audiovisual work and document reproduction. These staff members, who will be funded by the Government of Niger before the end of the project, must be trained in agricultural journalism and in production techniques for slides, films, radio and television programs and other agricultural extension aids.
- Activities of the Center: So far as possible, the activities of the center will complement those of the Ministry's documentation center, in order to benefit from its experience and from the wealth of information which it possesses. Two activities are particularly noteworthy:

Publications: Taking into account the equipment on hand and the needs in the area of agricultural extension, the center is capable of producing bulletins, guides,

brochures, promotional materials, posters, etc., to support the efforts of the field agents. The bulletins, guides and brochures will be useful to the extension staff and can generally be prepared in French. The center should re-examine this subject and prepare and distribute documents itself. Posters which simply illustrate an idea will be prepared in the local languages with farmers in mind.

Radio Programs: As indicated above, one of the center staff members should receive training in agricultural journalism. This person will be responsible for retransmitting the regular programs in order to provide technical advice to farmers or respond to their questions. Programs such as "Radio Club" or "Rural Radio" are very pertinent and should be revived by the center. Arrangements will be made with the national radio station to allow this person to perform his work properly.

The audiovisual aids unit should continue its poster development programs. In addition, 30 minutes or so of television time should be devoted each week to debates focusing on particular agricultural themes or demonstrations of specific subjects of interest to farmers. For this purpose, the television centers set up by the government for the samaria will be very useful.

#### Staff Training

Although, in 1986, the project identified three categories of training to be provided to the agricultural extension agents in order to make them more effective, little progress has been made in this area. Only some of the assistant extension agents and those individuals responsible for the Extension Support Unit demonstration fields in 1987 have received specific training concerning the demonstrations. We should also note that the upper level staff members trained by the project are not currently working for the project, even though, since 1976, a certain number of persons, generally counterparts for the expatriate staff, have studied in the United States in order to replace the expatriates. This has not occurred and the Agricultural Extension Service is suffering from a lack of design staff.

Recommendations: The areas of field staff training which were identified by the project seem to us to be of great importance in terms of meeting the needs of

producers and facilitating the dissemination of various technical themes developed through adaptive research. The project will cover the annual expenses of retraining field agents at the request of the departmental offices, as well as the cost of training to be provided to farmers concerning specific subjects or new technologies to be introduced into the rural areas.

#### **Extension Methodologies**

The delay in starting up the activities of this component and the lack of qualified personnel have made it impossible to develop an ongoing program of evaluation and experimentation in the area of extension methodologies.

As its first interventions of 1986, this component of the project, in the interest of flexibility and in light of the realities confronting each of the agricultural departments, agreed to participate in certain research and development activities planned by the departmental agricultural offices, instead of creating its own programs, with the objective of better studying the existing extension service in order to improve it. After obtaining the results from 60 demonstration fields that were tended by farmers themselves, the 1987 programs were designed, with a focus on levels of mineral fertilization and farming systems. Due to late planting, poor implementation and losses caused by drought conditions, the results of these demonstrations will be impossible to interpret and, consequently, they should be carried out again in 1988 and beyond.

Thus, at this stage we cannot address the question of appropriate agricultural extension methodologies. To arrive at the point where such methodologies can be effectively assessed, the results obtained by other projects involved in improving agricultural productivity should be indexed and re-examined, along with the results of agricultural research programs (INRAN, PEN, IFDC, Tropsoils, etc.).

**Recommendations:** For the Agricultural Extension Service of the Department for Agricultural Production to reach the objectives assigned to it, certain measures should be adopted within the framework of the Agricultural Production Support Project of the NCP. These measures primarily concern organizational matters and material assistance.

**Organization:** The Agricultural Extension Service should be restructured and supplied with design staff specializing in agricultural extension activities. The head

of this service and his deputy at the central level are primarily involved in administrative duties which do not benefit the development of new strategies and the follow-up of existing strategies for disseminating new technologies intended to increase or stabilize agricultural productivity in spite of the unpredictable climatic conditions experienced since 1973.

Rather than limiting itself to routine, administrative tasks, this service should primarily assist the departmental agricultural offices in their agricultural extension programs and, from a broader point of view, its functions can be summarized as follows:

- To interpret, publish and disseminate to farmers the new technologies designed to increase both their productivity and their income. These publications should include subjects related to agricultural activities, such as animal breeding, rural sociology and economics, and rural engineering. Agricultural extension work should relinquish the idea that all efforts must focus on crop production, since the farmer is above all an individual and the head of an enterprise.
- To adopt the system of research and development already begun by some productivity projects and the Extension Support Unit of the NCP.
- To provide training to the regional extension staff on a systematic basis through regular retraining sessions and short-term specialized courses or workshops.
- To assist the departments in organizing their agricultural extension section. Obviously these tasks cannot be handled by two or three local staff members, even if they are specialists in the subject. This is why, in addition to relying on the local staff, we recommend creating a group or team of specialists whose sole responsibility will be to work on these points and make recommendations to the head of the Agricultural Extension Service. This team will be in direct contact with INRAN in order to ensure a connection with research institutions. The expatriates working in the Extension Support Unit and at INRAN will assist in meeting this objective. This is why the management of the Extension Support Unit, with the material and financial means at its disposal, should fall within the responsibilities of the head of the Agricultural Extension Service.

Material Assistance: We noted that the field agents are generally well accustomed to the tasks involved in agricultural extension. However, in spite of their commitment and their dedication to their work, their efforts are negated by a lack of transportation. For example, in order to carry out the trials planned by the Extension Support Unit and the IFDC in 1987, almost all of the extension agents

visited farmers on foot. Since the objective of the trials was to interest 20 farmers in each of the selected districts, this would appear to be a difficult goal, given the work conditions.

As this particular problem determines the scope of the efforts made by the extension agents, the project should study, along with the regional offices, how to equip the agents with an adequate means of transportation.

#### **Links between Research and Extension**

At the present time, such links are limited to the seed multiplication centers and, more specifically, the supply of M0 seed to the Lossa Seed Farm. Otherwise, INRAN does not participate in designing the Extension Support Unit demonstrations and trials, nor does it utilize the results obtained from the demonstrations and trials. There is very little linkage between extension activities and agricultural research. It's almost as though everyone is working on his own. The agents also do not receive feedback, even when they carry out Extension Support Unit trials.

At this point, it is impossible to address the question of research results that should be incorporated in the agricultural extension program. Due to the failure of the Extension Support Unit trials in 1986 and 1987, it would be desirable for the regions to take them over, with the support of the Agricultural Production Support Project, and for the staff incentives to be eliminated. The farmers participating in the demonstrations could, however, be remunerated for their participation.

#### **Fertilizer Use and Extension**

The demonstration programs got off to a late start in 1987 with minimal doses. The drought and the sudden interruption of the rains caused plants to wither and reduced production to almost nothing. The results of the trials cannot be interpreted this year. The same is true of the trials focusing on cropping patterns and associated crops.

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**Recommendations:** As we emphasized above, the activities in this component should be continued by the regions with the support of the Agricultural Production Support Project. But we should point out that some farmers in the departments of Dosso, Maradi and Zinder have become accustomed to using phosphate fertilizers which they purchase directly in the Nigerian markets. For these individuals, the trials will perhaps have nothing new to contribute. The research/extension approach to agricultural systems, based particularly on associated crops (millet + cowpeas or millet + peanuts), would be of greater interest to them. The Agricultural Production Support Project should adopt the research and development system as the best approach to agricultural extension work.

**ANNEX E**  
**PERSONS INTERVIEWED**

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ANNEX E  
PERSONS INTERVIEWED

USAID

Ernest Gibson,	ADO
Roger Bloom,	ADO
Erna Kerst,	PDO
Kevin Mullaly,	ADO
Quincy Denbow,	ADO
Moussa Saley,	ADO
Mr. Ibrahim,	ADO
Modibo Sangare,	REDSO

Centrale D'Approvisionnement

Mr. Mohamadou Morou,	Niamey
Mr. Bagnou Amadou,	Niamey
Mr. Moussa Na Meito,	Niamey
Mr. Ali Diaop,	Niamey
Mr. Oussemane Obi,	Maradi
Mr. Saidou Bako,	Tahoua
Mr. Chaibou Labo,	Zinder

Cooperative Movement

Mr. Adé Abdoulaye,	UNC, Niamey
Mr. Ibrahim Abdou,	UNC, Niamey
Mr. Sani Ribiou,	URSC, Konni
Mr. Laouale Oussmani,	URC, Maradi
Mr. Saadou Garba,	URC, Maradi
Mr. Amadou Garba,	URC, Zinder
Mr. Bachirou Nouhou,	URC, Zinder
Mr. Aliou Darfou,	Roukouzoum
Mr. Bako,	URC, Niamey

Cooperatives

Chadakori,	Maradi Dept.
Droum,	Zinder Dept.
Roukouzoum,	Tahoua Dept.
Fandou Beri,	Niamey Dept.
Gouna,	Zinder Dept.
Guesselbodi,	Niamey Dept.
Tamroro,	Maradi Dept.

Agricultural Production Support Project

Kevin Creyts	Boukari Saly	Curtiss Reed	Louis Siegel
Zeinabou Ly	Ibrahim Magagi		
Gonzalo Romero	Graham Owen	M. Belo	
Sani Gonda	Salifou Mahamane	S. Oua	
John Mullenax	Fred Sowers	Ailou Abdou	
Papa Sene	Gremah Boucar		

Assistants

Souley Maikaka, Abouzeidi Soli, Bohari Manzo, Salou Djibo, Oumarou Issaka,	Chadakori and Tamrora Cooperatives Roukouzoum Cooperative Droum Cooperative Hamdallaye Cooperative Guesselbodi Cooperative
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Workshops

Cisse Abdoulaye, Yaou Danbarno, Abdoulaye Sany,	Tahoua Zinder Zinder
Simon Barmo, Yahaya Bako, Chaibou Bawa,	Private Workshop, Maradi Private Workshop, Maradi Private Workshop, Maradi

Traders

Four traders in Konni

Niamey Department Development Project

Ken Koehn  
Tom Shaw  
Mr. O'Neil  
I. Batouré  
Mr. A. Baoua

Commercial Banks

Mr. Leurez,	Niamey
Mr. Marchez,	Niamey
Issa Chetima,	Zinder
Kané Maiguizo,	Maradi
Mr. Kona,	Tahoua

**BDRN:**  
 Moussa Haitou, Niamey

**BCC:**  
 Suri Ramana, Niamey

**Dal Al Maal Al Islami:**  
 Hamida Hamida

**Ministry of Agriculture:**

Mamadou Amadou,	Secretary of State
Dodo Hannatou,	DPA
A. Malam Koki,	DPA
O. Sidibé,	DPA
I. Chipkaou,	DDA/Maradi
Henri Josserand,	DEPSA
Moussa Hamadou,	Manager-Extension, Dosso
Adamou Tiemogo,	Manager-Loga
Dialo Boubacar,	Manager-Falwal

Ministry of Plan

Mr. Boubacar

Research Station/Multiplication Centers

Jiha Neino/Tarna	
Thomas Francois,	Farsante Magagi/Kouroungoussao
Madou Adja,	Ibrahim Magagi/Doukou-Doukou
Ali Karou,	Issaka Assane/Guechemé
Sani Baaré/Lossa	
Maman Rabo/Magaria	
Ali Labo Moussa/Hamdailaye	

Rural Engineering

Sandra Atakara  
 Boubacar Ibrahim  
 Illa Djimrao/Zinder  
 Hamadi Adamou/Maradi

Others

Victor Labat,	Labat-Anderson
Felipe Tajeda,	Labat-Anderson
James Alritz,	CLUSA

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Pierrette Vuthi,  
Bakah Abdou,  
Mme. Abdoulaye,  
Polad Irani

Tufts University  
Riz du Niger  
SONARA  
NCP

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