

PD- AAM-817  
ISN=29737

6830240/17

NIAMEY DEPARTMENT DEVELOPMENT (NDD II)

FIRST INTERIM EVALUATION

12 February 1983

Dr. Richard Roberts, Development Administration Specialist, USAID/Rabat  
Dr. Theresa Ware, Social Scientist, SDPT/Bamako  
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## Preface

This evaluation draft report was, in large part, a team effort. Sections I through III are a group product. The individual sections have benefited from intensive group discussions, the sharing of ideas, questions, and suggestions. Throughout the entire process of researching and examining documents, interviewing in Niamey, Lossa, and the Ouallam arrondissement, and later, organizing and writing the draft, and finally, producing the final draft, the team worked together. Branching off came at the point when fulfilling our individual terms of reference in the face of pressing time constraints, made even more so by an amendment to the original scope of work, resulted in no time left to negotiate the merging of one document from three sets of working reports. There is overlap and repetition. Some ideas will appear to be overworked. Section IV contains the three reports on which the jointly agreed upon recommendations are based.

The evaluation began January 11, 1983, with the arrival of Richard Roberts, the Development Administration Specialist who was team leader. The Social Scientist, Theresa Ware arrived January 12. During the initial briefing session with Jim Lowenthal NDD Project Officer, we were informed that the individuals requested from the Ministry of Rural Development and/or Ministry of Plan to participate as evaluation team members had not yet been assigned to the team. Another team member, the Agricultural Economist, Douglas Barnett, from REDSO/WA, who worked on the issue of GON contribution to the Niamey Department Development Project the first week of January 1983, had left Niamey and was due back the end of January. A consultant Agricultural Credit Advisor who had been working for 5 weeks with the NDD Credits and Inputs Specialist in reconciling the credit fund account to its correct balance was finishing his assignment during the start-up of this evaluation. Discussions with him provided invaluable insight into the issues, problems and strengths of the credit and inputs system; the CNCA; the UNCC; and cooperatives. Participation in his debriefing with the USAID Mission Director provided an opportunity to hear the Mission's concerns and ideas about the NDD Credit System program. The arrival on January 18th of a consultant Credit Management Specialist to develop a new set of guidelines governing the management of credit at all levels of the project overlapped by several days with the departure of the Agricultural Credit Advisor. The final debriefing of this consultant with USAID/ADO, the Credit Management Specialist and USAID/NDD Project Officer provided useful information for us. We also attempted to meet with John McIntire who is conducting a farm management research study with ICRISAT, but he had left for an ICRISAT conference outside the country.

We were given complete access to documentation and full cooperation by the entire NDD staff. We were able to consult both the external and internal memoranda and reports, but were hampered by the fact that much of the quantifiable data in the project has not been synthesized. Much of this data is being synthesized for the 1982 Annual Report preparation which is in preparation, but our experience indicates that Annual Report preparation time is not the best time for an external evaluation.

## I. Executive Summary

The original purpose of this evaluation was 1) to review the accomplishments and achievements of the project so far, 2) determine the extent to which the project is attaining the planned outputs, and 3) recommend modifications which will allow the project to reach the intended beneficiaries.

This purpose was amended to include key program and policy recommendations associated with the successful implementation of the project. In this context the focus was on the importance of a) putting the credit program on a sound fiscal and management basis, b) determining as rapidly as possible the aspects of the technical package which can be modified and extended to, and used by the farmer, and c) defining the impact of the shortfall in contributions by the GON to the project.

This evaluation takes place at a time when the project has had the benefit of realizing a number of changes resulting from lessons learned under Phase I. The Technical Service Delivery System, for example, was reassessed to improve the organization and function of the CPTs and the technical services of project-related ministries. Four new CPTs became operational in 1982, bringing the total to seven (Three CPTs were operational under Phase I); Three additional CPTs are scheduled to open in April 1983. The staff situation at the CPTs will be strengthened this year with the placement of two PCV couples and two males in different centers, thus ensuring additional technical assistance in four centers. Recruitment is currently under way for Nigerien male and female follow-up agents to be placed in each center. Each CPT is operating at maximum capacity, graduating 20 couples per year. A total of 60 couples were graduated in 1981, 140 in 1982 and 200 will graduate in 1983.

The technical services on which the CPTs depend for training and extension are being strengthened through on-going training in joint planning and group dynamics. The Lossa I meeting in March 1982 was a big step toward tackling the problem of the management of the coordination of different technical sectors. The January planning workshop and the Lossa II workshop indicate a great deal of progress toward the commitment to joint planning and collaboration in the delivery of technical services to the CPTs.

The development of a system of village level organizations has advanced very little during the past year, but a strategy has evolved for implementation in 1983. The strategy revolves around an introductory village-level inquiry to obtain some very basic data and information on villages and cooperatives. The technical services will be directly involved in the gathering of this data and will be trained in the methodology under the direction of the training unit of the project. This unit is currently staffed by one person, the training Specialist, who acknowledges the need for short-term specialists to assist in the training for technical services personnel.

The credit system has been analyzed by two short-term consultants. The evaluation team concurs with their conclusions and supports their recommendations for action in the immediate future (by March 1983), and in the procedures and operations for the 1983 Agricultural season. The degree of success in implementing these recommendations in 1983, supported by effective training and follow-up should indicate by the end of the 1983 season whether the joint efforts of the CNCA, UNCC, and NDD can be expected to set up and operate the credit program on a sound fiscal and management course.

During Phase I there was no special training for women. Moreover, there was no active women's participation unit for the project. The presence of a women's participation advisor on the project since 1981 has resulted in a great deal of progress in the past year with every indication that more progress will be realized in 1983. This progress has also benefitted from the assignment of a Nigerienne counterpart from Animation (Ministry of Plan) to the unit. The unit is, however, still hampered by the lack of linkage to a broad-based organizational structure through which its legitimacy and credibility could be enhanced from the national level down to the local level. Training for women in the CPTs done by the technical services is expected to improve this year because of training for technical services personnel in technical as well as interpersonal skills. In addition, the recruitment of 12 female follow-up agents should significantly improve the support to training for women in the CPTs. Much remains to be done in increasing the participation of women in the project, but the process set in motion over the past 18 months indicates small but steady progress.

The Monitoring and Evaluation unit is not yet operational on the scale planned and needed. The most serious constraint to implementation is too little manpower (the unit consists of the M/E Specialist) to do all the planning, design and execution work needed to lay the foundation for a sound system in preparation for the start-up of the 1983 season and activities which should be going on during the season. The Poulin Report of October 1982 provides the basic guidelines for putting an M/E system in place. Implementing these recommendations, however, will require additional outside short-term assistance. Interviewers are shortly to be recruited to assist in conducting the Adoption Survey planned for April 1983.

The project is confronted with the control and coordination problems of all integrated rural development projects for which a structure parallel to established organizations (departments) is not created. NDD has made what observers we have consulted consider real progress toward what we could call the institutionalization of teamwork in development activities, teamwork based on discussion, negotiation and persuasion rather than a hierarchical chain of command. It will continue to be slow, but as it builds commitment in the field, it is likely to produce more solid results than the authoritative approach. It will be frustrating with continual incorporation of new team members required due to shifts of personnel, much less of a problem than in Phase I, but still a reality. However, it appears to fit well the direction the CON envisages for rural development organization (as per the

Zinder Conference) and it offers what Nigeriens and others point out is the only example of progress in solving the intra-organizational problems faced by all productivity projects in Niger, making many see it as a promising model for other projects. With some strengthening of staff and administration, the system should be operating effectively in Niamey Department and may well be in initial stages of introduction in other parts of the country by the end of the life of the project.

## II. Major Issues and Recommendations

### A. The Credit System

A credit fund was originally conceived (see Project Paper) to finance short-term (seasonal) credit for fertilizer, insecticides, pesticides and other seasonal inputs, and medium-term (4 years) credit for purchase of draft animals and farming machinery (e.g. plows, scarifiers, hoes). The fund was to be established by farmer reimbursement of credit given them to acquire such materials, which were to be paid for initially by AID and GON resources channeled through NDD.

As of 31 December, 1982, in its two phases, the NDD project has financed 247 credits (many involving several farmers) for 78.9 million francs CFA. This has all been medium term credit; there has been no short-term agricultural credit program nationwide since early 1980 (though this does not appear to have been taken into account in the Project Paper). Of the loan repayments due on these 247 credit contracts by the end of 1982, only 28 % were paid by the due date. No further credit will be made available under this project until AID is satisfied that it will be soundly managed, which includes ensuring repayment of loans.

The NDD and AID have recently had the benefit of studies of the accounting side, and of the credit management side of the problems reflected in the unacceptable loan repayment rate of the credit fund. In their reports to the Mission, and in the oral debriefings they made to both AID and GON (NDD and other) officials, these consultants (Stanley Straughter on the accounting, Thomas Stickley on credit management) defined the current status of the credit fund, identified weaknesses in the system, and recommended action to put the system in order and result in effective operation. Their reports are the key documents on the current status and needed changes of the system.

The evaluation team attended the debriefings of these consultants at the AID Mission, and has reviewed their draft reports. We concur in the conclusions and support their very practical recommendations for action in the immediate future (by March 31st, 1983), and in the procedures and operations of the 1983 agricultural season. We consider the ability of the agencies concerned (CNCA, UNCC and NDD) to implement these recommendations in 1983 to be a reasonable test of their ability to establish a sound credit system.

Putting the credit system issue in the broader context of the project as a whole, and of its objectives in terms of improved farming practices, we have the following observations:

a) without credit, the package of techniques now being recommended can be used only by farmers who have access to (and can afford) private credit, or who can pay cash for their equipment, animals and seasonal inputs;

b) some practices in the technical package require little or no monetary expenditure and can thus be used, and provide benefits, regardless of the existence or absence of a credit system, but there is not yet and will not be for at least two years (as discussed under "Technical Package") a confirmed package to recommend that is not dependent at least on medium-term credit, and possibly also (certainly for poorer farmers) on short-term credit.

In view of the foregoing, we recommend:

1) That NDD report on, and AID review, in mid-1983,

- a) progress in collecting loan repayments due as of 31 December 1982, and in implementing the other consultant recommendations for the period through 31 March, and
- b) levels of loan disbursements and the degree of conformity of the procedures and practices used to the recommendations of the consultants.

2) That AID auditors review the credit system operations of 1983, including collection on past loans, as early as is technically feasible in 1984.

3) That a consultant be engaged to complete as soon as possible in 1983 an analysis of the implications for the acceptance and spread of the new techniques, particularly use of chemical fertilizer, of the absence of seasonal (short-term) credit in the GON agricultural credit program in the context of the NDD project (i.e. in the project zone).

Should lack of credit be found to be a major deterrent to the use of certain inputs, particularly fertilizer, AID should insist that the credit fund provide credit for seasonal inputs, probably allowing for the possibility of repayment in either kind or cash at the end of the season for which the loan is taken out.

Should there be unsatisfactory findings on (1) and, particularly on (2), the Mission will have to decide whether it wants to continue supporting a project unlikely to benefit very many farmers very much, and even less likely to benefit the poorer farmers, for want of a viable credit system.

## B. The Technical Package

There are three general sources of indicators as to the appropriateness of the technical package: data on CPT graduates' post-training use of the package, data on sale of inputs and implements required for application of the package, and farm systems studies. Data on the CPT graduates are not totally reliable, but what they show is that many graduates do not use any of the techniques in the package (in 1982, 28 % of the 1979-81 graduated), and a fair number use several (of the 1979-1981 graduates using any at all in 1982, 57 % used 6 or more of the 11 practices recommended in the package). In Kolo, 75 % of the 1980 graduates used an average of 6.4 techniques in 1981, and the same trainees used still more (7.6 on the average) in 1982. Yield results are also mixed, and are, in part, linked as much to the regional pattern as they are to the package. There seems to be at least some measure of attractiveness in the package, but there are still many who use few or no techniques taught at the CPT. The data are inconclusive, and the factors influencing the use or non-use of the techniques taught at the CPTs include how the trainees are selected, how they are trained, what support is available to them after training, and the amount of voice they have in how the land they till is farmed, as well as the appropriateness of technical package.

Data on sales of inputs and equipment in 1982 are still being processed, but the consensus is that the sales of agricultural implements (e.g. plows, spreaders, but carts aside) are still very small, but are increasing. Fertilizer sales are much less than expected when the project was designed, although to some (unknown) extent this is highly likely to be related to fact that it can no longer be bought on Government financed credit. As with the information on CPT graduates, the data are inconclusive.

The third set of indicators is the data available from the study done by Dr. F. Stier for AID in 1982<sup>1</sup>, and from studies others have done elsewhere. In our view, however, the package has not been adequately tested under realistic production conditions on producer farms in the Mamey Department. The conclusion reached in this evaluation is that:

1) There is no conclusive evidence to indicate that the current agricultural technology package represents the best set of practices for each of the agro-ecological zones comprising the Mamey Department.

2) There is circumstantial evidence to suggest that it may not be the best package for certain zones, and that it appears to be profitable in those zones only in years of normal rainfall.

3) Until further farming systems research can be performed, the package may be considered marginally acceptable in those zones due to the income it makes possible from non-agronomic activities such as cartage and oxen resale.

The NDD should continue extending improved techniques, making it clear that animal traction is not a prerequisite to the use of the other techniques in the package, and that benefits can be obtained from the other techniques

<sup>1</sup>As per Dr. Stier's study

without animal traction. In addition,

a) Experiments already planned with animal traction other than two oxen, and without animal traction, should be undertaken on as many CPTs as possible in 1983.

b) More use should be made by the applied research advisor of information available from the experiences of CPT graduates using different mixes of techniques and identifiable through follow-up and (in the future) survey reports; and,

c) The Applied Research Unit, with the Monitoring/Evaluation Unit, should maintain closer relations with ICRISAT and with the Rural Economic Research Division of INRAN, particularly with regard to its work in the project zone, and with similar work in other parts of Niger (through, for example, MDR or the Ministry of Plan).

Most important, however, the project needs a package that will have the maximum receptivity because it is unequivocally beneficial under Niamey Department conditions, in farmers' fields, and in the eyes of the Nigerien agricultural research community. To have this soon enough to ensure significant production and farmer benefits from the project it is imperative that within the next few weeks: INRAN assign one (or more) agronomic engineer, preferably with a master's degree or equivalent qualification, to work fulltime with the Applied Research Unit, and to help it plan and implement on-farm research with the technical package and variants on it, particularly with and without alternative systems of animal traction, and that INRAN assume responsibility for applied research in the project zone within the next two years.

### C. GON Contribution and Recurrent Cost Issues

Given that GON's National Investment Fund has been reduced in size from 26 billion CFA to 7 billion and, given that Agricultural investment is only 9% of the Investment budget, it is very unlikely that GON will be able to sustain its original commitment to provide funding worth 1164 million CFA for the NDD Project. Technically, GON is already some 406 million CFA in arrears for project payments.

In light of these funding problems, the evaluation team recommends:

1) That GON contribution for operating expenses be reduced so that no additional funding is required. The 35 million and 50 million CFA deposits already made are sufficient for the reasons explained in 2 and 3 below.

2) That USAID pick up local costs, through the increased purchasing power, of the dollar, (assuming an exchange rate of FCFA 330:US \$ 1). This will require no additional financing beyond the current level of resources and budget projections will permit funding until December, 1986.

3) That the requirement for GON payments into the fertilizer subsidy subaccount of the credit fund be reduced proportionately to the reductions in the amount of the fertilizer subsidy. Action by the GON to eliminate completely fertilizer subsidies by December 1986 should be the basis for waiving 112 million CFA in overdue fertilizer payments as well as ongoing balances. GON failure to reduce fertilizer subsidies by 1984-85 should result in immediate payment of outstanding subsidy payment balances or a corresponding reduction in the level of services or in the LOP (Life of Project) of one or more years.

4) That the second interim evaluation scheduled for mid to late 1984 determine what options to recommend if the average exchange rate drops below 330 CFA/\$ and/or if GON has not made the required subsidy payments. The project will monitor the exchange rate through December, 1983 and will report on the impact that a decline (if occurring) in rates would have on project finances. Such options might include:

- a) A requirement that GON contribute to local costs in proportion to the decline in the exchange rate.
- b) That the project be reduced in scope by either:
  - i) closing some of the CPT's in the marginal agricultural production areas;
  - ii) closing down the activities of the PPN in an entire arrondissement; or
  - iii) that the project be terminated December 1985 for lack of funds or earlier because the GON failed to honor its commitment.

Recurrent cost estimates were determined for the operation of an individual CPT without vehicular support, or extension work. Total recurrent costs for the operation of a 10 CPT infrastructure was also determined, but excluded vehicle replacement, GON salary for certain project positions, and adjustment for inflation. These costs should be considered as rough approximations.

The estimated cost for running a single CPT is approximately 7.7 million CFA. The estimate is subject to the above qualifications.

### III. Project Recommendations

#### A. General

1. That the End of Project Status be redefined in terms of indicators that will demonstrate as much as possible "the institutionalization of a process" which is the purpose of the project, rather than static achievements which are more appropriate indicators of outputs.

2. That the GON and USAID clearly articulate what organizational units and functions will be in place when the project ends and the relationship between these units and functions, recognizing that this design does not constitute a prediction; the reality will depend on many unknowns, including reforms of the type discussed at the Zinder Conference (creating in each Department a

Secretary General for Development), and also including the desires and capabilities of the cooperatives at that point.

3. That close linkages be established and maintained with AID encouragement and support between the Agricultural Production Support Project implementation units and NDD project with a view to the former benefitting from the experience of the latter, and NDD benefitting from the outputs of APS.

B. System of Technical Service Delivery

4. That special attention in CPT training and extension be given the benefits available from the package of practices exclusive of animal traction, and the special role of fertilizer among the components of the package.

5. That NDD exercise quality control over the training it finances, ensuring the content, materials and methods proposed for use are appropriate to the training objectives, and that it evaluate such training in terms of changes in subsequent on-farm performance.

6. That NDD recognize that much of the training likely to be done under project auspices will be effective only if there is follow-up to help trainees over application problems, and therefore, plan accordingly.

7. That NDD assume responsibility for training not only in planning and organization, but also in technical and interpersonal skills needed by NDD and Technical Service personnel to implement project activities.

8. That NDD Niamey staff, arrondissement coordinators and technical service delegates spend sufficient time at the refresher training ("recyclage") for former CPT trainees to establish relationships on which to build the follow-up support system, and to learn from them of problems they have in applying the improved techniques, including input problems.

9. That NDD pursue the possibility of adding to its staff a terminating PCV with CPT and follow-up experience, and that he/she be recruited immediately for one to two years to provide full-time field support to follow-up agents (and local organization development teams, eventually).

10. That the Peace Corps input be brought up to target (one man and one woman in each of the ten CPTs) as soon as possible.

11. That NDD augment its capacity by increasing its use of outside individuals and/or organizations to provide on a contract basis, short-term training and/or technical assistance to the Project and the Technical Service, e.g. in technical areas, in communications/extensions and interpersonal relations, and in planning/execution skills in thus far neglected areas such as animal husbandry and erosion control if the NDD determines that such assistance could result in their productive participation in Project activities.

C. System of Self-Managed Village Organizations

12. That NDD commission a 1983 follow-up study to the 1976 Charlick study to be designed around the issue of the appropriateness of the GM structure

as a viable base for village level cooperative development.

13. That the findings of the 1983 village level inquiries to be implemented using the methodological approach set forth in the "Appui aux Organisations" document become the basis for designing the follow-up study to the Charlick study.

14. That the implementation of the village level organization development strategy to be put under way be planned in detail before steps are taken to talk with cooperative leaders, and that this planning involve the Monitoring /Evaluation Unit as well as other NDD staff and Technical Services personnel.

15. That the qualifications and experience of personnel to be involved in village level organization development be carefully assessed against the skill requirements implicit in the plan for strategy implementation, and that appropriate training be provided them before they begin field work.

16. That a team of two or three experienced people be recruited to direct this village level organization development "mini-project" under NDD guidance on a full-time basis during at least part of 1983 and intermittently in 1984 (depending on the outcome of the planning process, which should include at least one such person).

17. That the Training Unit obtain the documentation on the World Bank financed village level organization development activities in Bouza, Tera, and the third location to determine the relevance for training workshops based on this documentation.

18. That baseline surveys of target villages be made, and that annual follow-up surveys be designed and subsequently carried out to monitor the impact of village level organization development.

19. That the experience implementing the village level organization development strategy in 1983 and 1984 be used to design a sample survey for 1985 to define in the zone such factors as the desired and priority needs perceived by the villagers, village attitudes to "organized" activity, and impediments to the development of village organizations.

20. That NDD, AID and the GON remain sufficiently flexible in their plan implementation to be responsive to ideas and requests of village level organizations.

21. That NDD ensure that training needs are systematically assessed and that necessary and appropriate training is provided (e.g. in such areas as cooperative management, inventory and warehouse management, bookkeeping), with NDD exercising quality control over the training it finances, ensuring content, materials and methods proposed for use are appropriate to the training objectives, and evaluating the training in terms of changes in subsequent on-the-job performance of trainees.

22. That efforts to recruit a blacksmith trainer, and to initiate that training be intensified and brought to fruition.

23. That the VLO target (output indicator in the logical framework) be recognized by AID and the GON as having been decreased from 50-60 to 12-24.

24. That an assessment of institutional capability of village level organizations, cooperatives, CPTs, Ministry technical services and the impact of GON economic policy on farmers be undertaken by a short-term Institutional Development consultant in 1984.

D. System of Credit Delivery

25. That the recommendations of the consultants on cooperative accounting and on credit management be adopted and implemented immediately, such that the improved procedures be employed throughout the 1983 season.

26. That the need for training to accompany credit system changes be assessed immediately, and plans be made to meet it, using short-term consultant/trainer inputs if necessary to accomplish it in time to ensure maximum program effectiveness in 1983.

27. That a consultant be engaged to complete as soon as possible in 1983 an analysis of the implications for the acceptance and spread of the new techniques, particularly use of chemical fertilizer, of the absence of seasonal (short-term) credit in the GON agricultural credit program in the context of the NDD project (i.e. in the project zone).

28. That NDD report on, and AID review in mid-1983,

- a) progress in collecting loan repayments due as of 31 December 1982, and in implementing the other consultant recommendations for the period through 31 March, and
- b) levels of loan disbursements and the conformance of the procedures and practices used to the recommendations of the consultants.

29. That AID auditors review the credit system operations of 1982 including collection on past loans, as early as is technically feasible in 1984.

E. System of Agricultural Inputs Delivery

30. That AID ensure that the APS project agricultural inputs consultant due in Niger in the very near future to assess the agricultural inputs sector, among other things, include the NDD region in his study, with a view to identifying any persistent weaknesses and ways to eliminate them.

F. System to Increase Women's Access to Development Activities

31. That NDD draw up a plan of action for formalizing a collaboration with the AFN, through Promotion Feminine, and initiate introductory meetings for the purpose of explaining objectives of the women's component of the project.

32. That the Women's Participation Unit work with the Training Unit in making suggestions for training workshops for technical service field personnel

in how to communicate skills and techniques in a non-directive manner.

33. That all short-term resource needs, especially in personnel, be determined to assist in the accomplishment of tasks for 1983.

34. That male as well as female technical support agents and personnel receive training in effective communications with an all-female audience.

35. That technical services teams visiting villages to explain the project activities at the centers and the importance of selecting responsible candidates make every effort to ensure the presence and participation of women in these meetings.

36. That the "open-door" program be extended to include and accommodate women visitors from the villages of the trainees as well as neighboring villages.

#### G. System of Monitoring/Evaluation

37. Use the October 1982 consultant's report on the monitoring and evaluation system as the guideline for development of the system.

38. That Monitoring/Evaluating information needs be spelled out, and a survey agenda for the Unit over the balance of the Project life be prepared in the coming six months on the basis of the monitor/evaluation consulting report of October, 1982.

39. That NDD implement its plan to use short-term consulting assistance to help the Monitoring/ Evaluation Unit complete the planning, design, and other tasks necessary to put the system on a sound footing before the start of the 1983 agricultural season.

40. That the existing data base on the CPT graduates farming in 1982 be "cleaned up" so that it can be used as base line data for future comparisons."

41. That NDD obtain data on UNCC sales in the zone of non-NDD fertilizer and other inputs for 1981 and 1982 to permit computation of changes in the zone: the data problem will not exist in the future, as only NDD inputs will be distributed.

42. That NDD implement it's plan to acquire a microcomputer, peripherals and appropriate soft-ware for the data processing needs of the Monitoring/ Evaluation Unit (including the applied research component). This should include appropriate spares, and preferably a back-up system.

43. That INRAN assign one (or more) agronomic engineer, preferably with a master's degree or its equivalent, to work fulltime with the Applied Research Unit and to help it plan and implement on-farm research with the technical package and variants on it, particularly with or without alternative animal traction options and that INRAN assume responsibility for applied research in the project zone within the next two years.

44. That a farm systems research study be designed and carried out in the project zone to determine 1) current agricultural practices, 2) farm size and household size, 3) available agricultural labor in the household, 4) crops planted, and 5) farmer attitudes concerning agricultural practices and the adoption of new techniques.

45. That the CPTs carry out experiments in alternative sets of cultivation techniques; without ox-drawn equipment as one possibility and the use of crop inputs package (seed, fertilizer, planting density, and insecticides) without any animal traction, as another possibility.

46. That experiments with forms of animal traction other than two oxen, and without animal traction, be undertaken on as many CPTs as possible in 1983.

47. That more use be made by the applied research advisor of information available from the experiences of CPT graduates using different mixes of techniques and identifiable through follow-up and (in the future) survey reports.

48. That the Applied Research Unit, together with the Monitor/Evaluation Unit, maintain close relations with ICRISAT and with the Rural Economic Research Division of INRAN, particularly with regard to its work in the project zone, and with similar work in other parts of Niger (though, for example, MDR or the Ministry of Plan).

#### H. System of Coordinating and Management System

49. That every effort be made to assign Nigerien counterparts to the expatriate advisors as soon as possible (immediately in the case of applied research), and that in any case; Nigeriens qualified to take over the project units destined to be retained after technical assistance termination should be assigned to the units a full agricultural season before the departure of the expatriates.

50. That the team-building, consensus development approach to ensuring coordination be continued and fully supported by AID and the GON.

51. That the units of the NDD that have not already done so, prepare workplans for 1983, and regularly submit quarterly detailed plans and reports relating activities to plans, as prescribed for the advisory personnel.

52. That the 1983 (and subsequent) workplan of each unit include and explain what and when short-term assistance (e.g: consultants, trainers) is needed during the year, and that each quarterly report/workplan indicate the same for six months immediately ahead, and likely requirements during the three months after that.

53. That clear guidelines, forms and procedures be established for the identification, recruitment and supervision of short-term consultants/ trainers to minimize the administrative burden of increasing the use of such personnel, and to facilitate timely recruitment.

54. That NDD maintain constant communications with the M/E Unit of the Ministry of Rural Development concerning the assignment of at least one agronomic engineer, preferably, with a "maitrise," to work full-time with the NDD Applied Research Unit. This person should be assigned before the 1983 agricultural season.

55. That GON participation and input be a requirement for drawing up the terms of reference for this assessment study.

IV. Individual Evaluation Reports

A. Richard Roberts, Development Administration Specialist

## 1. Purpose

To institutionalize a process of rural development through the establishment of self-managed village organizations capable of assisting farm families with the achievement of increased food production on a self-sustaining basis.

The evaluators found the available description of "End of Project status" (EOPS) of limited utility. The Logical Framework defines EOPS in terms production of the outputs plus "enthusiasm and acceptance demonstrated by the rural production" - which is very similar to the wording of one of the Assumption for Achieving Purpose. In the pages of the Project Paper concerning Purpose (p. 14) where EOPS is normally defined, some of the characteristics just mentioned are quantified:

By the end of the five year life of this project it is anticipated that some 740 farmer couples will have been trained at the CPTs and some 1,160 farmers in nearly 300 villages will have been reached by the extension training components in the project...some 4,000 additional farmers...will have adopted the improved practices as a result of the multiplier effect produced by the above mentioned "trained" farmers... approximately 8,000 villagers... will directly benefit from literacy, cooperative, blacksmith, on-farm fattening and other programs.

These statements are much more appropriate as measures of outputs (for which they are in fact used in the logical framework) than as indicators of the attainment of the purpose of the project. In practice, the above could be accomplished without achieving the purpose.

In both the text (p. 14) and the logical framework (footnote to the verifiable indicators of outputs), the Project Paper suggests that in any evaluation the specific target figures are less important than "the degree of institutional development achieved" (logical framework note) and the extent to which the Project has "established a self-sustaining development process" (p. 14). This is a valid point, but neither the logical framework nor the Project Paper narrative provide indicators against which to measure progress toward this self-sustaining development process, or achievement of it. For internal project management purposes (and guidance to NDD's Monitor/Evaluation Unit survey efforts), and for reference in future AID evaluations of the project, new indicators are needed to identify (in logical framework language) "the End of Project Status".

The Mission will have to develop the new EOPS indicators, but the following are suggested as a starting point:

- \* project outputs have been generated as planned,
- \* the number of self-managed; economically sound village level organizations is growing annually and at an increasing rate,
- \* the range of economic and social activities of village level organizations is growing annually,

- \* yields and production of food crops are rising annually (taking weather factors into account),
- \* technical services are meeting increasing village level organization demands regularly and promptly,
- \* food imports into the zone are decreasing (or exports from it are increasing),
- \* general stores are established and growing in rising numbers of villages at increasing rates,
- \* demand for local language reading materials and for advanced literacy instruction is growing in the project zone,
- \* rising land values in villages of major project activity,
- \* decreasing rates of emigration from villages of major project activity.

To complete this, the Project should prepare a narrative description of the organizational relationships they are striving to place among the management unit, the CPTs, the cooperatives, and the technical services in the years following the termination of AID inputs. The actual outcome will depend on many unknowns, including governmental reforms of the type discussed at the Flinder Conference (e.g. Departmental Secretaries General for Development), and including the desires and capabilities of the cooperatives at that point, but it would help management and future evaluators to have a clear picture of that for which they are aiming.

Given the problems stated above with regard to the description of the EOPS in the logical framework and implicitly in the Project Paper text, what progress is there toward that which is described above? As we shall discuss below one of the major quantitative targets for output indicators (i.e. elements of outputs, such as functioning self-managed cooperatives) should be reduced, which will result in systems being less widely, and perhaps less well ensconced by the end of the project than was anticipated in project design. However, with approaches being taken and changes being implemented and/or being recommended in the present evaluation, the project should produce a meaningful output base, and doing so should establish an effective process that will result in an EOPS as described above. The ability of the three services concerned will be augmented by the Mission's APS project as it takes up where this one leaves off in the areas of extension and cooperative development training, and strengthening the input delivery system for the country as a whole.

### Prognosis

Although to a substantial extent their results will not be evident before the 1983 agricultural season, the changes that have been made thus far in Phase II, and are being made for the coming season, should produce a meaningful output base and establish an effective process that will result in the post-project

extension of that base. The APS project can greatly contribute to this if close collaboration can be established among the project organizations.

### Recommendations

NO. 1 - That the End of Project Status be redefined in terms of indicators will demonstrate as much as possible "the institutionalization of a process" which is the purpose of the project, rather than static achievements which are more appropriate indicators of outputs.

NO. 2 - That the Project prepare a narrative description of the organizational relationships they are striving to have in place the management unit, the CPTs, the cooperatives, the technical services and Departmental Administration in the years following the termination of AID inputs, recognizing that it is a target not a prediction; the reality will depend on many unknowns, including reforms of the type discussed at the Zinder Conference (creating in each Department a Secretary General for Development), and also including the desires and capabilities of the cooperatives at that point.

NO. 3 - That close linkages be established and maintained with AID encouragement and support between the Agricultural Production Support Project implementation units and NDD project with a view to the former benefitting from the experience of the latter, and NDD benefitting from the outputs of APS.

## 2. Inputs

### Retrospective

AID inputs are essentially on schedule. The long-term technical assistance positions were not all filled as quickly as posited in the Project Paper, but this seems to more a case of designer over-optimism than dilatory recruiting. Project development in the area of monitoring and evaluation was set back by the decision to change advisors, which left a period of several months with no advisor, and a need to start building a foundation in late 1982 which should have been in place by late 1981 (if not before the end of Phase I). One long term position, that of master mechanic, remains to be filled. Recruitment, which is to be in West Africa, has been delayed pending the move of NDD to its new quarters, where there will be a garage (which it now lacks).

There has been very little use of short-term technical assistance, certainly far less than planned in the Project Paper, and in our view, less than there should have been.

AID training inputs are a little behind schedule in the case of participant training, as noted in the introduction to the Outputs chapter. Two participants

training, left three months behind schedule, and the other two have not been definitively named, and are thus at least a half year behind schedule.

Commodity inputs are on schedule. Fertilizer sales are moving less rapidly than anticipated, resulting in a build-up of stocks. Orders for next year are being cut back as a result.

The GON has not provided all of the personnel anticipated. It is difficult to be very precise in terms of numbers because the Project Paper is not very precise. It is clear that the GON was expected to provide two middle level cadres for each CPT, in addition to the director and literacy instructor, and these two cadres/CPT have not been provided. There is no sign that they will be, and in the current straits of the GON, it is very unlikely. To some extent this has been covered by NDD recruitment of follow-up agents (just completed), but they are, of course, in effect financed by the US contribution to local costs.

The GON has also not provided counterparts to the long-term advisors. Indeed, four of the five have no Nigerian colleagues working with them full-time at all; the exception is the Women's Unit, where there is a qualified counterpart to the US advisor.

The major issue on the subject of Inputs is the general GON contribution to the budget and the material subsidies. These are far below expectations, and commitment. This subject is covered in some detail in Dr. Barnett's paper.

### Prospective

The recommendation we have made, and the realities of the project, are almost certain to require more long-term technical assistance than was originally programmed. It is too early to say just which positions should be retained how long, but it has hard to see any being closed out before the end of 1984. From this distance in time, in my view, three to four long-term advisors are likely to be needed for one year more than planned (the plan calls for three years each); it is too early to say which three to four. The budget review just completed at the NDD indicates that at least three can be managed within the current budget total. In addition, we have recommended that the NDD go ahead as it is now considering doing, to hire a terminating Peace Corps volunteer who has been working on one of its CPTs and doing follow-up work for the past two years; he would be used to follow-up the new follow-up agents just recruited for the project. This would be for one year, with a possible extension. The budget review indicates that funds are available.

On numerous occasions we have pointed to a need for more short-term technical assistance to increase the capacity of the Project in specific areas, for specific tasks. We have made no attempt to work out the manpower implications; that would require far more planning of the individual actions than we are in a position to undertake. However, we do note (and mentioned above) that very little of the budget for short-term personnel has been used. There should be ample resources for work in the foreseeable future.

We see no particular need for changes in planned commodity inputs, other than the addition of a microcomputer capability, which we understand has already approved by both AID and the GON.

The nettle represented by local costs and the serious economic problems of Niger is reviewed in Dr. Barnett's paper. One of the key points that has come out of the review of the budget just completed at the NDD is that the US budget for local costs has a much higher CFA value than at the time the budget was prepared (using an exchange of 200/dollar), permitting AID to pay more local costs without spending more dollars.

In short, we see no changes required that would result in AID having to consider increasing the total value of the grant.

### 3. Outputs

#### Overview

The project is on schedule in terms of most items on the implementation plan in the project paper (see Table I). The main exceptions are the applied research, which began in earnest a year later than planned, and so is that much behind the implicit schedule, and the participant training, with the last two of four participants who should have left for the US last July is still not named. It is an schedule for the rest of the implementation plan items (except for the GON financial contributions, a major item dealt with above under "Issues" and in Dr. Barnett's report in Annex). On the other hand, not all important items are on the implementation plan, and in the case of one-initiation of work with village level organizations, the project is making serious beginnings at least a year late..

The status of the output indicators identified in the logical framework is shown in Table II. Comments on individual items in the table are in the following sections on the specific outputs. The Project's review of some of the output indicators and recasting of one (village level organizations) as presented to the 1983 Iossa seminar in Annex to this report.

Note that the logical framework defines as systems "established and functioning". With the partial exception of (e) and (f) in the table; these indicators say nothing about whether the systems are functioning. The consultant on monitoring and evaluation in October, 1982, suggested some. We recommend that at least three should be used for monitoring and evaluation by the project and AID.

TABLE 5

Project Paper Implementation Plan

<u>Date</u>	<u>Action</u>	<u>Status</u> (date completed)
January 1981	Project authorized	May 1981
March 1981	Project agreement signed	June 1981
March 1981	Annual Report due	March 1981
January-March 1981	Preparation and submission of PIO/T's and PIO/C's	July 1981
April 1981	IFB preparation for CPT and PMU construction	July-August 1981
April 1981	First group of 5 PCV's at CPT's	April 1981 (4 PCV's)
April 1981	Orientation seminar for new personnel	March 1981
April 1981	Orientation for agricultural extension personnel	March 1981
January-July 1981	Recruitment of U.S. technicians	March-September 1981
April-June 1981	Design of applied research and pesticide use program (with participation of consultant)	April 1981-November 1981
June 1981	GON deposits subsidy and financial contribution to project account no later than this date	35 million deposited May 1981
June 1981	Agricultural season begins	June 1981
July 1981	All additional staff for existing CPT's in place	June 1981 but less staff than anticipated
July 1981	Arrondissement coordinators and office personnel in place	June 1981
July 1981	Arrival of new Project Liaison officer (project manager)	July 1981

<u>Date</u>	<u>Action</u>	<u>Status</u> (date completed)
September 1981	Selection of CPT & PMU construction firms	November 1981
October 1981	Harvest begins	October 1981
October 1981	Construction of 4 CPT's and PMU begins	February 1982
November 1981	GON deposits additional funds as required	50 million deposited August 1982 plus 27 mil subsidies; 206.4 mil still due
December 1981	Begin selection of long term participants	January 1982
March 1982	Annual Report due	November 1982
March 1982	Training/orientation of extension personnel	March 1982 (follow-up agents)
April 1982	Construction complete on 4 new CPT's	May 1982
June 1982	Agriculture season begins	May 1982
July 1982	Long term participants depart for U.S.	2 in Oct/Nov 1982; 2 being selected
July-August 1982	Pesticide evaluation	under way
October 1982	Construction of 3 CPT's	February 1982
October 1982	Harvest begins	October 1982
November 1982	GON deposits additional funds as required	No action (200 Mil due for 1983)
Nov/Dec 1982	First interim evaluation	Jan/Feb 1983
March 1983	Annual Report due	in preparation
April 1983	Construction complete on 3 CPT's	December 1982 (except for trainee huts and wells)

Magnitude of Outputs

<u>Anticipated: Logical Framework</u>	<u>Actual: January 1983</u>
a. 740 farmer couples receive long term training	a. 200; 1,000 likely by PACD
b. 1,160 farmers receive short-term training	b. 275 in 3 groups, 2-8 day sessions
c. 4,000 additional farmers adopt improved agricultural practices	c. some reported, but no data to quantify or show trends
d. 10 farmer couples training centers completed and fully operational	d. 7, with last 3 completed except wells & trainee huts, in progress
e. 3,350 tons of fertilizer distributed	e. 834 tons distributed, 486 tons sold
f. Estimated 9,000 additional tons of millet & 2,000 addit, tons of nieve being produced.	f. data unavailable
g. Revolving credit/input fund established and working	g. established but poorly working; modifications recommended by consultants January 1983
h. 300 village cooperatives established and operating	h. app. 500 village cooperative units established but operations very, very limited
i. 12 new coop warehouses built	i. 12 warehouses built
j. 2,800 coop leaders trained	j. approx. 150 for 5 days by UNCC using some NDD resources, but without content or quality control by NDD
k. 58 selected coop managers receive special training	k. no special training yet
l. 600 coop member women receiving credit and technical advice	l. no data; no reports of progress
m. 65 literacy training centers established and 2,700 adults trained (2,100 men, 600 women)	m. 15 opened 1/83; 7 ready to open awaiting materials; 30 trainees/center.

Anticipated: Logical Framework

Actual: January 1983

- |   |   |
|---|---|
| n. 30 grinding mills installed  | n. none; await site ident./study  |
| o. 30 new blacksmiths trained and equipped  | o. no new ones; seek qualified trainer (2 wks retraining of 16 PH. I trainees)                |
| p. 6 mobile vaccination corrals put into service                                      | p. 3 delivered, not yet in service; target cut to 3 due price                                 |
| q. 2,000 farmers participate in one of the animal husbandry programs                  | q. no action  |
| r. 300 villages participate in soil conservation and/or tree planting program         | r. no action  |
| s. 100 school gardens initiated   | s. no action  |
| t. 1 warehouse/office/house complex built for GON services                            | t. completed  |
| u. 24 GON departmental and arrondissement level personnel receive short-term training | u. 51 in 2 Iossa 6-day seminars; 3 for two-month training program at University of Pittsburgh |
| v. 4 GON personnel receive long term US training                                      | v. 2 in US from 11/82; more scheduled early 1983  |
| w. 60 CFT personnel trained   | w. 31 trained to date, more scheduled early 1983  |
| x. 1 project management unit established  | x. established, but understaffed  |
| y. Preliminary Phase III plan produced at and Yr 4                                    | y. no action  |

N.B. While the above magnitude of outputs have been specifically identified, any evaluation of this project should also focus on qualitative elements that indicate the degree of institutional development achieved.

There has been some, as discussed in the text. Indicators for institutional development should be identified for future evaluation.

#### 4. System of Technical Service Delivery

As experience has been gained and project personnel get down to the task of converting often vague Project Paper propositions to reality, it has become increasingly clear that although the Project Paper does not say so in so many words, this output has two parts: the CPTs and the technical services. This has been true from the start, but it became even more so when the MDR and UNCC did not provide the complement of fulltime personnel expected (2 per CPT) in 1981.

##### The CPTs

Four new CPTs were operational in 1982 in addition to the 3 opened during Phase I. The other three to be established under Phase II are nearly completed and will be in service for the 1983 season.

The CPTs have less staff than expected (as noted above), and as a result are more dependent on the involvement of technical service personnel than they would otherwise be. The positive side of this situation is that the CPTs are obliged to make every effort to work closely with the technical services and cannot stand aloof on their own. The negative side is that they cannot oblige the technical services to do their part, and some are not very diligent vis-a-vis the CPTs. However, the team-building process initiated with the Lossa seminar in 1982 and reinforced with the Lossa workshop and then the Lossa seminar in January, 1983, appears to be making progress in obtaining the involvement of the technical service personnel. Poor performance in 1982 was admitted at Lossa by those involved and they committed themselves to doing a better job both at the Centers and in follow-up during 1983. NDD will have to follow-up closely, making sure the matter is brought up in monthly reviews as soon as absences begin to occur. (In one case, we were told that they came to the CPT fairly regularly early in the season, but then attendance began dropping off and never recovered). A mini-Lossa at arrondissement level may be useful in mid-season if team cohesion seems to be diminishing.

The staff situation at the CPTs will be strengthened this year with male PCVs at four of the ten CPTs and female PCVs at three of the ten (there were 3 PCV women and 1 man in 1982), and with at least one female and one male Nigerien follow-up agent at each CPT. However, the participation of the technical service delegates will be no less important.

Each CPT is operating at capacity, turning out 20 couples each year. They graduated 60 couples in 1981 and 140 in 1982, and they expect to train 200 in 1983. By project termination at the end of 1986 there should be 800 graduates from Phase II to add to the 90 of Phase I.

The following tables give an indication of the extent to which CPT graduates were using in 1982 the techniques they had been taught. It should be noted that there are internal inconsistencies in project data on this subject that make these figures somewhat suspect, particularly for Filingue - which shows lower

utilization rates than the others and may be unjustifiably pulling down the average. While the accuracy of the data is open to some question, the consensus is that the orders of magnitude reflect reality. This raises questions as to the effectiveness and the appropriateness of the training.

Percent of CPT Graduates Using 0, 1-2, 3-12, 6-12 Techniques  
in 1982

Year at CPT	Number Trainees	Number 0	of 1-2	Techniques 3-12	Used 6-12
1979	30	50 %	23 %	27 %	23 %
1980	60	25 %	10 %	65 %	47 %
1981	60	20 %	18 %	62 %	43 %
1979-1981	150	28 %	16 %	56 %	41 %

The graduates of 1979 and 1980 were trained during Phase I of the project; while Phase II began after the start of the 1981 training and had little opportunity to effect it. Thus, these data say much more about Phase I than about Phase II. The key question now is: What has been done to ensure that Phase II trainees make more use of the CPT training ?

The answers we have found are that, firstly, applied research is under way to try to identify ways the package of techniques can be improved, and thus made more attractive to the farmers; this is discussed below in the context of monitoring and evaluation. And secondly, there have been several changes in the areas of trainee selection, the CPT programs and follow-up after training at the CPT; these are discussed in the following paragraphs. The changes that have been, and are being introduced are sensible. We would expect to see notable improvement in the 1983 data, which will be the first to reflect any of these changes (as the 1982 graduates begin to apply what they learned).

Selection

In Mlamey Department, as in other productivity projects, it was clear in early years that trainees selected for CPTs were not always promising candidates. Criteria were modified by NDD in 1982, considerably downplaying the idea of a monetary allowance (the amount of which had been reduced already in 1981) and stressing the relationship of the trainee and training to the cooperatives and the village (see Annex 1). The criteria were written out in 1982 (for the first

time) and teams of arrondissements technical service officials visited villages to explain the program, including the importance to the local village and cooperative leaders of selecting promising candidates likely to make good farmers (able to repay the loan the cooperative will have to guarantee; and able to show others new techniques).

To this pre-season activity was added the "Open Door" action. Each trainee's village chief, cooperative president and relatives were invited (and transported) to the CPTs for a day and a night during which the trainees explained and demonstrated what they were learning. (One CPT director did the entire Open Door activity in one day, including round-trip transportation; this unsatisfactory experience was a result of leaving substantial detail to center directors. On the other hand, doing this resulted in some imaginative practices elsewhere (see below) that might not have occurred to central planners). The evaluation team heard enthusiastic support for the "Open Door" whenever the subject came up. It seems to have made a very strong impression on villagers, CPT directors, arrondissement technical service staff, Peace Corps volunteers and even people who heard about it only second hand. The consensus is that the villages and cooperatives now identify much more with the trainees and have more interest in what they have learned. The test will be 1983.

### Programs

NDD is giving continuing attention to the CPT program, but in keeping with its policy of involving field personnel in decisions they will have to implement, NDD is not dictating program in any detail. Great care is needed to delegate without abdicating; the former involves retaining some responsibility for content and quality, and the right to guide if needed, while the latter involves leaving it all to others - it can happen through neglect, as well as by conscious decision.

To some extent this may be happening in the case of the inputs of the technical services at the CPTs. This said, it is encouraging to see that NDD considers its programs and the management of its CPTs to be subject to improvement, learns from experience, and involves staff in the process. CPT staff met before the opening of the Centers in 1982 to plan programs, make changes and generally set out the plan for the year. They will be doing so again for a week in February this year, at which time they will also review general center management and instruct the three directors of new centers and one replacement director. The experience of their present directors will be a key input to the sessions, given the participative style encouraged by the technical assistance team and practiced by NDD management to the benefit of all concerned. This annual review/learning session and the methods proposed for it (and used, for example, at Iossa) are to be commended (we have heard considerable praise for the methodology from Nigeriens inside NDD and outside who have seen it in action).

In this context, renewed effort with the CPT directors is needed to ensure that trainees really understand that considerable benefit can be derived from those parts of the technical package other than animal traction in the absence

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of the latter. The role of fertilizer in the package (a major one) also does not appear to be getting across, considering the relatively small proportion of trainees using parts of the package and including fertilizer (27 % using phosphate, 21 % urea in 1982).

### Follow-up

The NDD has also recognized a major weakness it shares with other productivity projects, the need for continued attention to trainees after they leave the CPT. This is by no means simply a question of gathering data with which to evaluate projects. More important, its absence deprives the trainees of assistance they need to overcome difficulties they are bound to encounter if and when they try to apply by themselves at home what they have learned surrounded by fellow trainees and supervision at the CPT. Follow-up is essential to successful training. It should be considered an integral part of the training during the first year (at least) after completion of the formal program at the CPT. It is not synonymous with monitoring. It is a matter of finishing the training job begun on the CPT. This is recognized by the NDD management and technicians (who have pointed it out in their reports), by the Department and Arrondissement technicians (who discussed it at length at Iossa), and by the long-term advisory personnel.

The fact that the 1981 agricultural season was already underway when Phase II began, and GON's failure to provide technicians for each CPT (expected, but not explicitly mentioned in the ProAg), are cited to explain there being no field personnel to do follow-up in 1981. NDD hired its own follow-up agents ("agents de suivis") for the 1982 season, gave them a week of training and access to a Land Rover and put one in each of the 7 CPTs to follow-up the 60, 1981 CPT graduates and the 90 from Phase I. They seem to have interpreted their jobs essentially as being to check up on the trainees, and to report whether or not they were using the techniques taught at the CPT and what yields they obtained. There is nothing to indicate they provided assistance to the trainees, or had the inclination or ability to do so. They had little assistance from the arrondissement delegates (though it does vary from place to place), and there is no indication at all that the Agriculture Service extension personnel gave any special attention to CPT graduates.

As noted above, the problem is recognized, and judging from reports from other productivity projects (see Zinder Conference documents), it is a problem everywhere. In 1983, NDD recruited additional (and replacement) follow-up agents in February 1983, eight men and twelve women. The terms of reference used (see Annex 2) defined the job as one of extension, not "control" or data gathering. Training for the following agents is planned for one week with all the CPT staff in February, and a later special session of a month for only the follow-up agents. In addition, follow-up was a principal theme at the Iossa workshops in January. The technical services personnel at Department and Arrondissement levels have acknowledged that they, too, have an interest in the CPT graduates and have reason to follow them up also. They made a commitment at Iossa to do so.

This is promising particularly the stress NDD is putting on the extension role of the follow-up agent (he is an "agent d'appui") over the inspector role. However, this means they must have appropriate communications skills and it means they must be technically capable of providing assistance. The former are not likely to be found in the recruit, developing the appropriate skills will require training, probably mid-season refresher training, and careful follow-up of the follow-up agents. (We understand that the NDD is considering recruitment of a terminating PCV who has two years experience on a CPT and doing follow-up; he would concentrate on follow-up of the follow-up agents and of those working on development of village level organizations. This, we strongly endorse.

Continuing reminders to the coordinators of the role expected of the technical services in follow-up will be important to stimulate their involvement. However, NDD can foster technical services participation in follow-up by integrating its training of its follow-up agents, e.g. by using the arrondissement coordinators as instructors, and including the more promising extension agents of the Agricultural Service as participants (trainees) along with the follow-up agents. This would be another form of team building.

Another action to meet the trainees' need for help after they leave the CPTs the organization of refresher training ("recyclage"). This was done for 1979 and 1980 trainees just before the 1982 season opened. This was held for 8 days at CPTs and attended by an estimated 60 of the 90 men (there was no retraining for the women in the classes of 1979 and 1980). Two or three cases have been cited of attendees who had not used in 1981 the techniques they learned at the CPT, but who did so in 1982 after the refresher training. Unfortunately the data are not readily available (they exist, however) to identify those who attended the refresher and farmed differently in 1982 in comparison with 1981. (In Kolo arrondissement, which appears to have the most reliable data, the class of 1980 recouped one-its one lost - not using techniques in 1981 - member in 1982, but lost 3 others; the other 16 used more of the techniques in 1982 than in 1981 - the median number went from 5.5 to 8.0, while the arithmetic mean went from 6.4 to 7.6).

Similar retraining is planned pre-season 1983 for the Class of 1981. Participation in such retraining should be recorded in the trainee's record, and advantage should be taken of the opportunity of having numerous former trainees together to learn from them of problems they have encountered in applying techniques, including problems obtaining inputs. With this in mind, NDD Niamey staff and arrondissement coordinators, as well as technical service delegates should all spend time with the trainees at these refresher sessions, along with CPT staff. It is rare opportunity to learn, but also to establish relationships and (particularly important in 1983) to start a more supportive follow-up system.

### Extension

The CPT is to become a center for extension through both its own graduates and their follow-up, and short-course training for villagers. Output indicators are 1,160 farmers trained in short-courses and 6,000 adopting improved practices learned from practitioners who learned on the CPT.

The first short-courses were run in 1982. Twenty farmers attended eight days of training in the use of animal traction units (which they already owned) organized by one of the CPTs in Ouallam, 155 are reported to have attended two days of training organized for the same purpose in Filingue, and 100 attended training organized by the CPT in Day. The purpose of such training is to bring about a change in what the farmer does in this field. NDD does not know whether it was a success in those terms. Such information should return to the project via field personnel of the arrondissement (in theory) and via its own follow-up agents, and it should be sought via the survey work to be undertaken by the Monitor/Evaluation Unit. However, even in the absence of such feedback, the Training Unit should be assuming some "quality control" responsibility for training sponsored by the project. At present, it does not always do so (even when the CPTs are doing the training).

More planning and more feedback are needed. How to best fit it into present activities? What to include? (e.g. in areas in which cooperative credit is frozen due to excessive unpaid accounts, techniques not requiring animal traction may be most sensible). Do it for one lengthy period, or for several short ones tied to the season? Do several short ones in several places, or give each of a few locales a series? Who does the training? This is a sub-project of its own and it is not a job that can be totally delegated to the CPT directors to organize as they wish. This is another case in which the experiences of 1982 should be reviewed at the CPT directors seminar in February, and guide-lines established. Moreover, a data gathering system to assess results will be needed from the Monitor/Evaluation Unit.

Extension via CPT graduates is going on to a limited but undefined extent. Reports from follow-up agents in 1982 indicate that of the 108 CPT graduates farming that year, 60 (55 %) were doing some spreading of the techniques. These reports are based on statements by the ex-trainees. They are not elaborated upon, and their meaning is unclear. The figure almost certainly exaggerates reality (some so reported were using very few techniques themselves, and there is reason to doubt the accuracy of some of the follow-up reports). At the same time, field trip reports by NDD central staff do include narrative accounts of extension work by several ex-trainees. While there does appear to be some spread effect, it is probably very limited so far, but data are not available to qualify it. We would expect steps to improve recruitment and follow-up should result in increased spread effect. Extensive training (the short-courses) can do even more, with the CPT graduates available to promote it and to provide local follow-up to it. Any improvement in the technical package will help.

#### Women in the CPTs

During Phase I there was no special training for women. They participated in some of the training provided to their husbands, but they appear to have been considered by those on the ground more as accompanying spouses than as trainees themselves, and they were treated accordingly. During the first year of Phase II, a program for the women trainees was prepared for introduction in 1982. The program, which was used in 1982, involved the following:

- 1) sewing,
- 2) construction of an improved cookstove,
- 3) health and nutrition,
- 4) literacy courses, treating concerns of women,
- 5) new techniques in millet and sorghum cultivation, and vegetable gardening,
- 6) health and child care methods.

The situation of the female trainees at the CPT and in their villages is treated at greater length by Dr. Ware in her report.

### Literacy Training

Literacy training is the responsibility of the Literacy Service through an agent who is full-time at each CPT, and also serves as assistant to the director. Mixed reports are received as to trainee interest and training effectiveness. At one center there was a near boycott in 1982, but by year-end three there had done well enough that the Literacy Service selected them for supplemental training (1 week in January) to become literacy center instructors in their own villages. A new Departmental Head of the Literacy Service is working closely with NDD, and this aspect of the training is to get increased attention in 1983. We have no basis on which to evaluate the effectiveness.

### Village Organizations

The CPTs are to eventually function as technical support units to the village cooperatives. (Project Paper, P. 15). It is not very clear to the evaluators just what this will mean in practical terms. In the absence of fulltime CPT personnel concerned with cooperatives, the CPT-Cooperative link is at present only the trainees. One possibility that could be considered would be offering at a CPT off-season, training in cooperative management and in literacy related to it. Of particular utility in some areas would be training in the kinds of recordkeeping now done for many cooperatives by UNCC agents. NDD would have to accept responsibility for quality control of the training (ex ante and ex post), and might find that it must organize some training of trainers. This should be closely tied to activities under the heading of local organization development.

There is some thought at the NDD to the effect that the CPTs should eventually come under the tutelage, or even the full control of the cooperatives (an idea also discussed at the Zinder Conference). (See Annex 3). This prospect should be kept open, but whether and when it occurs will depend - or certainly should - on the wishes, and on the economic and managerial evolution of the cooperatives.

### The Technical Services

The consultant on monitoring and evaluation looking at the project in October, 1982, identified "the strengthening of extension services provided by the GON at

the village level" as a component of the project. At the second Lossa conference, in January, 1983, NDD and the assembled departmental and arrondissement officials agreed that "the reinforcement of GON support and extension services" is a major theme (these are equated with project outputs in logical framework terminology). It is a selective strengthening to a great extent, aimed at enabling them to do things the NDD agree should be done, and those it thinks will be necessary to ensure continuation of the process the project is to initiate, but it will help them follow their own agendas as well.

One step in the process has been the planning seminar in Lossa in March, 1982, the past appraisal/future replanning workshop in January, 1983, and the detail planning seminar later that month. All of these involved in very active roles the personnel of the technical services at the department and (except the workshop) arrondissement levels. All involved learning to work in teams, to analyze rural development problems and plans beyond one's own special field, to identify past weaknesses and plan corrective measures. The NDD used these - successfully in the view of the wide variety of people with whom we have discussed it - to convince the technical service people that they are part of the project, and to begin teaching them to plan, and to access performance against plans.

The more technically oriented seminar at Mandallaye in late 1982 concerning the system of accounting for credit and input distribution is an example of the type of strengthening of which more is needed. NDD cannot attain its objectives in terms of village level organizations without working through the technical services. Yet their education and training does not equip them to draw out the villagers needs, to listen, to encourage... to do what must be done if the project and the services are to become responsive to expressed, as opposed to inferred village needs and wants. Training for technical services personnel in this and quite probably other areas at least at the arrondissement level (including encadreurs as well as delegates) should be provided by the project. It will require oversight by the Training Unit, but will probably have to be contracted out to at least some extent.

NDD has provided material support as foreseen to the services in the form of vehicles, fuel and buildings. It is on target with these. However, it has done far less in terms of promoting and financing useful development activities through the technical services. There have been none of the animal husbandry, soil conservation/tree planting, school garden activities anticipated. The one area of progress toward targets is literacy, where 15 centers were opened in January, 1983, by the Literacy Service with NDD support (and 7 more will open, we are told, as soon as NDD gets the necessary teaching materials to them). Project explanation of lack of activity in these areas is that the services concerned have proposed no projects, or poorly prepared projects, or activities for which regular budget is said to exist. We have not been able to get a clear picture of this situation in the time available, but it looks very much as if key areas are being neglected. If part of its technical services delivery system is weak in project identification and/or preparation, NDD should help it improve; short-term technical assistance is one way this might be done if there is a readiness to make good use of it.

### Prognosis

CPTs and technical services are the key elements of the System of Technical Service Delivery. The effect of most changes made in Phase II will begin to be evident only in the 1983 agricultural season. We expect them to be positive. More adjustments will certainly be needed, but if current efforts to identify and eliminate weaknesses continue, the CPTs should be viable training and extension units before project termination. The applied research should give them an improved package to extend, and better monitoring and evaluation will provide data to assess impact. Less has been done to strengthen the technical services. Positive relations with most seem to have been developed, this is a start (that is said to have eluded productivity project managers elsewhere in Niger). However, more retaining and follow-up in the field are needed to make them more productive parts of the system of technical service delivery. Outside personnel will have to be called upon to increase NDD's capacity to provide such training, but as it comes on stream, the extension training component of the CPS project should reduce this burden on NDD at least in that area.

### Recommendations

- NO. 4 - That special attention in CPT training and extension be given the benefits available from the package of practices exclusive of animal traction, and the special role of fertilizer among the components of the package.
- NO. 5 - That NDD exercise quality control over the training it finances, ensuring the content, materials and methods proposed for use are appropriate to the training objectives, and that it evaluate such training in terms of changes in subsequent on-the-performance.
- NO. 6 - Recognize that much of the training likely to be done under project auspices will be effective only if there is follow-up to help trainees over application problems, and plan accordingly.
- NO. 7 - That NDD assume responsibility for training not only in planning and organization, but also in technical and interpersonal skills needed by NDD and Technical Service personnel to implement project activities.
- NO. 8 - That NDD Niamey staff, arrondissement coordinators and technical service delegates spend sufficient time at the refresher training ("recyclage") for former CPT trainees to establish relationships on which to build the follow-up support system, and to learn from them of problems they have in applying the improved techniques, including input problems.
- NO. 9 - That NDD pursue the possibility of adding to its staff a terminating PCV with CPT and follow-up experience, and that he/she be recruited immediately for one to two years to provide full-time field support to follow-up agents (and local organization development teams; eventually).

NO. 10 - That the Peace Corps input be brought up to target (one man and one woman in each of the ten CITs) as soon as possible.

NO. 11 - That NDD augment its capacity by increasing its use of outside individuals and/or organizations to provide on a contract basis, short-term training and/or technical assistance to the Project and the Technical Services, e.g. in technical areas, in communications/extensions and interpersonal relations, and in planning/execution skills in thus far neglected areas such as animal husbandry and erosion control if the NDD determines that such assistance could result in their productive participation in Project activities.

### 5. Village Level Organizations

UNCC, with some material aid (fuel and use of vehicles) from NDD has now "organized" just over 100 cooperatives whose units cover all the villages in the project zone. This is well beyond the target of 50-60 cooperatives covering 30 villages expressed in the Logical Framework. However, the output refers to cooperatives established and functioning. This means being something more than being a conduit for UNCA credit and UNCC inputs. And it means being independent of UNCC agents for recordkeeping and other clerical work, which most cooperatives apparently are not, in spite of Literacy Service Training focused on cooperative organization and management. While the cooperatives may have been "created"; there is a consensus that they are far from dynamic, and far from being viable or self-managed. The evaluation team has heard of only one cooperative in the zone (in Itchiguine) that observers agree may be approaching a point at which it can become wholly self-managed, self-sufficient and a vital promoter of development in its villages.

Other indicators for this system include training for cooperative leaders and for selected cooperative managers, credit and technical advice provided to women, installation of grinding mills, the training and equipping of blacksmiths, and the construction of cooperative warehouses. The warehouses have been built, but apart from one brief cooperative training course run by UNCC with NDD financing but without NDD quality control, there had been no action toward the targets for these activities. The training has been left to UNCC, the blacksmith program is held up for want of a qualified trainer we are told, and the grinding mills require more advance preparation than was done in Phase I (as is discussed elsewhere in this report).

The motor force for the establishment of cooperatives in villages is credit diffusion of materials, especially carts. For all practical purposes, the absence of credit means the absence of cooperatives, thus the viability of cooperatives is a function of the presence of a credit program. In 1982, there were 99 cooperatives in the project zone and 104 for 1983. The establishment of these cooperatives is not because of farmer initiative; they came into existence rather, because of government planning priorities.

The extension of credit sets in motion a chain of interactions between cooperative members and the UNCC because the latter is responsible for seeing that forms are filled out and payments collected. This means visits to the cooperative must be made, providing the opportunity for dialogue between cooperative and UNCC representatives.

Field visit discussions indicate that cooperative members view the UNCC as the conduit between them and access to credit and attendant administrative tasks. Since the credit is something brought to them and available only as a member rather than as an individual (individuals borrow, but always in the name of the cooperative). What seemed to be clear was the absence of any actions at this point to assume decision-making and management control. (This does not represent a lack of astuteness; we were told of cooperative leaders who think they could get lower prices on inputs if they could do the buying on the open market, instead of having to go through the UNCC.

Interviews during the field visit to Ouallam revealed a very low level of understanding of the concept, purpose, and function of a cooperative by villagers. The Union Nigerienne de Credit et de Cooperation (UNCC) is responsible for promoting a variety of cooperative training programs in the project zone. It conducts training programs at different times during the year which are designed specifically for elected cooperative officials. These training programs are conducted by UNCC agents (department and arrondissement delegates and field agents, often with assistance from Animation Rurale and occasionally from National Literacy). Materials are developed by UNCC's National Training office with financial assistance from Danish AID and the International Labor Office.

The increase in the number of cooperatives in the project zone has substantially increased the training load of UNCC staff. A week of training (newly elected GM and cooperative officials are trained at cooperative seat villages for four to seven days) plus one to two days of a refresher session (to reinforce acquired knowledge of cooperative principles) each year is insufficient for a through introduction and explanation of cooperative principles. The limited capacity of UNCC to effectively train and follow-up its training in all cooperatives within the same time frame is recognized by the project as an impossible task. The Project has financed such training in one case, but considers it relatively ineffective (and, as noted earlier, did not exercise any quality control over the UNCC training it financed).

Project activities at the CPT centers are providing the cooperatives an opportunity to influence the use of resources in attempts to increase production. They are, for example, to assume responsibility for the selection of CPT trainees; they are invited to participate in the open-house activities at the centers; and the materials for CPT trainees is to be delivered to them through the cooperatives, allowing the cooperative leaders to know exactly what the trainee has received. This involvement with the training and equipment investment in the CPT trainee passes on to the cooperative the responsibility for ensuring accountability from the trainee to the cooperative members.

There were instances the early years in which the materials were delivered

directly to the homes of CPT trainees, in effect, bypassing the cooperative. Cooperative leaders had no idea what the member had really received, but were obliged to sign for the credit extended to that trainee. This type situation has resulted in behavior by the trainee which indicated he perceived the credit relationship to be between him and the UNCC rather than between him and the cooperative. As cooperatives become more and more involved in the dynamics of recruitment and selection of trainees for the CPTs and participate in the open-house activities, they should be able to make more effective use of CPT graduates.

We have found no indication of any role being played thus far by returned CPT trainees in cooperatives. Among the factors that influence the situation are the viability of the receiving cooperative and the quality of cooperative training presented in the CPT. Cooperative related training in the CPTs has been based on indirect involvement by UNCC taking the form of cooperative training content in CPT literacy classes rather than training programs staffed by UNCC personnel. Cooperative training materials-teaching have been supplied to CPT literacy instructors who use them in conjunction with other teaching aids available from the National Literacy Service.

The direct project contribution to this training has been the financing of two brochures prepared through close collaboration between literacy and UNCC personnel and made available in literacy centers and CPTs. There is little project data on the quality of cooperative training and orientation provided by literacy instructors in the CPTs, but limited interviews with returned CPT trainees concerning their understanding of cooperatives and their perceived role as a member seem to indicate a substantial need for improvements in cooperative training currently provided by CPTs which will require more than brochures and pamphlets.

Thus, the project has done little to date to develop cooperatives. In this, a key part of the project has been neglected. These are the "village level organizations" mentioned in the Project purpose. The Project Paper does not set a schedule in this area, but NDD is certainly behind schedule in the sense of not being far enough along to ensure reaching its goal. The reasons for this are numerous. The "cooperative system" inherited from Phase I was very weak. The CPTs had high GON priority, high visibility and required immediate attention because they already existed; with new ones coming on stream. What is to be done and how are very vaguely covered in the Project Paper, giving little guidance to implementors (or evaluators). Other reasons include the fact that no specialist was planned for it, and although the technical assistance person qualified in the area (in the person of the training specialist) arrived in October, 1981, and immediately has the CPTs as a concern. The project organization includes no unit responsible for this activity. Cooperative specialists expected to become full-time staff members of the CPTs did not materialize. Finally, the UNCC in the zone focused on forming cooperatives, not developing them (which is admittedly more difficult). All of these and doubtless others contributed to the neglect and subsequent delay in this area.

Project Management recognizes that it is behind schedule, and that this output is one that is key to project success. Village level organizations and the

Project objectives with regard to them were the main theme at the Iossa planning seminar of 1983, and the participating departmental and arrondissement technical service officials agreed to give it major attention in 1983.

NDD has evolved the beginnings of a strategy to assist local organizations to reach self-management. They have realistically cut back their target from some 50-60 cooperatives (i.e. village level cooperative units) to 12 to 24, and have clarified what they want to accomplish in these cooperatives and villages. (see pp. 3-4 or Annex 3, Obj 85, which was prepared for the 1983 Iossa Seminar).

We support the strategy as it has been outlined to us and is described in Annexes 3 and 4. However, we feel strongly that before it moves any further toward implementation considerable additional preparation is essential if the job is to be done well (and if not, best not begin). Each step of the process should be through before village discussions begin (e.g. the relative roles of the Cooperative and of the village units of which they are composed, and of the individual members of the latter), and the campaign carefully planned from training to identification of village priorities to response to perceived needs and wishes. The Monitoring/Evaluation Unit should be involved because of the key information gathering component of the early step and the importance of meaningful, consistent recording of what is done and learned. (It will also have to plan base line surveys of villages selected for attention). The first year (1983) will be experimental, requiring careful documentation and on-line assessment to permit adjustments for 1984. Annual surveys will probably have to be planned for comparison with the baseline survey to chart impact, and other surveys will doubtless be needed (e.g. the 1983 and 1984 experience should provide enough insight into the process and its problems and factors determining the way it evolves to permit design of a sample survey over the project zone to define such factors as the desires and priority needs perceived by villagers, villager attitudes to "organized" activities\*, and impediments to the development of village organizational capabilities.

To implement its strategy, NDD will (must) rely heavily on the arrondissement team of technical service heads. At the service delivery stage, they will have to rely on other technical service personnel. None of these people have had training or experience that would give them the attitudes and skills needed to promote and assist village level organizations to become responsive to member needs, self-reliant, and self-managed. (see Annex 4 "Appui aux organisations"). These people will have to be "encadrés" by qualified fulltime personnel reporting to someone who will be, in effect, the manager of a "mini-project". That will be pretty much a fulltime job. NDD does not have the staff to do this on its own. They have now acknowledged this. There will have to be more use of short-term personnel, local and/or expatriate if the project is to meet even its reduced targets. Unfortunately, this was not recognized six months ago, when a qualified organization (e.g. a PVO) could have been identified to field a competent team in time to work under project guidance on launching the effort in 1983.

\* Charlick reports in "The Mamay Regional Productivity Project - An Analysis of the Social Soundness of the Design," USAID, November, 1976, that there is a poor history of collective organization in the zone.

At least two qualified people, willing to spend substantial time in the field, are needed as soon as possible, and either a senior person to manage the effort, or liberation on virtually a fulltime basis of the training advisor (which will leave a gap in his unit, where he is alone). Action here is urgent.

The NDD should be aware that somewhat similar work, aimed at identifying villagers perceived needs (but not necessarily at development organization) has been recently undertaken and carefully documented (we are told) in a "micro project" financed by the World Bank at Bouza, Tera and one other location in Niger. Detailed reports are said to be in preparation. NDD should learn more about this, obtain the reports when available and arrange to share experience with those involved.

Finally, we draw attention to the need for the project, the GON and AID to recognize a certain need for flexibility if there is to really be a serious effort to learn from villagers what they want, and to respond to what they want even if it does not coincide with what the planners thought they wanted, or need, and put in the design. The design includes a variety of possibilities (mills, blacksmiths, animal fattening, school gardens), but some cooperatives may have other ideas. The project should be responsive.

### Prognosis

Phase II efforts to develop a system of Village level Organizations began only with the emphasis on the subject at the January, 1983, Bossa planning workshop (and the subsequent seminar). The target number of organizations has been reduced significantly (from 50-60 to 12-24). This is sensible. A strategy has been evolved; discussed with the technical services and is to have initial implementation in 1983. The strategy should produce the results sought unless it is implemented hastily, without adequate preparation and staffing. Qualified outside specialists are needed to supplement the NDD staff and to supplement, train and supervise (loosely) Technical Services personnel involved in implementation. Building capable Nigerien field staff and management in the process will be particularly essential because although the methodology may be developed and proved in the 12-24 target cooperatives in the zone, the 80-90 others will still need help evolving after project termination.

### Recommendations

NO. 12 - That the implementation of the village level organization development strategy to be put under way in 1983 be planned in detail before the first steps are taken to talk with cooperative leaders, and that this planning involve the Monitoring/Evaluation Unit as well as other NDD staff and Technical Services personnel.

NO. 13 - That the qualifications and experience of personnel to be involved in village level organization development be carefully assessed against the skill requirements implicit in the plan for strategy implementation, and that

appropriate training be provided them before they begin field work.

No. 14 - That a team of two to three experienced people be recruited to direct this village level organization development "mini-project" under NDD guidance on a full-time basis during at least part of 1983 and intermittently in 1984 (depending on the outcome of the planning process, which should include at least one such person).

No. 15 - That information exchange and continuing collaboration be arranged with those involved in the World Bank micro-project concerned with developing ways to identify village priorities and ensure local participation in development.

No. 16 - That baseline surveys of target villages be made, and that annual follow-up surveys be designed and subsequently carried out to monitor the impact of village level organization development.

No. 17 - That the experience implementing the village level organization development strategy in 1983 and 1984 be used to design a sample survey for 1985 to define in the zone such factors as the desires and priority needs perceived by the villagers, village attitudes to "organized" activity, and impediments to the development of village organizations.

No. 18 - That NDD, AID and the GON remain sufficiently flexible in their plan implementation to be responsive to ideas and requests of village level organizations.

No. 19 - That NDD ensure that training needs are systematically assessed and that necessary and appropriate training is provided (e.g. in such areas as cooperative management, inventory and warehouse management, bookkeeping), with NDD exercising quality control over the training it finances, ensuring the content, materials and methods proposed for use are appropriate to the training objectives, and evaluating the training in terms of changes in subsequent on-the-job performance of trainees.

No. 20 - That efforts to recruit a blacksmith trainer, and to initiate that training be intensified and brought to fruition.

No. 21 - That the VLO target (output indicator in the logical framework) be recognized by AID and the GON as having been decreased from 50-60 to 12-24.

## 6. SYSTEM OF CREDIT ESTABLISHED AND FUNCTIONING

The indicator is defined as a "revolving credit/inputs a fund established and functioning." The fund is established. It is operated by the Caisse National pour le Credit Agricole (CNCA) with agents of the National Union of Cooperatives (UNCC) doing much of the field work. (The system is described in Dr. Stickley's report annexed to the present report.)

The credit fund was originally conceived (see Project Paper) to finance short-term (seasonal) credit for inputs such as fertilizer, insecticides, and pesticides, and medium-term (4 years) credit for purchase of draft animals and farming machinery (e.g. plows, fertilizer spreaders). The fund was to be established by farmer reimbursement of credit given them to acquire such materials, which were to be paid for initially by AID and GON resources channeled through NDD.

As of 31 December, 1982, in its two phases, the NDD project has financed 247 loans (many involving several farmers) for 78.8 million francs CFA. This has been medium term credit; the short-term agricultural credit program was cancelled nationwide by the GON as of 1980 (a fact which does not appear to have been taken into account in the Project Paper). Of the loan repayments due on these 247 contracts by the end of 1982, only 28 % were paid by the due date. In the words of Stanley Straughter, an accounting consultant who recently reviewed the credit program accounts,

The severity of the delinquency problem puts the entire credit program at risk. At the current payment rate, loan funds will not be repaid and interest income will not cover the administrative cost of the program. There fore, (sic) raising the question of the future viability of the program without subsidized funds. (see Annex 7, p. 9).

Because of this situation, the credit program is now frozen, except for anticipated credit for CPT trainees in 1983, and they must all be members of cooperatives not having more than 10 % of their accounts in arrears. AID auditors who reviewed the project between July and October 1982 have set conditions which must be met before the fund can be unfrozen.

Dr. Straughter was in Niger in December-January to review and reconcile the accounts of the credit program. Shortly before he finished, Dr. Thomas Stickley arrived to assess the credit program and advise as to how it could be put on a sound footing. In their reports to AID, and in the oral debriefings they made, both to AID and to GON officials (of NDD, CNCA and UNCC), they defined the current status of the credit fund, identified weaknesses in the system, and recommended action to put the system in order and meet the conditions set by the AID auditors. Their reports are key documents on the current status and needed changes of the system.

The details of the managerial, operational and procedural weaknesses of the system are found in their reports in the attached annexes and are not repeated here. A key overall conclusion in Dr. Stickley's report is that "high delinquency rates are more the result of shortcomings in the performance of the lending institutions themselves than from the borrowers". The practical nature of their recommendations to correct shortcomings is reflected in Dr. Stickley's conclusions:

A draft protocol agreement between NDD and CNCA was drafted on July 17, 1981 (Annex Z 1 ) and is now being revised. I would suggest that the

following points be incorporated into the revision:

- Reconciliation of points raised in Straughter report (See "References consulted", Annex C) be accomplished by March 31, 1983.
- Role of NDD advisor be redefined (See "NDD Credit Advisor recommendations" in Section III.A.2 of this report) and that a more active counterpart relation be developed by moving the NDD Credit Advisor to an office near his counterpart, the Chief of the Miami Department Agency of the CNCA.
- Priority should be given to collecting loans now overdue (See "Loan Repayment Recommendations" in Section III.A.4 of this report) by March 31, 1983.
- The system of monthly reports proposed (See "Accounting/Reporting System Recommendations" in Section III.A.5) in this report should be adopted immediately.
- Loan contracts should be written at the arrondissement level (See "Loan Disbursement Recommendations" in Section III.A.3 of this report) and effective March 31, 1983.
- Systematic programs should be developed to meet the three key deadlines of the credit program:
  - May 1 Loan Disbursement
  - Dec. 31 Loan Repayment
  - Sept. 30 Statistical Reporting.
- Premiums should be divided among cooperatives, encadreurs and delegates as follows:
  - Loans due Dec. 31, 1979: 15 % of amount collected
  - Loans due Dec. 31, 1980: 10 % of amount collected
  - Loans due Dec. 31, 1981: 5 % of amount collected and that this cost be paid from NDD project funds if possible.

It is my belief that the recommendations of the "Audit Report" (See "References Consulted" Annex C) will all be satisfied from:

1. Actions NDD has already taken
2. The recommendations of the Straughter report, and
3. The recommendations of my own report, here.

The evaluation team attended the debriefings of these consultants at the AID Mission, and has reviewed their draft reports. We concur in the conclusions and support their very practical recommendations for action in the immediate future (by March 1983), and in the procedures and operations of the 1983 agricultural season. We consider the ability of the agencies concerned (CNCA, UNCC and NDD) to implement these recommendations in 1983 to be a reasonable test of their ability to establish a sound credit system.

Another aspect of the credit also deserves close scrutiny. As noted earlier, since this project as designed the GON has eliminated "credit de campagne", short-term credit for seasonal inputs (fertilizer, fungicide, pesticide, seed). These inputs are now available only on a cash basis, and their use (particularly in the case of fertilizers) has dropped significantly. At best this change

discriminates against the poorer farmers, those who have the greatest difficulty buying with cash at the beginning of the season. At worst, it bodes ill for the extension of the technical package on whose acceptance production improvement is predicated; in 1982, of the CFT graduates using any of the techniques they had learned on the CFT, only 29 % were using phosphate and 21 % urea (according to field agent reports). The evaluation team has not had time to look closely into this, but it is clear from discussions within the Project and from the Project Paper (Annex 0 in particular) that the availability of "credit de campagne" was an assumption when the project was designed; and it appears to us to have been an important assumption.

### Prognosis

Putting the credit system issue in the broader context of the project as a whole, and of its objectives in terms of improved farming practices, we have the following observations:

- a) without credit, the package of techniques now being recommended can be used only by farmers who have access to (and can afford) private credit, or who can pay cash for their equipment, animals and seasonal inputs;
- b) some practices in the technical package require little or no monetary expenditure and can thus be used, and provide benefits, regardless of the existence or absence of a credit system, but there is not yet and will not be for at least two years (as discussed under "Technical Package") a confirmed package to recommend that is not dependent at least on medium-term credit, and possibly also (certainly for poorer farmers) on short-term credit.

We accept the view of consultants Straughter and Stickley to the effect that their recommendations are feasible and will enable the institutions involved to meet the conditions laid down by the AID auditors, and to do so during 1983. It can be done. Indeed, action is already under way. However, should it not be done, or should seasonal credit be found to be of major importance to the project and not be made available by the GON, the likelihood of meeting project objectives, or obtaining significant results from it, will be so greatly diminished as to put the project in jeopardy.

### Recommendations

NO. 22 - That the recommendations of the consultants on cooperative accounting and on credit management be adopted and implemented immediately, such that the improved procedures be employed throughout the 1983 season.

NO. 23 - That the need for training to accompany credit system changes be assessed immediately, and plans be made to meet it, using short-term consultant/trainer inputs if necessary to accomplish it in time to ensure maximum program effectiveness in 1983.

NO. 24 - That a consultant be engaged to complete as soon as possible in 1983 an analysis of the implications for the acceptance and spread of the new techniques, particularly use of chemical fertilizer, of the absence of seasonal (short-term) credit in the GON agricultural credit program in the context of the NDD project (i.e. in the project zone).

NO. 25 - That NDD report on, and AID review in mid-1983,  
a) progress in collecting loan repayments due as of 31 December, 1982, and in implementing the other consultant recommendations for the period through 31 March, and  
b) levels of loan disbursements and the conformance of the procedures and practices used to the recommendations of the consultants.

NO. 26 - That AID auditors review the credit system operations of 1983 including collection on past loans, as early as is technically feasible in 1984.

## 7. System of Agricultural Inputs Delivery

The only logical framework indicator relevant to this output is the anticipated delivery over project life of 3,350 tons of fertilizer. Thus far, 834 tons have been distributed, but only 486 have been purchased by farmers. In addition, however, a wide range of agricultural equipment has been distributed, as have draft animals. Current data are being assembled during the period the evaluation team is in Niger. They are not yet aggregated, but the process is under way and the results will be produced in the 1982 Annual Report. It is evident from the partial data available thus far that the flow of implements and fertilizer to the field has improved over Phase I and the start of Phase II. Supply on hand in the cooperatives now exceeds demand, except for ox carts and donkey carts. Fertilizer stock at the cooperative level exceeds last year's sales (and much more than that in the case of urea). Orders are being cut back because of this.

No major problems have been identified in this area that have not already been dealt with, e.g. the mixing of UNCC and NDD supplies in cooperative warehouses. In that case, all present supplies are to be taken over by the NDD, which is to be the sole supplier for the project zone from now on. Problems cited by AID auditors in the July-October, 1982, review either have been, or are being corrected according to information available to us. Much was done at the meeting of NDD, the national credit organisation (CNCA), the cooperative union (UNCC) and the UNCC's supply center (the "Central d'Approvisionnement") at Hamdallaye in December, 1982. This included agreement on an inventory control system and other procedures. Some training in the application of new forms and procedures has been given, but it has yet to reach the lower levels in the field.

### Prognosis

It is early to say how well the recent changes will take hold. They are still

being implemented, or are in the design stage for implementation as the season approaches. Current progress is encouraging. However, the NDD is still playing a major role as the carrier that moves the inputs to the cooperatives from Central d'Approvisionnement, a role that really should fall to the UNCC of its Central d'Approvisionnement. AID should keep a close eye, and a helping hand on the agricultural inputs supply system in the project zone via the APS project.

#### Recommendation

M. 27 - That AID ensure that the APS project agricultural inputs consultant due in Niger in the very near future to assess the agricultural inputs sector, among other things, include the NDD region in his study, with a view to identifying any persistent weaknesses and ways to eliminate them.

#### 6. System to Monitor and Evaluate Project Activities

This system has two elements, one is data gathering, synthesis and analysis. This is done by the Monitor/Evaluation Unit. The other is applied research on the technical package being recommended for the use of farmers in the region, the work of the Applied Research Unit. No indicators are defined for either in the logical framework for the project.

Both elements should have been part of Phase I with relatively high priority. In fact, they began systematically and in earnest only a year ago in the case of the applied research, and even more recently in the case of the monitor/evaluation unit (though it was created earlier and did do some useful, if limited work). Both are much less far advanced than is merited by their importance for the project. The reasons are many, including design and implementation of Phase I, and there is no great benefit to be obtained from trying to disentangle them now. The key lesson to be learned is that a system to collect and analyze at least basic project activity/results indicators should be soundly established at the start of a project, and if the technical package available to a rural development project has not been tested at the farm level, analyzed and if necessary tailored for local conditions, before the project is begun, on-farm applied research and farming systems studies should be a priority part of the project from the start.

#### The Monitor/Evaluation Unit

This Unit is currently staffed by one experienced expatriate, who arrived on post at the end of October, 1982. He has part-time assistance for an agricultural technician on the NDD staff.

Thus far in Phase II data has been collected from varied sources on CPT crop yields and trainees, credits, and inputs, among other things. A notable absence, which should be remedied, is data on non-project UNCC fertilizer sales in the zone. Unfortunately, much of the data is not internally consistent, very

little has been synthesized (although some of this is currently being done for the 1981 Annual Report), and there is no analysis of changes over time. (The evaluation team tried to compare 1981 and 1982 farming practices of individual 1979 and 1980 CPT graduates to see to what extent they had retained, added or dropped specific technical practices (and which). Differences in data gathered the two years and in that gathered in different arrondissements (in 1981), and inconsistencies between two sources on the same trainees in 1982 (along with anomalies in data from the main source) required so much cross-checking and adjusting that the effort was finally abandoned. However, the 1982 data probably can be cleaned up, and certainly should be to provide a baseline for later comparison). Management is obliged to work with little systematic information on the results of its activities.

Fortunately for the project, and future evaluators, NDD is now in the process of establishing a well-conceived system. A monitoring and evaluation consultant reviewed the situation in October, 1982, and provided an excellent set of guidelines for this. The new advisor to the M/E unit is using those guidelines to develop the M/E system, although he has not yet converted them to a detailed workplan.

A planning/reporting system for the department and arrondissement technical service personnel and the coordinators has been a first step. The planning was initiated at the Lossa Seminar (18-22 January, 1983), but now requires follow-up to insure completion. (Simultaneously, the advisor must produce the NDD annual report. Once the plans are established, he is to follow up on the reporting stage as reporting deadlines approach. The next step is development of a survey instrument to obtain data annually on the CPT graduates and their farming practices. He will also participate in the design of forms of the follow-up agents, and he must plan his own activities for the year before more of it passes. Given the competing demands on him for urgent (overdue) base-building activities, short-term consulting assistance should be found. For example, the consultant used in October 1983, could help convert his own general guide lines to more detailed work plans and objectives.

The M/E Unit plans to recruit and train its own staff to undertake surveys and code the data, rather than relying on follow-up agents to include serious data gathering with their extension role. A major reason for this is the importance of obtaining valid data, and the difficulty of doing so with personnel whose own performance is reflected in the data, and who are not trained interviewers. Given the need for field information concerning cooperatives, demand for literacy training, use of new technology (e.g. grain mills) as well as the CPT trainees and their fellow villagers, and given the paucity of solid field information of any of this from elsewhere in Niger, an in-house survey team is justified combined with the microcomputer whose order is being processed, it will give the M/E Unit the potential to produce very useful information for NDD management; and for interested services in various Ministries. This potential would be greatly reduced without the microcomputer, whose acquisition we strongly endorse.

The changes made and in process in the M/E Unit are radical and very promising. However, we draw attention to the need for one or two Nigerien staff with

sufficient background in surveying, statistics and/or sociology to be able to lend some professional support to the expatriate advisor, and to the use the microcomputer. Such person(s) would be prime candidates for US or (more likely, considering language problems) third country short-term training. We also draw attention to the fact that the post of the M/E advisor was programmed for three years only. The present advisor is in his first year, but a predecessor was in the position for a year, meaning that in principle the present incumbent will be there only two years and will not be replaced. He may succeed in putting a sound, self-sustaining system in place with Nigerian personnel in two years; but it is doubtful.

#### Applied Research Unit

A special part of the monitoring and research system output is applied research on the package of practices (technology) and farming systems. This is done by an expatriate advisor. Applied research on the technology including pesticide tests, began in earnest with the 1982 season. (Experiments begun in 1981 were discontinued on technical grounds by the technical advisor who arrived early in 1982). This puts the applied research one season behind schedule.

Priority has been given to pesticide tests because EPA regulations limit options in the project zone until it is done. Experiments on some other components of the technical package were begun in 1982, but the fact that the advisor is working alone limited what could be done in addition to the pesticide work. In 1983, the demands of the pesticide tests will be shared with the Plant Protection Service (with technical assistance from the FRG), giving the NDD advisor more time for other experiments.

It is unfortunate that trials with variants of the animal traction now recommended (two oxen), and the package of techniques without animal traction at all, could not be begun in 1982, but we understand (and certainly recommend) that they will be initiated on CFTs in 1983. We would further recommend that they be done on as many CFTs as possible (particularly in the low rainfall parts of the zone) so that the trainees can see the results. More effort may be needed to make CFT directors understand the importance of the research to tailor the package to the region, to improve it where possible (not to "test" it, or to label it good or bad, right or wrong). Help in this should be available from PCVs on 4 CFTs, and it would be good their technical knowledge if the follow-up agents if they could work on the applied research, too.

Along with its current work on the CFTs, the Project should be giving more attention to farm systems research, to testing the package of practices, and variants on it, under actual production conditions - on farmers plots. This is needed to determine just how the package and variations of it fit the constraints under which the farmers operate, and just what their real utility and benefit are to the farmer. NDD should learn more about the work being done in Filingué by the Rural Economic Research Division of INRAN, which has some relevance for the project, if it is well done. However, what is really needed is the acceleration of the applied research, and the addition of on-farm research to the present work on CFTs. Although two or more years of testing may be necessary to

convincingly identify specific packages in a region whose rainfall is as irregular as is the case in Niamey Department, the addition of on-farm research, and an increase in the variety of tests will produce more information in that same time period.

As Dr. Barnest points out in his evaluation report, there is a good amount of evidence, albeit circumstantial, that the present package is not profitable when the risk of drought years is taken into account, although non-agronomic income (from use of the oxen for cartage, for example) makes it acceptable. The elimination, or even significant reduction of subsidies on inputs - which is being urged on the Government by AID - would make the current package even less interesting to the farmer. There is an urgent need for good data on the results of other packages on farms in the project zone. To a certain extent, it may be possible to obtain useful information from CIT graduates, most of whom are using less than the complete package, although few not using animal traction use many other techniques.

An expanded program of applied research should have high priority. Moreover, INRAN should be intimately associated with the MDD applied research. The present close relationship is very good. But what is needed is direct involvement that would a) increase the personnel engaged in the work, essential if there is to be any on-farm research at all this year, and b) give it the certifiability that will be important when results become available for extension.

### Prognosis

The Monitoring/Evaluation Unit currently has a bottleneck in the form of too little manpower (one professional) to do all of the things needed to lay the basis for a sound system before the start of the next season. This can be overcome with some outside help. Once it is, the guidelines provided by the consultant called in last October, the competence of the advisor and the support being exhibited by MDD management argue well for the development of the system. However, the GON and AID must recognize that information gathering and analysis are costly. MDD needs its survey team the development of the system, provided it has the budget and personnel to do the survey work that is needed, and being contemplated.

The applied research is off to a good, but late and slow start. One person is not enough to move it along as fast as is needed to test and improve the package of techniques, tailoring it to the region. If INRAN can take a serious part in the applied research, and can make possible on-farm testing in addition to what is planned now for the CITs, good indications should be available

a year from now, and confirmed results a year or at most two later. Without INRAN, progress will be too slow to have much impact on the project during its life. With INRAN, results will be greater, sooner, and it will be able to take over the applied research from NDD that much sooner.

### Recommendations

#### Monitoring/Evaluation

NO. 28 - That NDD use the October 1982 consultant's report on the monitoring and evaluation system as the guideline for development of the system.

NO. 29 - That Monitoring/Evaluation information needs be spelled out, and a survey agenda for the Unit over the balance of the Project life be prepared in the coming six months on the basis of the Monitor/Evaluation consulting report of October, 1982.

NO. 30 - That NDD use short-term consulting assistance to help the Monitor/Evaluation Unit complete the planning, design, and other tasks necessary to put the system on a sound footing before the start of the 1983 agricultural season.

NO. 31 - That the existing data base on the CPT graduates farming in 1982 be "cleaned up" so that it can be used as base line data for future comparisons.

NO. 32 - That NDD obtain data on UNCC sales in the zone of non-NDD fertilizer and other inputs for 1981 and 1982 to permit computation of changes in the zone, the data problem will not exist in the future, as only NDD inputs will be distributed.

NO. 33 - That NDD acquire a microcomputer, peripherals and appropriate software for the data processing needs of the Unit (including the applied research component). This should include appropriate spares, and preferably a back-up system.

#### Applied Research

NO. 34 - That INRAN assign one (or more) agronomic engineer, preferably with a master's degree or equivalent, to work fulltime with the Applied Research Unit, and to help it plan and implement on-farm research with the technical package and variants on it, particularly with alternative animal traction options and without animal traction, and that INRAN assume responsibility for applied research in the project zone within the next two years.

NO. 35 - That experiments with animal traction other than two oxen, and without animal traction, be undertaken on as many CPTs as possible in 1983.

NO. 36 - That more use be made by the applied research advisor of information available from the experiences of CPT graduates using different mixes of techniques and identifiable through follow-up and (in the future) survey reports.

NO. 37 - That the Applied Research Unit, with the Monitoring/Evaluation Unit, maintain close relations with ICRISAT and with the Rural Economic Research Division of INRAN, particularly with regard to its work in the project zone, and with similar work in other parts of Niger (though, for example, MDR or the Ministry of Plan).

### 9. Project Coordinating and Management System

The project management unit is the indicator for this output. It exists, but is still evolving. We considered the system from three points of view: internal organization, staffing, and linkages with other organizations with which it must collaborate, and on which it must depend in many cases.

The project management unit is reasonable well organized at the head-quarters level in terms of allocation of responsibilities. The lack of a unit responsible for promoting village level organizations is something of an anomaly, but the responsibility has now been given the training unit, so at least that is clear. Staff meeting minutes which identify issues discussed but do not identify decisions made as to how to resolve the issues, or who is responsible for action leave the impression that issues are left unresolved at times, and that systematic follow-up is not the rule. We are told this is improving, but suggest that it receive more management attention. Attention to internal communications and information flow is also needed, both for effective operations and team cohesion. The AID liaison officer could assist in procedures development and staff training.

Not all of the project units have worked out their work plans for 1983. This should have been an outcome of the Iossa seminar, when field personnel were to be preparing such plans. The units should prepare their annual and quarterly plans; and report with reference to them, just as they expect the field staff to do. Unit plans will serve also as the plans of the technical assistance personnel, which lack in some cases. Staffing is another matter entirely. Four of the five specialized units of the project are one-person units, the exception being the Women's Participation Unit (in which the advisor has a counterpart). Moreover, the one person in the units is an expatriate. The result is that each is obliged to spend most of his or her time executing, and cannot do all of that, let alone enough planning, managing or consciously assessing results. As noted earlier, the involvement of the Plant Protection Service in Pesticide Tests will help in 1983 in the case of applied research, but an agronomic engineer from INRAN is badly needed, now. The Monitoring/Evaluation unit plans to recruit a team of survey agents and controllers that will help considerably in that unit. The Training Unit (now also responsible for village level organization development) proposes to follow our suggestions to make more use of short-term personnel (or teams thereof), provided they can be identified.

We are told that the shortage of qualified cadres rules out the "counterpart" approach to technical assistance in NDD. That may be. However, we strongly recommend that qualified cadres join the expatriates in the various units of NDD at least a year before the departure of the advisors so that they were one season together.

The linkages between the Project Management Unit and the technical services in the field are not hierarchical. The Project Director has much less "control" over the field personnel than was envisaged by the Project Paper authors (p.46).

NDD project activities are implemented through the technical services of Ministry of Rural Development, Ministry of Plan and others, with a very small NDD staff of Nigeriens and expatriate staff. The intent is to have project activities implemented through existing rural development structures to mesh project activities into the on-going rural development activities of technical services. This organizational approach means, on the one hand, that project management does not have direct control at the level of project execution, but on the other hand; it provides the means through which the project can initiate a development process which is self-sustaining.

Coordinating the activities of various technical services is a very difficult management task. A common weakness in practically all integrated rural development project is the fact that the majority of project managers have had no training in the management of complex organizational units and processes. In general, they are technicians who must develop competence in management skills work on the job in a learn-as-you-go manner. To remedy this situation: a great deal of emphasis must be placed on training for project staff at all levels: on seminars and workshops designed to teach management skills and reinforce the learning and practice of these skills.\*

Under Phase II of the NDD project, the organizational strategy is a jointly planned and coordinated process. The vehicle for setting this process in motion is planning and training workshops and seminars based on group dynamics in communications. The March 1982 Iossa I and January 1983 workshops as well as the January 1983 planning sessions involving the participation of departmental, arrondissement, and CPT personnel is an impressive indication of a commitment to working collaboratively across service sectors to incorporate project activities into on-going sector activities. The process is by no means operating ideally, but every indication is that it is showing positive results. The NDD project was singled out during the Zinder Conference on rural development strategies as the only productivity project which is addressing the problem of joint planning through dialogue and team efforts.

Reviewing relevant documents and discussing this with many people familiar with this project and others have lead us to the conclusion that development in Niger is increasingly going to be through established technical services over which the coordinating agent does not exercise hierarchical control, at least not unshared control, and that the NDD is developing and demonstrating ways this can be done effectively.

\* This discussion draws heavily on the "Integrated Rural Development; Making It Work", report by DAI, pp. 51-52. (French version).

The building of department and arrondissement teams through Iossa seminars, and their integration into the project through these and regular monthly meetings take time. But they are part of the institutionalization process. This deserves support, and the process should be documented. In this context, as mentioned in the pages on purpose and EOPS, we do recommend that the GON prepare a statement explaining just what structure, relationships and role is after 1986 foreseen for the project management unit and those with whom it is currently building this team relationship.

### Prognosis

NDD has made what observers consider real progress toward what we would call the institutionalization of teamwork in development activities that is based on discussion, negotiation and persuasion rather than on a hierarchical chain of command. It will continue to be slow, but as it builds commitment in the field, it is likely to produce more effective results than the authoritative approach. It will be frustrating, with continual incorporation of new team members required due to shifts of personnel, much less of a problem than in Phase I, but still a reality. However, it appears to fit well the direction the GON envisages for rural development organization (as per the Zinder Conference) and it offers what Nigeriens and others point out is the only example of progress in solving the intra-organizational problems faced by all productivity projects in Niger making many see it as a promising model for other projects. With some strengthening of staff and administration, the system should be operating effectively in Niamey Department and may well be in initial stages elsewhere by the end of the project.

### Recommendations

NO. 38 - That every effort be made to assign Nigerien counterparts to the expatriate advisors as soon as possible (immediately in the case of applied research), and that in any case; Nigeriens qualified to take over the project units destined to be retained after technical assistance termination should be assigned to the units a full agricultural season before the departure of the expatriates.

NO. 39 - That the team-building, consensus development approach to ensuring coordination be continued and fully supported by AID and the GON.

NO. 40 - That the units of the NDD that have not already done so, prepare workplans for 1983, and regularly submit quarterly detailed plans and reports relating activities to plans, as is prescribed for the field personnel.

NO. 41 - That the 1983 (and subsequent) workplan of each unit include and explain what and when short-term assistance (e.g. consultants, trainers) is needed during the year, and that each quarterly report/workplan indicate the same for six months immediately ahead, and likely requirements during the three months after that.

NO. 42 - That clear guidelines, forms and procedures be established for the identification, recruitment and supervision of short-term consultants/trainers to minimize the administrative burden of increasing the use of such personnel, and to facilitate timely recruitment.

**IV Individual Evaluation Reports**

**B. Theresa A. Ware, Social Scientist**

ACRONYMS AND ABBREVIATIONS

AFN	Association des Femmes Nigerienne.
CNCA	Caisse Nationale de Credit Agricole (National Agriculture Credit Bank)
CPT	Centre de Perfectionement Technique (Farmer Couple Training Center)
GON	Government of Niger.
INRAN	Institut National de Recherche Agronomique du Niger. (National Agriculture Research Institute).
MDR	Ministere du Developpement Rural. (Ministry of Rural Development.)
MP	Ministere du Plan. (Ministry of Plan)
NDD	Niamey Department Development
UNCC	Union Nigerienne de Credit et de Cooperation. (National Credit and Cooperative Union).

## 1. INTRODUCTION

The purpose of this report is to review the impact of the project at the village level and make recommendations concerning the modification of project inputs so as to make more likely the attainment of project objectives, especially the impact of targeted populations.

The Niamey Department Development II (NDD II) Project is the second phase of a long range program of rural development in the Niamey Department of western Niger. The project attempts to transfer agricultural techniques which will create the conditions necessary to increase farmers' capacity for greater food production and to support the establishment of local organizations through which a wide range of development services are available for villages. The project has implemented activities at seven farmer couple training centers (CPTs) at which twenty farm couples each acquire new agricultural techniques every year and out of which an extension and follow-up system is being established. Emphasis is placed upon the extension of an improved agricultural package, including the introduction of animal traction equipment and chemical fertilizers, and the efficient distribution of the required inputs to the farmers in the project zone.

Under Phase I the project operated in portions of three arrondissements, Ouallam, Filingue, and Niamey. The project zone\* for Phase II includes portions of four arrondissements within the Niamey Department: Ouallam and Filingue south of 14° 30' south latitude, Niamey arrondissement north of a boundary 5 kilometers from the Niger river and a small portion of Say.

The ethnic composition of project zones within the Niamey and Ouallam arrondissements is predominantly Zarma. Say is also basically Zarma and Filingue is predominantly Hausa, but has settlements of Kurfeyawa, Arawa, Peul, Zarma, and Touareg. Other ethnic groups are also found in the Niamey and Ouallam arrondissements. Some sedentary and semi-sedentary Peul are located in the southern portions of the Niamey arrondissement, and slightly southwest to the north of Ouallam, Hausa and Arawa groups have settled. These are all primarily small farmers. This ethnic diversity means that not all these small farmers farm in the same manner, so the project needs to know something about the farming practices among these diverse groups in the four arrondissements if it is to be able to provide a technical package attractive enough to farmers to warrant their acceptance and utilization of the package.

\* See the Project Paper Social Analyses for more in-depth descriptions of the project zone and the ethnic composition of the zone.

It has been recommended in the evaluation report that the project, with direct collaboration with INRAN, conduct farm systems research. The 1983 "Adoption Survey" should provide some data on farm holdings. In the meanwhile, the Stier analysis (1979:10) of the Agricultural Statistics Service data gives us some idea of the amount of land farmers are cultivating in the project zone. Her data suggests that land holdings in project areas may be much smaller than the 4 hectares indicated in national statistical averages (USAID/Niger 1980:2).

Cultivated Area Per Exploitation, by Arrondissement 1979

	Less than 1 ha	1 ha	2 ha	3 ha	4 ha	5 ha	6 ha	
	-1.99	-2.99	-3.99	-4.99	-5.99	-6.99		
Niamey	11.6%	20.7%	24.0%	9.9%	8.3%	8.3%	4.9%	
Ouallam	35.9%	22.1%	13.0%	6.9%	7.6%	4.6%	2.3%	
Filingue	15.7%	26.1%	17.2%	12.7%	7.5%	3.7%	3.0%	
	7 ha	8 ha	9 ha	10 ha	11 ha	12 ha	13 ha	Total
	-7.99	-8.99	-9.99	-10.99	-11.99	-12.99	-13.99	
Niamey	4.1%	2.5%	1.7%	0.8%	1.7%	0	1.6%	100%
Ouallam	0	2.3%	1.5%	1.5%	0.8%	0.8%	0.8%	100%
Filingue	4.4%	3.0%	0.7%	0.7%	1.4%	0.7%	3.0%	100%

From F. Stier, Project Paper, Volume II, p. 10.

The proportion of exploitation in each hectare category indicates that there is an overwhelmingly large percentage of very small farms in the project zone. CPT trainees for the 1983 season are selected from among farmers cultivating between 4 and 5 hectares.

## 2. SYSTEM OF TECHNICAL SERVICE DELIVERY\*

This system output has two components: the CPTs and the technical services under the Ministry of Rural Development, Ministry of Plan, and the UNCC. The critical training function of the CPTs is very dependent on the delivery of support services by these technical organizational units. The Sargent et al. study of animal traction in the Sahel points out that:

Lack of adequate support services appears to be a major cause of low benefits to farmers and low adaptation rates in projects. If any one of the critical services breaks down, the entire chain of production is broken down and farm profitability is seriously compromised. The inadequacy of these support services is well documented in the 27 projects analyzed. (Sargent et al., 1980:73-74).

The project has no parallel technical services staff, thus the CPTs depend on the technical services of the above mentioned structures for delivery of training. This delivery has been intermittent, inconsistent, poorly coordinated, and poorly communicated. This lack of adequate support services was an agenda item at Lossa I held in March 1982, which elicited a commitment to provide better services to the CPTs during the 1982 agricultural season. The problem of poor communication, and transmission of course material will be addressed early this year through training workshops in group dynamics and interpersonal skills. The project is devoting a great deal of attention to the problem of coordinating the activities of the various services and establishing a collaborative team effort and approach to servicing the centers. Discussions with department and arrondissement level technical personnel during the Lossa II workshop in January 1983 indicated a renewed commitment on their parts to providing quality service to the centers in 1983. Technical staff met before the opening of the centers in 1982 for the purpose of program planning and will convene again in February 1983 to lay out the 1983 plan. Directors from the three new centers due to open in April will also attend the February session where they will have the benefit of the experience of the present directors. This organizational approach of joint planning and team effort allows all involved to benefit from the experiences of colleagues from the various centers and to share problems, decisions taken to solve them, and ideas on how to improve the process of collaboration in the delivery of services to the centers.

\* Under the Scope of Work document Technical Inputs and Agricultural Inputs the questions are the same.

### The CPT Centers

In 1982 four new CPTs became operational, bringing the total to seven (three CPTs were operational under Phase I). Three additional CPTs are scheduled to open in April 1983. Each CPT is operating at maximum capacity, graduating 20 couples per year. A total of 60 couples were graduated in 1981, 140 in 1982 and 200 will graduate in 1983. The cumulative total of CPT graduates under Phase I and Phase II is 290 (there are 90 graduates from Phase I). The selection of candidates for training and the quality of training figure among the most important factors. The staff situation at the CPTs will be strengthened this year with the assignment of two PCV couples and two other male PCVs at four of the ten centers (the total number of centers with a female PCV will be three, the two new ones and the present one assigned to Boula). Recruitment is currently under way for Nigerien male and female follow-up agents to be placed in each center.

### Impact of the Project on CPT Trainees

The impact of project activities at the centers on returned CPT trainees can be measured by the utilization rate and acceptance level of the technical package. The acceptance level is a function of several social, economic, and environmental/climatic factors, all of which are interrelated. The economic and environmental/climatic factors are addressed by Dr. Barnett in his analysis of the appropriateness technical package. This section will address some major social factors; namely, the selection process for trainee candidates; land tenure constraints; the quality of training received at the centers, and active follow-up of trainees when they leave the centers.

### Selection Process for Trainee Candidates

Phase II has benefitted from the lesson learned from Phase I that poor selection procedures resulted in trainees who had little or no commitment to farming or to learning new farming techniques. During discussions with village leaders in Guessi we were informed that during the beginning years of the project, village cooperatives often selected the n'er do wells as candidates for the centers because the (cooperative leaders) did not fully understand the purpose of the CPTs, thus saw no reason to send off a productive member of the community. Selection procedures and criteria at least from the project end, were revised in 1982 and formally committed to paper as "Informations sur les CPT Destines aux Stagiaires et aux Villages qui les ont Choisis" (see Annex 1). Included in the "fiche de recrutement"

for 1982 are specific instructions concerning the role of women in the centers. Using this document as a guide, technical services teams made visits to villages; informing village leaders of the purpose of the training at the centers and the importance of selecting responsible farmers capable, not only of learning the techniques, but also of communicating and transmitting this learning to their neighbors. The selection process for 1983 is basically the same, but the "fiche de recrutement" has been radically revised to include not only more highlighting of activities for women, but land tenure issues as well.

Selection criteria from the cooperative end of the process is not known. It is not clear how candidates are selected for participation in the training program. To further refine the selection and recruitment process, the project should have some knowledge of how candidates are selected by their cooperative and the criteria used in the selection process. This criteria has significant implications for the spread effect of the techniques especially in cases where the candidate has no authority over the land he cultivates. The question was posed during the field visit to the two Ouallam arrondissement villages, but the response was that there are no criteria for selection by those cooperatives. We suspect that this is not the case, but certainly could not verify this during a short field visit. It is an issue which should receive more focused attention as data on village level organizations is collected this year.

A criteria for selection should be that the trainee have authority over the land allocated to him for cultivation. The 1983 "fiche de recrutement" takes note of the need to ensure that the trainee has, first of all, at least 4-5 hectares at his disposal and secondly, that senior members of the agricultural production unit of which the trainee is a part, agree to grant the trainee permission to apply the technical package as recommended<sup>1</sup>.

1 In Part I of the Social Analysis in the Project Paper Annex, Painter points out that "collective fields are managed by the windi koy, head of household--but more to the point, this individual (a male) is the head of an agricultural production unit--as collective patrimony, often linked to the founder of a given village or hamlet, i.e., the first person to effectively use the lands in question. These collectively-owned fields, managed by the eldest male in the line, are worked by all productive members as directed by him. Production relations of this kind have been characterized as "dependent" goo bande, junior members are "behind" the authority of the senior member. In the case of CFJA trainees, difficulties continue to be encountered once they return home and attempt to apply the new techniques on fields owned and managed by their fathers...Given their lack of authority within the production unit (i.e., their relation of dependence---goo bande), they occasionally discover that they are not permitted to use the equipment (Pradier 1979a:41-42: 1979b; 1980a:10) (Painter 1980: 7-8).

Attention to this problem this year is a lesson learned from Phase I in which it was reported that "eight of the twenty trainees currently enrolled at the Fondou Mayaki CPT will return home to cultivate fields controlled by their fathers" (Painter 1980:15).

The project would have systematic data collected on land tenure issues and constraints to ensure that learned techniques will be, not only applied, but will be spread through demonstration of the techniques by the trainees to neighboring farmers.

The issue of land holdings is also addressed in the 1983 "fiche de recrutement" under the phrase that the trainee should have at his disposal at least 4-5 hectares of land. The Sargent *et al.* study suggests that 4 hectares is about the minimum size for a profitable adoption in ox-drawn equipment and the minimum size for donkey traction would be approximately 3 hectares. Table I from the Part II social analysis by F. Stier shows the estimates percentage of farms that fall below the minimum for profitable adoption of donkey and ox-drawn traction.

Percent of farms with cultivated areas below minimum for profitable adoption of donkey and ox-tractio. - estimated from 1979 survey data of NDD project zone.

Arrondissement	% farms with cultivated area less than 3.00 ha.	% farms with cultivated area less than 4.6 ha.
Niamey	56.3 %	71.2 %
Ouallam	71.0 %	82.5 %
Filingue	59.0 %	76.2 %

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From P. Stier, Project Paper Annex, p.12.

#### Quality of Training at the Centers

The quality of training at the centers depends on the involvement of the technical services personnel in the training program. The joint planning and team building process set in motion at Lossa I in March 1982 and further refined with the January 1983 planning workshop and Lossa II are positive indicators of expected involvement of technical services personnel for 1983. Field personnel are directly and very actively involved in decisions that have to be made concerning the program and planning

for the year. NDD is providing technical advisory assistance in the area of training for technical services personnel.

### Follow-up of Trainees

One of the areas of neglect in the project has been the follow-up of returned CPT trainees which is crucial to the re-inforcement of what they have learned in the centers and assistance in application of what they have learned once they are back home in their villages. For example, during an interview at Tolkobaye Fondobou with one of the women 1982 graduates, we were informed that she fully intended to demonstrate the construction and use of the Improved cookstove to her neighbors after she has successfully constructed one in her own compound. She had already completed three trial runs resulting each time in breakage in the construction when the stove was fired. This problem has been recognized by NDD and will be addressed during follow-up this year with advise from the project's women's participation unit.

Eight male and twelve female follow-up agents are being recruited for the 1983 season. Their job will be one of technical assistance and support, rather than to monitor whether or not the trainees are using the techniques learned at the CPT centers. It is very much recognized by the project staff that these follow-up agents will need training for their jobs. A training program is planned for one week with all CPT staff in February and a longer program of one month is planned at a later date for the follow-up agents. The problem of follow-up was discussed in some detail at the Lossa workshop in early January 1983. Training will emphasize communications and interpersonal skills in transferring technical information and applications. It will be conducted in both a classroom and "hands on" techniques.

The extent to which former CPT trainees are utilizing the technical package is indicated in the following tables, the first of which is from the report of Dr. Roberts, and the second, from the project files.

TABLE II

PERCENT OF CPT GRADUATES USING  
0, 1-2, 3-12, 6-12 TECHNIQUES  
IN 1982

Year at CPT	Number Trainees	Number 0	of 1-2	techniques 3-12	used 6-12
1979	30	50 %	23 %	27 %	23 %
1980	60	25 %	10 %	65 %	47 %
1981	60	20 %	18 %	62 %	43 %
1979 - 1981	150	28 %	16 %	56 %	41 %

From R. Roberts, Evaluation Report (1983: ).

TABLE III

The Proportion of Ex-Stagiere's Utilizing the improved Cultural Practices by Region and Graduating Class

	Graduating Class	Number of Ex-Stagieres Applying 1 technique	Selected seed	seeds treated w/ fungicide	Turning soil w/ plow	Technique Applied				1st weeding	Plant thinning to 3	2nd weeding	Rotation
						Correct Density	Manure	Phosphate	Urea				
Bilingue	1979	9	56	67	44	22	44	11	-	22	-	22	11
	1980	13	85	69	38	38	77	15	15	31	38	23	8
	1981	15	93	53	20	40	47	7	7	27	20	13	7
Sub Total		37	81	62	35	38	37	11	8	27	22	19	8
Kolo	1980	17	76	94	76	76	94	71	47	59	59	35	0
	1981	18	78	72	61	72	89	6	11	50	67	22	0
Sub Total		35	77	83	66	74	91	37	29	54	63	29	0
Quallam	1979	5	100	60	100	100	60	100	80	100	100	100	20
	1980	15	87	67	73	67	73	20	27	60	73	47	0
	1981	15	100	60	93	73	93	40	27	93	93	93	87
Sub Total		35	94	63	86	74	80	40	34	80	86	74	40
Total all Regions	1979	14	71	64	69	49	57	43	28	49	35	49	15
	1980	45	82	78	60	64	82	38	27	51	58	36	2
	1981	48	90	62	56	62	77	17	15	56	60	42	29
TOTAL		107	84	89	59	62	76	29	21	53	56	40	16

Drop-outs are excluded

The data from Table III are accompanied by no descriptive analysis of why these trainees adopted certain techniques and not others; why certain field or portions of fields were cultivated under the new techniques; the point in the fallow cycle these fields were when cultivated under the new techniques (which may, for example, affect the use or non-use of fertilizer); and the stability of individual tenure. Small farmers may be reluctant to increase investments in borrowed plots unless they have some assurance that they will retain access to the plot for more than one agricultural season (Painter 1980:8).

Plans are underway to conduct an Adoption Survey which will address these and many other questions, including questions on land tenure issues, with particular attention to women's plots.

#### The Technical Package and Applied Research

Research on the technical package cannot be expected to come up with a more attractive package for farmers unless greater emphasis is placed on the micro-economics of the package with trials conducted under conditions as close to those of normal farm conditions as possible. The package should be tested under different climatic and soil conditions, household labor availability, and land holdings size.

The CPTs should conduct experiments in alternative sets of farming techniques; the absence of ox-drawn equipment as one possibility and the use of the crop inputs package (seed, fertilizer, planting density, and insecticides) without any animal traction as another possibility for all farmers.

The NDD Adoption Survey will provide some insights into why some recommended practices are adopted and others are not, but what is really needed is experimentation with the package at the farm level which cannot be done without an understanding of farming systems and the critical constraints to increased production in the project zone (See Dr. Barnett's report for a discussion of critical constraints to increased production in the project zone).

There should be collaboration between the M/E Unit and the Applied Research Unit on the cross-fertilization of ideas concerning the methodology and implementation design of the upcoming Adoption Survey and the recommended farm systems research. Research conducted at the farm level should be carried out with the direct involvement of INRAN because findings and recommendations concerning the package must have GON approval through the INRAN research station. This would require the identification of INRAN staff people for direct involvement in

the research. The Applied Research Specialist pointed out that she would need at least one agronomic engineer, preferably with a Master's degree or equivalent, to work full-time with her on a farm systems research study.

### Spread Effect of the Technical Package

NDD staff field reports indicate that there is some spread effect of the package among non-CPT villagers. In Ichtiguine, for example, preliminary data estimate that 85% of the farmers use fertilizer, fungicides, and carts as a result of participating in demonstrations by returned CPT trainees.

The "open door" program, started first in the Maradi productivity project, is another channel for introducing farmers to the training and production results taking place in the centers. Village chiefs of trainees, cooperative presidents and relatives were invited to spend one day and night at the centers during which time the trainees explained and demonstrated the new techniques and skills they were learning.

According to comments we heard during the Ouallam field trip, invitees were very favorably impressed, especially villagers. Village leaders with whom we talked during the field visit stated that they were quite impressed by the height of millet on CPT fields compared to theirs. CPT directors and arrondissement technical services personnel also expressed satisfaction with the program and spoke optimistically about plans for the 1983 "open door" program.

These same field reports also reveal a number of cases in which neither village leaders nor villagers were aware of the new farming techniques applied by returned CPT trainees. The most important reason for this almost non-existent impact is the lack of effective follow-up of the trainees once they have returned to their villages. It was highlighted at the Zinder conference that all productivity projects share in common the problem of inadequate follow-up. NDD is addressing this problem this year by recruiting and training 12 female and 8 male follow-up agents as technical support extension to returned CPT trainees.

### RECOMMENDATIONS

No: 1. That NDD maintain constant communications with the Monitoring/Evaluation Unit of the Ministry of Rural Development of Rural Development concerning the assignment of at least one agronomic engineer, preferably, with a Master's degree or

equivalent, to work full-time with the NDD Applied Research Unit. This person should be assigned before the 1983 agricultural season.

No: 2. That a farm systems research study be designed and carried out in the project zone to determine 1) current agricultural practices, 2) farm size and household size, 3) available agricultural labor in the household, 4) crops planted, and 5) farmer attitudes concerning agricultural practices and the adoption of new techniques.

No: 3. That the CPTs carry out experiments in alternative sets of cultivation techniques; without ox-drawn equipment as one possibility and the use of the crop inputs package (seed, fertilizer, planting density, and insecticides) without any animal traction, as another possibility.

No: 4. That INRAN assume full responsibility for applied research in the project zone within the next two years.

### 3. LOCAL-LEVEL VILLAGE ORGANIZATIONS

The local level village organizations which the project wishes to impact are the cooperative and the Groupement Mutualiste (GM). The cooperative program in Niger was established in 1955 under the 1955 cooperative Decree. By 1965, there were perhaps 30 cooperatives and 100 village mutual groups in existence. In 1966, a "new system" of cooperatives was established with the objective of expanding the movement and better adapting the cooperative to traditional structures. The "new system" was based on villages rather than individuals joining, with a village collectively deciding at a meeting whether to form a cooperative mutual group. Although this "new system" dates back to 1966, cooperatives in the project zone are very new, the oldest dates from 1977 and more than half of the current number date from 1978. The relative newness of their existence accounts, in part, for their fledgling and fragile viability. Painter, however, makes the point that "their actual functions-- whatever the evolving expectations entertained by the GON about their future as the basis for Societes de Developpement -- are limited to those of cooperatives throughout Niger: marketing and credit diffusion. In the past, modest profit margins afforded cooperatives by GON (UNCC) on the basis of their cashcrop and/or staple crop marketing activities furnished the basis for cooperative capital accumulation which, in theory, could be invested in a variety of locally-defined "development" activities. In practice, cooperatives have not been accorded much autonomy in this area" (1986:18). They are generally not farmer initiated, but owe their existence rather to government planning priorities.

In 1982, there were 99 cooperatives in the project zone and 104 in 1983. The cooperative consists of 5-10 villages, each of which has a GM composed of heads of households in the village.

The motor force for cooperative development is credit diffusion of materials, especially carts. For all practical purposes, the absence of credit means the absence of cooperatives, thus, the viability of cooperatives is a function of the presence of credit.

The extension of credit sets in motion a chain of interactions between cooperative members and the UNCC forms must be filled out and payments collected which creates activity providing the opportunity for dialogue between cooperative members and UNCC representatives.

Field visit discussions in Ouallam indicate that cooperative members view the UNCC as the conduit between them and

access to credit and attendant administrative tasks. The credit is something brought to them and available to them only as a member rather than as an individual (individuals borrow, but always in the name of the cooperative). What seemed to be clear during the discussions was the absence of any actions at this point to assume decision-making and management control. (This does not represent a lack of astuteness; we were told of cooperative leaders who think they could get lower prices on inputs if they could do the buying on the open market, instead of having to go through the UNCC).

Interviews with village leaders during the field visit revealed a very low level of understanding of the concept, purpose, and function of a cooperative by villagers. The Union Nigérienne de Credit et de Cooperation (UNCC) is responsible for promoting a variety of cooperative training programs in the project zone and conducts training programs at different times during the year which are designed specifically for elected cooperative officials. These training programs are conducted by UNCC agents (department and arrondissement delegates and field agents, often with assistance from Animation Rurale and occasionally from National Literacy). Materials are developed by UNCC's National training office with financial assistance from Danish AID and the International Labor Office.

The increase in the number of cooperatives in the project zone has substantially increased the training load of UNCC staff. A week of training (newly elected GM and cooperative officials are trained at cooperative seat villages for four to seven days) plus one to two days of a refresher session (to reinforce acquired knowledge of cooperative principles) each year is insufficient for a thorough introduction and explanation of cooperative principles. The limited capacity of UNCC to effectively train and follow-up its training in all cooperatives within the same time frame is recognized by the project as an impossible task. The Project has financed such training in one case, but considers it relatively ineffective (and, as noted earlier, did not exercise any quality control over the UNCC training it financed).

Project activities at the CPT centers are providing the cooperatives an opportunity to influence the use of resources in attempts to increase production. They are, for example, to assume responsibility for the selection of CPT trainees; they are invited to participate in the open-house activities at the centers; and the materials for CPT trainees is to be delivered to them through the cooperatives, allowing the cooperative leaders to know exactly what the trainee has received. This involvement with the training and equipment investment in the

CPT trainee passes on to the cooperative the responsibility for ensuring accountability from the trainee to the cooperative members.

The Credit and Inputs Advisor informed us that in the early years of the project there were instances in which the materials were delivered directly to the homes of CPT trainees, in effect, bypassing the cooperative. Cooperative leaders had no idea what the member had really received, but were obliged to sign for the credit extended to that trainee. This type of situation has resulted in behavior by the trainee which indicated he perceived the credit relationship to be between him and the UNCC rather than between him and the cooperative. As cooperatives become more and more involved in the dynamics of recruitment and selection of trainees for the CPTs and participate in the open-house activities, they should be able to make more effective use of CPT graduates.

We have found no indication of any role being played thus far by returned CPT trainees in cooperatives. Among the factors that influence the situation are the viability of the receiving cooperative and the quality of cooperative training presented in the CPT. Cooperative related training in the CPTs has been based on indirect involvement by UNCC taking the form of cooperative training content in CPT literacy classes rather than training programs staffed by UNCC personnel. Cooperative training materials-teaching have been supplied to CPT literacy instructors who use them in conjunction with other teaching aids available from the National Literacy Service.

The direct project contribution to this training has been the financing of two brochures prepared through close collaboration between literacy and UNCC personnel and made available in literacy centers and CPTs. There is little project data on the quality of cooperative training and orientation provided by literacy instructors in the CPTs, but limited interviews with returned CPT trainees concerning their understanding of cooperatives and their perceived role as a member seem to indicate a substantial need for improvements in cooperative training currently provided in the CPTs which will require more brochures and pamphlets.

The project has made little progress to date to strengthen cooperative capabilities in self-management. In this sense, a key part of the project has been neglected. NDD is very aware of this critical area of neglect and has acted on this problem area. Village level organizations were the principal theme at the Lossa planning seminar in January 1983 at which time the ground-work was laid for a strategy to assist in the process of developing a self-management capability at the cooperative level.

The project has realistically scaled down its target from some 50-60 village level units (GMs) to the more manageable number of 12-24. A methodological approach noted earlier in the text has been designed for conducting village level inquiries. The village level inquiries scheduled to get under way in mid-1983 will go a long way in providing preliminary information on village needs, priorities, history, attitudes concerning the future, social organization, infrastructure, etc., but a much more fundamental issue must be addressed before the project becomes too involved in activities at the village level. The project must address the issue of whether or not the GM structure is an appropriate organizational base for local level self-development. The 1976 analysis of the social soundness of the Niamey Regional Productivity Project designed by Charlick suggests that:

There is strong reason to believe that the obligatory GM structure is an inappropriate organizational base for local-level society, particularly in the project area: Preliminary research findings indicate that no traditional base for village wide cooperation exists in Zarma society, and that the imposition of such an organizational structure could have negative consequences for a significant portion of the population and for the viability of existing village organization. (Charlick 1976:2)

Painter (1980:17) makes reference to this issue in the Project Paper and does point out that it will require "long-term" research on indigenous forms and processes of cooperation in project zones and their relation to introduced cooperative structures", but seems to dismiss the issue in stating that "there is no a priori reason on ethnographic or 'political' grounds alone to suspect that the 'fit' \* will be poor". (ibid.)

There is very definitely a project need to look very closely at this issue, using a short-term consultant to conduct a study of the viability of local level organizations and alternative structures and organizational units with the potential for developing a capability for self-management. NDD staff

\* The 'fit' referred to here is between traditional social structures and cooperative programs.

is aware of the need to obtain data on organizational structures at the village level and in this particular case, pointed out that there should be a follow-up to the Charlick study. This follow-up should revolve around the issue raised by Charlick and should be conducted during 1983.

In the meantime, implementation of the preliminary village inquiries based on the methodological approach set forth in the "Appui aux Organisations" document will require the full mobilization of the arrondissement coordinators and their field staffs. The NDD Training Unit acknowledges that some fairly in-depth training will be required of these technical services personnel before they are ready to go out to villages and elicit the desired responses. These technical services personnel will need training in the skills and techniques required to communicate the need for joint collaboration between the villagers and the project. In other words, merely reciting project objectives without carefully eliciting from them why and for what reason the project could be of interest to them will simply not capture the attention of busy farmers. The Training Unit Specialist responded to an evaluation team discussion with him concerning projected personnel needs to accomplish the tasks ahead of him this year by drawing up a list of short-term needs in personnel in which he suggested both expatriate and African persons or organizations with the technical capability to provide assistance for specific training tasks.

The implementation of this strategy could probably benefit from the experiences of other projects in the country which have become involved in village level development. During an interview in Niamey we were informed that some implementation activities designed to identify how villagers perceived their participation in new activities have been carried out and carefully documented in a small project financed by the World Bank at Bouza, Tera, and one other location in Niger. We were told that detailed reports were in preparation. The NDD Training Unit should obtain the documentation on the World Bank financed village level organization development activities in Bouza, Tera, and the third location to determine the relevance for training workshops based on this documentation. The "case study" teaching techniques may be appropriate for the training workshops.

#### Project and Village Level Organizational Units at End of Project Inputs

What will project and village level organizational units

be at the end of project inputs? It is precisely within the context of having villagers articulate their perceptions of how they see themselves in relation to the project that the project should be able to address the question of what it realistically expects to leave on the ground at the termination of project inputs. At the end of project life what specific functions should the village level organizations be capable of assuming and sustaining? What are the CPTs supposed to evolve into at the end of the project and what will be the role of the cooperatives? These questions are raised within the broader context of the project logical framework by Dr. Roberts in his discussion of the End of Project Status (see page 34-35 of his report). A question along the lines of changes and modifications in organizational units and functions was raised by the Project Director during the team's debriefing, but more from the perspective of administrative and technical units than from that of village level organizations. A discussion of end of project expectations for all organizational units involved in the project (administrative, technical, village level) took place during the team's debriefing with the M/E Unit of the Ministry of Rural Development. The response concerning the role and function of village level organizations at the end of project inputs was not as clearly focused as desired.

It seems that a focus on this issue has not yet crystallized at the USAID and GON decision-making levels. Both the GON and USAID should clearly articulate what organizational units and functions will be in place when the project ends and the relationship between these units and functions. This will involve in-depth assessments of village level capabilities, the relationship between cooperatives and CPTs, the capability of technical services to effectively deliver training and agricultural inputs, and the economic capability of the GON to continue to support its technical service field personnel and create economic incentives for farmers to increase their production. USAID and the GON should undertake this assessment in early 1984 to coincide with the assessment and review of the viability of the credit program. A short-term consultant in Institutional Development Analysis should be contacted to carry out this assessment. The terms of reference for the assessment should be jointly drawn up during the latter part of 1983 by the GON and USAID. GON participation and input will be of critical importance.

#### RECOMMENDATIONS

No. 5. That NDD commission a 1983 follow-up study to the 1976 Charlick study to be designed around the issue of the appropriateness of the GM structure as a viable base for village level cooperative development.

No: 6. That the findings of the 1983 village level inquiries to be implemented using the methodological approach set forth in the "Appui aux Organisations" document become the basis for designing the follow-up study to the Charlick study.

No: 7. That the Training Unit obtain the documentation on the World Bank financed village level organization development activities in Bouza, Tera, and the third location to determine the relevance for training workshops based on this documentation.

No: 8. That the GON and USAID clearly articulate what organizational units and functions will be in place when the project ends and the relationship between these units and functions.

No: 9. That an assessment of institutional capability of village level organizations, cooperatives, CPTs, Ministry technical services and the impact of GON economic policy on farmers be undertaken by a short-term Institutional Development consultant in 1984.

No:10. That GON participation and input be a requirement for drawing up the terms of reference for this assessment study.

#### 4. SYSTEM OF CREDIT DELIVERY

A key component in the achievement of the project's sector goal is the existence of a credit program which has a sound fiscal and management capability. One of the sector goals of the project is the achievement of food self-sufficiency which implies an increase in crop yields. The Project Paper points out that increasing crop yields will depend on promoting the adoption of the technical package. There seem to be few alternatives to making this technical package available to farmers except through a credit and inputs supply program.

The credit program was created during Phase I to provide credit for procurement of inputs needed to make seasonal short-term in-kind loans for agricultural inputs such as fertilizer and insecticides. The GON terminated this component of the credit program in 1980. Medium-term loans to purchase animal traction packages which "normally include two oxen (about 100,000 FCFA for the pair), an ox-cart (77,000), Basic plow/weeder (Bati de Base), frame (6,000), and a 5-Tooth Weeder (6,000) for a total amount of around 190,000 FCFA" (Stickley 1983:3).

#### Impact of Credit Program on Farmers

The total number of loans made under Phase I and Phase II through December 31, 1982 was 247; 61% of which were to ex-CPT trainees and 35% to cooperatives. The total amount due from each arrondissement by December 31, 1982 was 66,392,225 FCFA. The total amount repaid was 18,682,569 FCFA. This is a total repayment rate of only 28%. As a result of such a low repayment rate, the credit fund is now frozen which means that 1983 CPT trainees must be selected from cooperatives with no more than a 10% default rate.

In part, the high delinquency rate is attributable to a poor understanding of the credit repayment procedures. The NDD Credits and Inputs Advisor explained that villagers are quite aware of the credit program and its purpose, but do not understand the procedures involved in loan processing and repayment. They seem to understand that repayment of the loan is a responsibility which must be fulfilled, but have not understood exactly how much they owe or when payments are due and collectible. Stickley points out, for example that "loans are made to farmers collectively through a single loan to a cooperative. If farmers appear voluntarily with money in their hands it is very difficult for the collection agent to tell them specifically how much each should pay as their part of the collective loan" (1983:9). He goes on to conclude that

"high delinquency rates are more the result of shortcomings in the performance of the lending institutions themselves than from the borrower" (ibid.)

As noted in the Executive Summary, the debriefing of the Agricultural Credit Advisor consultant who worked with the NDD Credits and Inputs Advisor in reconciling the credit fund account to its correct balance and the Credit Management consultant who developed a new set of guidelines governing the management of credit at all levels of the project, provided invaluable data for the preparation of this report. Their recommendations form the core of changes needed to set the credit program on a sound fiscal and management course. We concur in their conclusions and support their recommendations for specific actions to be taken by March 1983.

It was also noted earlier that in 1980 the GON terminated short-term credit for seasonal crop inputs, namely, fertilizer, insecticides, fungicides, and seed. These inputs are now available only on a cash basis. The use of these inputs has decreased, especially for fertilizer. An interesting point, however, is the fact that women are large consumers of fertilizer throughout the project zone. During interviews in Ouallam with Department heads, the UNCC head estimated that 90 % of fertilizer users in the arrondissement are women. The NDD Women's Participation Advisor pointed out that women in the project zone have been using fertilizer on their garden plots for several years -- even before the start-up of the project.

The impact of the credit program at the village level can be illustrated by the fact that although the project has not involved women outside the CPTs in any fertilizer use activities, it has, through the credit program made access to fertilizer much easier. The cost of the fertilizer is shared by several women. Why are women in the zone such large consumers of fertilizers? It is surmised that they are often allocated nutrient-poor and exhausted soil for their plots, thus are obliged to enrich the soil to make it more profitable. There is no project data on women's plots yet, but the M/E Unit Specialist pointed out that the Adoption Survey to be conducted this April is designed to yield data on women's fields.

Carts are a very popular item in the project zone, selling especially well in Kolo (Kolo has more fertile soils, higher rainfall, and is closer to Niamey markets than the other arrondissements of Ouallam and Filingue). The ox and donkey carts are the widely adopted items in the technical package. They are seen as a source of non-agricultural income and may be used year-round for household purposes. They serve as revenue-earners from hauling fees and sales from hauled commo-

ties such as firewood, hay, and water. Not surprisingly, these carts are the most popular part of the technical package in the NDD zone. The following table provides statistical data on the purchase of ox and donkey carts for 1979 through 1980:

	<u>1979-1980</u>	<u>1981</u>	<u>Villages</u>
Ox carts	230	180	Ouallam, Kolo Filingue
Donkey carts	450	230	Same as above

#### RECOMMENDATIONS

No:11. That the recommendations of the consultants on cooperative accounting and on credit management be adopted and implemented in order for improved procedures to be realized during the 1983 season.

No:12. That the type of training needed to implement changes in the credit program be determined immediately, using short-term consultant trainer inputs to accomplish the tasks.

No:13. That NDD assess the progress made in collecting loan repayments which were due December 31, 1982 in mid 1983 as an indicator of the establishment of a sound credit system.

No:14. That the Credits and Inputs Unit develop a methodology for determining the number of farmers, including women, purchasing fertilizer and other inputs for cash in order to determine who is benefitting from the medium-term credit program.

## 5. SYSTEM TO INCREASE WOMEN'S ACCESS TO DEVELOPMENT ACTIVITIES

The extent to which the women's component of the project has brought about increased responsiveness to women's issues by the technical services of the Ministry of Rural Development and other Ministries is first of all evidenced by the appointment of a Nigerienne counterpart from the Animation Service to the project. Another indicator of this responsiveness was the questions raised at Lossa II concerning the role of women in the centers and follow-up for them after they return to their villages. Issues affecting women's participation were also raised at Lossa I and the planning workshop in January 1983. These are indications of a heightened consciousness and increased responsiveness to women brought about by specific project activities. Looking beyond the project zone to the Zinder conference, an increased responsiveness to women's increased participation in economic activities was evident in the recommendation that "women's activities be reappraised and integrated into the cooperative structures through special components."

The Women's Participation Advisor pointed out that she would like even more responsiveness to women's issues through a collaboration with the Association des Femmes Nigériennes (AFN) which would have to be approached through Promotion Feminine, the mandated GON structure through which formal relationships with women must pass. A missing element in the achievement of its goals is a broad based organizational structure through which the Unit's legitimacy and credibility can be enhanced from the national level all the way down to the village level. The Unit has no organizational counterpart onto which it can graft itself and through which it can launch its activities at the village level.

The Project Paper points out that to achieve its goals, the women's component "will work with the Association des Femmes Nigériennes." This is an important factor for project implementation because no functioning or viable women's groups exist in most villages, but each village does have an elected representative of the AFN. Their active participation may be nil, but at the arrondissement level they could be a powerful lobby for the cause of women engaged in economic activities. The Unit's work plan and calendar for 1983 indicate a coordination and collaboration activity with the AFN. Discussions with the Advisor revealed the fact that she was moving ahead with planning an initial meeting with the AFN. She suggested setting up a meeting with the NDD Unit and the USAID officer for women's issues as a first step; next, contacting the Promotion Feminine, and then working out a joint plan for collaborating with the AFN.

### Principal Function of the Women's Unit

The principal function of the Women's Unit is to provide advisory assistance in the delivery of training and follow-up to women trainees in the following areas:

- intensive training in agriculture, including new techniques in millet and sorghum cultivation as well as in vegetable gardening;
- construction of improved cookstoves;
- health and nutrition;
- literacy;
- sewing; and
- small ruminant and poultry raising

### Start-Up of Unit

The start-up of the unit began with the recruitment of a full-time advisor in 1981. Until that time the unit was literally inactive. The advisor was able to move quickly in establishing communication and dialogue with Promotion Feminine and the Institute for Social Science Research (IRSH). Communications and dialogue with the Ministry of Plan resulted in the appointment of a Nigerienne counterpart from the Animation Service. Field trip reports point out the key role played by this counterpart in the establishment of dialogue with women in the villages. This counterpart is currently in Upper Volta for short-term training, after which she will return to the project.

At the level of the CPTs, coordinated visits by Animation and Agricultural technical services were established. Women had not been included in training at the centers before the start-up of this unit. Thereafter, monthly visits by each chief medical officer to health centers near CPTs for health check-ups and instruction were organized. Sewing lessons at 3 CPTs and 35 improved cookstoves in the 14 CPTs and in surrounding villages were constructed. Ten moulins were installed under Phase I and three are planned for installation this year. In this connection it should be mentioned that field inquiries were conducted by the Advisor in late 1981 and observations and preliminary findings indicated the need

for two studies. One was "Evaluation de l'Implantation des Moulins a Grains dans le Departement de Niamey," completed in May 1982 and "The Socioeconomy of Women in the Ouallam Arrondissement," completed in September 1982. Based on the recommendations of the May 1982 Study on Moulins, the three moulins will not be installed until criteria for the selection of villages is established.

Since the discussion of moulins has come up, we can move on to a discussion of the extent to which Phase I resources, particularly moulins, have been utilized to the benefit of women.

Under Phase I resources, ten moulins were installed at the cooperative level in the project zone. Both the Wilson field inquiry conducted in January 1982 and the Keita evaluation study conducted in May 1982 indicate that 60% of the women use the moulin twice a day. Of this 60% of the women who stated that they use the moulin twice a day, approximately 40% pointed out that when their personal funds are low, they pound the millet or sorghum themselves. These studies point out that daily use of the moulin is a function of the amount of cash women may have at the time and the amount and seasonal availability of grains (corn, for example, is not pounded by the women because it is a much more difficult task than pounding millet; thus, is almost always brought to the moulin for grinding.

The Keita study provides examples of how women feel about the presence of a moulin in their midst. Statements such as "thanks to the moulin, many marriages remain intact....there are numerous divorces because young women find (pounding) too difficult...too painful...young women today no longer have to work as hard (pounding) as did their mothers and grandmothers...", indicate a broad acceptance and enthusiasm by women in the zone for this new technology.

Despite the high level of acceptance of the moulins, optimum utilization is constrained by 1) the lack of enough cash by women to use the moulins with greater frequency and 2) the lack of a management capability to assume responsibility for the financial viability and operation of the moulins. These problems along with identification of the need to establish criteria for the selection of villages where moulins would be installed are highlighted in the Wilson inquiry which led to the commission for the Keita study. Both the Keita study and the May 1982 meeting held at the UNCC stress the need to select a village with the resource capacity among women which will provide them some discretionary income (from vegetable gardening, selling of food on the streets, etc.); in other words, a village which has the potential for succeeding in making the operation

of a moulin of profitable and maximum use by the women. The problem of management by women is viewed as of such critical importance that two cooperatives will be selected to experiment with increasing forms of female participation in cooperative functioning. It has not been decided whether these two cooperatives will figure among the four to eight cooperatives to be identified for intensive project activity in 1983, or whether they will be outside of and in addition to the targeted number. The question was raised by the Advisor at Lossa II. In our view, the two cooperatives should figure among the targeted four to eight because of the need to husband project resources, especially personnel, but flexibility should be maintained.

#### Selection Procedures and Criteria

Selection procedures and criteria were revised in 1982 and formally committed to paper as "Informations sur les CPT Destines aux Stagiaires et aux Villages qui les ont Choisis" (see Annex A). Included in the "fiche de recrutement" for 1982 are specific instructions concerning the role of women in the centers. Under Phase I women simply accompanied their husbands to the centers as wives and mothers. They were not selected for participation in the project; their husbands were. This situation was shared by all productivity projects. Reports on the Maradi and Dosso projects refer to the trainee as the "ex-stagiaire et son epouse" rather than as the "trainee couple."

Technically speaking, women are still not recruited since selection emphasis is on the male, but the 1983 selection criteria for CPT trainees highlights the need to pay more attention to the fact that women trainees are active participants in the center's program and should be viewed as such by both the husband and wife. During our field visit we were informed of one instance in which the husband casually informed his wife that they would be participating in the project at the center for eight months. There was another instance in which the husband said nothing to the wife until the vehicle arrived the morning they were to depart for the center. Having no forewarning or knowledge of this project or the imminent departure, the wife agreed to go only after two hours of discussion and persuasion.

The procedure for informing villagers of the project applies to women also (see page for a description of the procedure), but we were informed in the villages that the women are quite often not present when the technical services teams make their visits or they are present, but are peripherally included in the discussion resulting in a poor understanding of what was said. These visiting teams should make every effort to ensure the presence of women in these meetings and work with village leaders on ways in which women can more actively participate in the discussion on what the project and the centers are all about.

### Quality of Training at the Centers

The quality of training at the centers is improving and its impact on the women themselves will be noticeable this year for the first time because the 1982 graduates are the only ones who benefitted from the project training program designed in late 1981 and early 1982 by the Women's Participation Unit in collaboration with the technical services of the arrondissements. There was no training program for the wives who accompanied their husband trainees under Phase I of the project.

In those centers where a female PCV is installed, the women seem to be functioning in a more structured learning environment than in those centers serviced uniquely by the technical services. The reinforcement through daily contact of what is learned bolsters self-confidence in newly acquired skills and techniques. The assignment of a female follow-up agent at each of the centers this year (after their training) will provide the complement to technical services training.

The training curriculum for women consist of the following activities:

- intensive training in new techniques in millet and sorghum cultivation as well as in vegetable gardening;
- construction of improved cookstoves;
- health, nutrition, and child care;
- literacy courses adapted to the needs of women: and
- sewing

Planning for 1983 is centered on a program addressing the needs of women such as gardens around the "bungalows", the procurement of seed, and improved instruction in literacy. The Animation, Technical Services, and UNCC skills in communicating and teaching will be improved through training sessions already planned, with some already completed. We were informed during the interview with the woman CPT trainee who graduated in 1982 that she did not enjoy the literacy course for two reasons: 1) she did not have enough confidence in herself to believe that she could learn to read, and 2) the instructor was not comfortable teaching women. This problem should be a focus of the training in effective communications for technical services field personnel.

Although the CPT trainees who graduated in 1979 and 1980 were invited to participate in a "recyclage" or refresher training in 1982, this activity in 1982 was not applicable to women because there were no training activities for women in the 1979, 1980 and

1981 classes. Due to the logistical problems of transportation and housing of the 1982 women trainees for a few days of training, plans have been made to incorporate refresher training themes and activities in the follow-up activities planned for 1983.

#### Follow-Up and Impact

The absence of female follow-up agents at all but three of the centers during the 1982 season is being remedied for the 1983 season by the recruitment of 12 females. The 1982 women graduates will receive follow-up visits this year to reinforce what they learned at the centers, to correct errors in the application of specific techniques, and assist in the resolution of any problems surrounding the application of new skills.

It is not yet possible to determine impact on this group of 1982 graduates. It is possible, however, to extrapolate from impressions received during the field visit to Ouallam and from interviews with two of the three PCVs who worked with this group in 1982. The trend seems to be that women CPT trainees will have a positive impact in their villages. For example, a 1982 trainee wife who was interviewed in Tolkobaye Fondobou (she and her husband had just returned from training at the Simiri center on January 10, 1983) stated that she was looking forward to demonstrating the technology and functioning of the improved cookstove to her female neighbors as well as the sewing techniques she had learned at the center (she happened to be wearing the "shirt" she had made at the center with assistance from the PCV). She went on to point out that her family and neighbors are very curious about her training experience and ask her a lot of questions. Discussions about what she did and learned at the center often take place during group activities such as pounding millet and drawing water.

Her enthusiasm and confidence seem to be a function of the support she receives from her mother and the other women in her compound. She clearly profited from the daily reinforcement of what she was learning from the PCV assigned to the Simiri center.

Follow-up activities for the women will provide the type of reinforcement and assistance needed for them to gradually assume the role of demonstrator in their villages. The Advisor pointed out that the problem encountered by the 1982 trainee in constructing the improved cookstove will be addressed by bringing to the women the piece needed to keep the stove from breaking during its firing.

The enthusiasm, interest, and support of the mother of the trainee we interviewed indicate the receptivity of women and the need to extend the "open-door" program activities for 1983 to include and accommodate women visitors from the villages of the trainees as well as neighboring villages. This would broaden the impact base because women outside the trainee's compound and village would have an opportunity not only to see what the trainee is doing at the center, but also, to see her in the role of demonstrator/instructor. The trainee, in effect, becomes a role model in a cultural milieu in which there are very few women who are actively involved in non-traditional roles.

#### RECOMMENDATIONS

No:15. That NDD draw up a plan of action for formalizing a collaboration with the AFN, through Promotion Feminine, and initiate introductory meetings for the purpose of explaining objectives of the women's component of the project.

No:16. That the Women's Participation Unit work with the Training Unit in making suggestions for training workshops for technical service field personnel in how to communicate skills and techniques in a non-directive manner.

No:17. That all short-term resource needs, especially in personnel, be determined to assist in the accomplishment of tasks for 1983.

No:18. That male as well as female technical support agents and personnel receive training in effective communications with an all-female audience.

No:19. That technical services teams visiting villages to explain the project activities at the centers and the importance of selecting responsible candidates make every effort to ensure the presence and participation of women in these meetings.

No:20. That the "open-door" program be extended to include and accommodate women visitors from the villages of the trainees as well as neighboring villages.

## 6. CONCLUSION

One of the most striking aspects of this project is the manner in which it is addressing the problem of lack of control over project activities at the level of execution and coordination of activities among the organization units of the various technical services. It is not easy to effectively manage an integrated rural development project and like the other productivity projects in Niger, the NDD project has, in effect, little control over the way in which the technical services execute project activities.

In March 1982 NCC initiated a joint planning activity for the purpose of engaging all project organizational units responsible for implementation activities in an examination of the issues and tasks required in providing better services to the CPT centers. Subsequent joint planning sessions have all revolved around the theme of coordinating the activities of the various services and team building in providing training and other inputs to the centers. This process seems to be taking hold and was referred to at the October 1982 Zinder seminar as being a role model for the other productivity projects. The NDD project is the only one, so far, to address the problem of an effective alternative to creating a structure parallel to existing GON technical organizational units in the delivery of services to the CPTs.

Another striking aspect of the project is the fact that neither the GON nor USAID has clearly articulated what organizational units and functions will be in place when the project ends and the relationships between these units and functions.

Plans are underway this year to more firmly engage farmers in the process since NDD staff realize how critically important it is to have the full participation of the target population. The technical services seem committed to engaging farmers in dialogue concerning how they each perceive the socio-economic milieu in which farmers make their living, how each side perceives, defines, and prioritizes needs and problems, exactly what each is capable and willing to commit to addressing problems defined by farmers, and a commitment to patience during the trial and error period in which farmers sort out their own organizational roles and functions.

A fundamental assumption is made in the pursuit of establishing a process which will allow the evolution of self-sustaining and self-generating village level organizations. It is that the delivery of credit, training, and technical support will be timely and effective.

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Boubacar Ibrahim  
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Amadou Ali Beidi  
Boubabar Seyni  
Marayi Maidawa  
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Ide Yacouba  
Noma Seyni

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Agricultural Coordinator-Kollo  
Agricultural Coordinator-Say  
Agriculture-Filingue  
Agriculture-Filingue  
UNCC- Filingue  
UNCC-Kollo  
UNCC-Ouallam

CPT Level

Labo Moussa Gaine  
Mohamed Boubacar  
James Boubacar  
Alicou Dankarami  
Maigari Ibrah  
Hassane Bania  
Amy Wilson  
Ann McPhail  
Dale Downes\*

Director, Simiri(Ouallam)  
Director, Filingue (Chiwil)  
Director, Filingue (Fandou)  
Director, Kollo (Kone-Beri)  
Director, Ouallam (Tondikiwindi)  
Director, Say (Gueladjo)  
Peace Corps Volunteer, Kollo (Boula)  
Peace Corps Volunteer, Ouallam (Simiri)  
Peace Corps Volunteer, Ouallam (Simiri)

Cooperative Level

Female cooperative members  
Cooperative President

Toula  
Ichtiguine

FIELD TRIP TO OUALLAM ARRONDISSEMENT

Labo Moussa Gaine  
Boubacar Ibrihim  
Noma Seyni  
Hima Sahabi  
Diakite  
Village leaders, GM leaders,  
CPT formers trainees 1979 (2)  
Village leaders, GM leaders,  
CPT former trainees 1982 (couple)  
Cooperative leaders

CPT Director, Simiri  
Agricultural Coordinator, Ouallam  
UNCC  
Literacy  
Animation  
Village of Guessi  
  
Village of Tolkobaye Fandoubou  
  
Village of Tolkobaye Koirategui

\* Dale Downes did not attend the seminar. Discussions with him took place January 31, 1983.

SCHEDULE OF MEETINGS AND INTERVIEWS

	1983
Arrival of Richard Roberts, Development Administration Specialist and Team Leader	January 11
Arrival of Theresa Ware, Social Scientist	January 12
Briefing by Jim Lowenthal	January 12
Initial Meetings and informal discussions with some NDD staff.	January 13
Meeting with NDD Director, Technical Director, and NDD staff	January 13-14
De-briefing of Agricultural Credit Advisor with USAID Mission Director	January 14
Meeting with USAID/DEO	January 14
Meeting with USAID/DEO, Program, and ADO offices	January 17
Lossa II Workshop (A) Interviews with 1) Female cooperative members of Toula: 2) President of Ichiguine Cooperative, 3) CPT chefs. 4) Arrondissement coordinators, 5) departmental heads, 6) two female Peace Corps Volunteers 7) Arranged field visit to Quallam arrondissement with arrondissement coordinator	January 17-22

Final de-briefing of Agricultural Credit Advisor with USAID/ADO, USAID/NDD Project Officer, and Credit Management Specialist	January 21
Field Trip to Ouallum: Theresa Ware Richard Roberts, Tony Doggett, USAID/DEC	January 25
A) Planning meeting at CPT in Simiri with field team: CPT chief, and arrondissement coordinator.	
B) Briefing meeting with Adjoint to Sous-Préfet in Ouallam.	
C) Meetings/Discussions with: 1) UNCC 2) Animation 3) Literacy	
D) Village Meetings/Interviews: (2 Villages) 1) GM members 2) Returned CPT trainees: 2-1979 graduates, 1 1982 graduate and his wife 3) Cooperative leaders/members	
NDD Staff Interviews (continued)	January 26
Credit Management Specialist de-briefing with USAID Mission Director	January 27
Arrival of Douglas Barnett, Agricultural Economist	January 31
First Meeting with GON team members	January 31
Meeting with Monsieur Humbert, Ministry of Rural Development, Monitoring and Evaluation Unit	February 3
De-briefing with NDD Project Director and Project Officer	February 7

Debriefing with USAID Mission

February 7

Debriefing with MDR/M/E and  
MDR evaluation team members

February 8

Meeting with L. Seagal  
MP

February 9

Draft Report

February 12

APPROPRIATE TECHNOLOGY: THE CASE OF ANIMAL TRACTION  
AND THE NIAMEY DEPARTMENT DEVELOPMENT PROJECT (NDDP)

C. I. Douglas Barnett, Agricultural Economist

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logical settings, etc.) the exact effect of any particular combination of these variables on crop productivity is unknown when a new technological package is introduced. For this reason, Agronomic and/or Farming System Research (FSR) is performed, and appropriate modifications made so that a package can be designed for optimal performance in any given set of conditions.

However, in past projects involving the introduction of animal traction, research station experimentation, performed without including farmer participation, resulted in packages that had not been completely verified at the farm level. In a recent evaluation of animal traction packages and performed by Sargent, Lichte, Matton and Bloom, it is stated that (quote, page 61)

"Our analysis shows that the benefits to farmers from animal traction have been quite variable, often falling well below expectations.

The expected benefits from animal traction have often been based on analyses of "maximum potential benefits".... "However, such studies rely on experiment station trials rather than on-farm testing, and thus tend to exaggerate the benefits which might reasonably accrue. The examination of 27 projects,....."disclosed a number of problems which largely explain the modest level of benefits achieved to date from animal traction programs. One of the most important problems is the lack of improved farmer-tested (author's emphasis) bio-chemical production technology, which is needed to complement the mechanical technology, of donkey and oxen cultivation. Farm-level constraints and weak supporting services also inhibit the adoption and effective use of animal traction."

#### The Problem

For the most part, it appears that the Niamey Department Development Project (NDDP) fits the pattern described above.

The package has not been adequately tested under realistic production conditions on producer farms in the Niamey Department. The conclusion reached in this evaluation is that,

1. There is no conclusive data to indicate that the current agricultural technology package represents the best set of practices for each of the agro-ecological zones comprising the NDD project area.

2. There is circumstantial evidence to suggest that it may

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1. There is no conclusive data to indicate that the current agricultural technology package represents the best set of practices for each of the agro-ecological zones comprising the NDD project area.
2. There is circumstantial evidence to suggest that it may

not be the best package for certain zones; and that it appears to be profitable in those zones only in years of normal rainfall; and

3. Until future farming systems research can be performed, the package may be considered marginally acceptable in those zones due to the income made possible from non-agronomic activities such as cartage and oxen resale:

The following two sections explain how and why this conclusion was derived. The third section briefly summarizes and lists the author's recommendations for follow-on activities.

Note: Recently, a number of articles have emerged in the literature regarding the efficacy of animal traction. An excellent synthesis of them was made by Dr. Fran Stier, former REDSO/WA Anthropologist, and appears in Annex 3, titled "Farming Systems Analysis", of the recent USAID "Farmer Equipment Enterprises Development "(FEED) PID: Since much of the analysis of animal traction has already been formed by Dr. Stier, only the highlights will be presented here.

#### Results From the 1982 Agricultural Season.

In this section, the author will explain the (limited) results of the 1982 season and relate it to the utilization of the technical package. Due to the manner in which data was collected and presented in past project years, it was difficult to make direct comparisons with data from 1982. For this reason, 1981 was excluded for Tables 1 - 2. Thus, any conclusions drawn here regarding the package techniques should be considered tenuous since only one year's worth of data is being examined.

Tables 1 through 4 show the results of the utilization of the NDDP technical package components for the 1982 season. Several biases are inherent in Table 1. First of all, it excludes those ex-stagiaires who had either abandoned their fields or migrated out of the region. Thus, the data is probably biased towards the better farmer. Second, the tables may contain some errors, particularly for Filingue in 1982 (there were too many inconsistencies with it compared to the 1981 data). The Ouallam data was incomplete for 1981 (10 trainees whose files were stolen were excluded). Unfortunately, the data was not clear as to how many people were in this category. Table 1 shows the percentage utilization of the individual recommended practices. Table 2 shows the cumulative totals of those farmers who are using the techniques. These tables will also appear in the 1982 NDDP Annual Report. Both

tables are based on the same data, but the results are stated differently.

Given these caveats, Table 1 shows us that for both Kolo and Ouallam arrondissements, approximately 60% of the ex-stagiaires used the scarifiage (using oxen traction for land preparation) in 1982. In Kolo, and Filingue, though, the use of the oxen for the 1st weeding was lower—around 27% and 54% respectively. Delgado and McIntire, in their study of oxen traction use, thought that animal traction would be most advantageous for crops that required extensive seedbed preparation. In the sandy, fragile soils of Filingue and Ouallam, land preparation by the oxen penetrates no more than a few centimeters into the soil (to break the crust). Also, land preparation is performed at the end of the dry season when forage as animal feed is at its seasonal low. Thus, weakened by lack of food, the oxen may not adequately perform the land preparation activities. Nevertheless, the figures here seem to indicate that the farmers use the oxen land preparation. In other studies (Barret et al; Sweetman, per comm.) it was noted that only farmers who have had a certain number of years of experience utilize their oxen for mechanical weeding because the inexperienced oxen more easily damage the crops when passing between the rows. This view is not refuted by the data. Also, in all three districts, the utilization of the oxen for the second weeding was lower than for the first weeding.

Fertilizer usage was fairly low this year (no more than 40% in any of the arrondissements) due, in part, to the lack of rains. However, the relatively larger yields (Table 3) obtained in Kolo are also due in part, to the carryover effect of a large phosphate application made last year.

Having received a 30,000 CFA/month stipend in 1980, the Kolo stagiaires were able to save enough to purchase the full recommended dosage of fertilizer for 1981 (150 kg of phosphorus in year 1, followed by 35 kg in later years). The 1981 stagiaires received a lower stipend (20,000 CFA/month), so they had fewer resources available for fertilizer purchases for this year, in addition to the low rain fall. Also farmers are now required (since 1980, see below), to make cash payments for fertilizer. At this point, it is difficult to determine the exact effect that this requirement has had on fertilizer purchases though one could say that the method of requiring cash payments would discriminate against the poorer farmers.

TABLE 1.

The Proportion of Ex-Stagiaires Utilizing  
the Improved Cultural Practices by Technique

	Year	Sample size	Selected seeds	Fungicide	Scarifiage	Correct seed density	Manure	Phosphate	Urea	1st Mechanical weeding	Proper Thinning	2nd Mechanical weeding	Rotation	Total	% Graduates Farming
<u>ARRONDISSEMENT</u>															
Filingue	1982	37	81	62	35	38	37	11	6	27	22	19	8	29	67
Kolo	1982	35	77	83	66	74	91	37	29	54	63	29	0	54	88
Ouallam	1982	35	94	63	86	74	80	40	34	80	86	74	40	68	63
TOTALS		107	84	89	59	62	76	29	21	53	56	40	16	52	71

TABLE 2.

The Cumulative Proportion (or percentage) of ex-stagiaire's who used at least one approved agronomic practice on millet for 1982.

Arrondissement	Number of ex-stagiaires who applied _ 1 technique	-----The number of techniques applied-----										
		_ 1	_ 2	_ 3	_ 4	_ 5	_ 6	_ 7	_ 8	_ 9	_ 10	_ 11
Filingue	37	100	73	51	38	27	24	22	16	8	5	3
Kolo	35	100	97	94	86	69	63	46	29	9	6	0
Ouallam	35	100	94	91	86	86	86	74	60	40	26	11
All Arrondissements Total	107	100	88	79	69	60	57	47	35	19	12	5

TABLE 3.

Millet Yields For 1982

<u>Arrondissement</u>	<u>Year Graduated</u>	<u>Sample Size</u>	<u>Yield (Kh/ha)</u>
Filingué	1979	14	222 (164)
	1980	18	202 (161)
	1981	18	220 (170)
Subtotal		50	215 (162)
Kolo	1980	17	990 (477)
	1981	18	672 (334)
Subtotal		35	827 (435)
Ouallam	1979	5	544 (166)
	1980	8	204 (273)
	1981	14	463 (323)
Subtotal		27	401 (307)
TOTAL		112	450 (400)

<sup>1</sup>Standard Deviation in brackets ( ).

TABLE 4.

Ex-Stagiaire Millet Yields Over Time

(kg/ha)

<u>Year</u>	<u>Filingué</u>	<u>Kolo</u>	<u>Ouallam</u>
1980	591 (294) <sup>1</sup>	890 (443)	234 (104)
1981	290	851	584
1982	215	827	401

<sup>1</sup> Yields in parenthesis are controls for 1980. Controls were not available for 1981 and 1982.

Overall package use varied between arrondissements from 29 to 68 (an average of the percentage utilization of the package techniques summed across all activities). In total, no more than 52% of all the techniques were used by the ex-stagiaires who farmed. Table 2 shows the distribution of the number of techniques used by the ex-stagiaires. An interesting feature is revealed here - the total number of techniques used by the entire group is fairly evenly distributed - some ex-stagiaires are making much greater use of the package than others.

The utilization rate of techniques by the farmers, according to Stier, is actually somewhat higher than those found in other Nigerien productivity projects, attributed to the unusually intensive training received at the CPT's (Stier:17). However, at the current rate of no more than 55% utilization, an explanation is needed to show why the utilization is not higher.

It was already mentioned that close to one-third of the ex-stagiaires had left farming in 1982 for Filingue and Ouallam. In total, 12% migrated out of the region and another 21% stopped using the technical package.

Stier attributes the lower number of Filingue and Ouallam's farming stagiaires to the fact that:

"Much of the northern part of the project zone is very marginal for agriculture; for example, Ouallam has seen 11 drought or serious food shortages in the last century. In such areas, off-farm employment and periodic migration necessarily supply a larger portion of income than in areas better suited to agriculture;" (Stier:17).

The end product that is to be the result from package utilization-higher yields-did not materialize in two of the three arrondissements. Millet yields of only 215 kg/ha were realized in Filingue and Ouallam.<sup>1</sup> Although the package yields were higher than the control yields (591 vs. 294, 234 vs. 104) in 1980, the absolute value of yields (except for Kolo) was, overall, low. As discussed below, it is difficult to economically maintain the technological package under such circumstances.

<sup>1</sup> In all fairness, in the Ouallam arrondissement there are 5 ex-stagiaires who have been using 9 or more of the techniques. Together, they averaged just over 550 kg/ha, giving some indication that utilization of the package can produce higher yields.

Kolo's yield was higher -- and this was in part explained by the fertilizer purchases made last year (mentioned earlier). The fertilizer effect is evident because the class of 1980's yields were significantly much higher than the yields for the class of 1981 (990 vs. 672 kg/ha). The standard deviations show a wide yield variability as well. The coefficient of variation (stan. dev./average) ranges from .52 to .76 across the three regional average yields.

Note also that there is a great variation in yields over the three time periods: Filingue 194-591 kg/ha; Ouallam 234-584; Kolo 851-890. (Table 4). The variability is related more to climatological changes than farmer ability. This makes the return on the package less certain, a factor influencing the farmer decision to acquire the package.

Table 5 shows the measured rainfall at three CPTs for the last three years. Actual rainfall varies within micro regions of each arrondissement. The distribution of the rainfall is important, too: Ouallam was very fortunate in that though the moisture that fell was barely adequate to sustain the millet, it was very evenly distributed.

Table 5.

Rainfall for Niamey Department (mm)

<u>Arrondissement</u>	<u>CPT</u>	<u>Year</u>	<u>Quantity.</u>
Filingue	Fandou	1981	497
		1982	270
Kolo	Boula	1980	634
		1981	459
		1982	454
Ouallam	Simiri	1980	364
		1981	352
		1982	269

NDD Equipment Sales

One indirect measure of farmer acceptance of the equipment can be taken through an examination of the actual sales of equipment. Table 6 shows selected equipment and fertilizer sales for 1980 and 1981. The table shows that either inventories were

TABLE 6.

List of Selected Equipment Sales and Final Inventory for 1980 and 1981.

Material	Year	Number Sold	Niamey Department <sup>1</sup> Only sold to Stagiaires	Final Stock	Kolo sold	Filingué sold	Ouallam sold
Super Triple ) Phosphate )	1980 <sup>2</sup>	29.8 (tons)	21.8	257.0	7.25	14.3	8.25
	1981	124.4	—	375.3	31.9	26.5	65.9
Urea	1980	57.0	6.55	204.8	20.7	15.3	15.0
	1981	72.9	—	267.8	18.4	8.5	46.0
Charette bovine	1980	325(units)	90	0	119	117	89
	1981	240	60	0	80	85	75
Charette asine	1980	451	0	49	147	111	193
	1981	230	0	0	100	75	55
Bâtis de Base	1980	91	90	279	20		
	1981	281	60	378	203		
Canadiens 5-dents	1980	91	90	124	20	35	36
	1981	262	60	257	184	42	36
Houe Asine	1980	45	0	218	15	15	15
	1981	43	2	375	14	16	13

<sup>1</sup> Includes Kolo, Filingué and Ouallam Arrondissements

<sup>2</sup> N:B: 1980 includes figures for 1979 as well.  
Includes stagiaires and non-stagiaire sales:  
(30+60=90 for 1979 + 1980, 60 units 1981 stagiaires).

over-stocked (1981 phosphate sales were one-third of the year-end inventory, urea nearly one-fourth, one-fifth for houe asine, and the carts were almost all sold out) or that sales were not as high as anticipated. It is interesting to note that ox cart and donkey cart sales maintained the lowest year-end inventories in 1981 and, although Canadian 5-tooth unit sales marginally exceeded the ox cart sales, the donkey cart sales far surpassed that of the houe asine. Also, the Canadian 5-dent had the greatest number of sales in the Kolo district (184; 70%) where rainfall is slightly higher than Filingué or Ouallam. The low number of Canadian 5-dent sales in these latter two districts is perhaps indicative of the lower acceptance they have among the farmers in those areas. Without sales records from the UNCC, though, it would be difficult to verify this statement.

### Summary

In summary, the limited results of 1982 give (only) an indication that the utilization of the entire package is not very high - no more than 55% of all of the recommended cultural practices. Oxen utilization for land preparation and weeding is varied in use across the three districts. Even though the techniques are being used to some extent, the yields that were obtained did not attain the expected values, though perhaps they are some what higher than had the techniques not been used at all (Ouallam's yield of 407 kg/ha was higher than Filingué's 215 kg/ha; Ouallam had a higher percentage technique utilization. Both were surpassed by Kolo which benefitted from a fertilizer carry-over effect.)

It can be tautologically stated that the yields were lower than expected because the full package wasn't used. Rather, the more appropriate question to be asked should be, 'why wasn't the full package used?' Part of the reason could be explained by the poor rainfall. The extension service also failed to provide adequate follow-up (an infrastructural weakness, discussed below). The first reason points out the farmers' ability to adjust to the situation. Judging the quantity of rains that fell, they held back on the fertilizer. However, this demonstrates another point: the marginal ability of this region to produce crops prevents the capturing of the full effects of this package except in years when the season is good.

Second, if infrastructural weaknesses still exist, the package, though good in itself, is left without the necessary support. Third, the lack of credit (i.e. the requirement of cash payments) for fertilizer may hinder its use. However, the lack of rains may have disguised this constraint.

In short, there are too many "variables" in the "equation" to be able to adequately explain the current rate of package utilization. There are indications that the package (but not necessarily all of it) is helpful to ex-stagiaires, but the package is not necessarily optimized because of the amount of rainfall in the region, the debt level and accompanying lack of credit, and the current weakness in extension efforts.

### Technological Package Difficulties

In this section, 11 reasons are sought to explain the overall low utilization of the package by the farmers. The explanations will draw upon both project-related experiences and research findings presented in the literature.

1. One of the major problems encountered in the project is that, first of all, the original technological package was not adequately defined so that the current package has somewhat evolved out of use, but of itself, had never been fully tested. In Volume II, Annex Q, of the Project Paper, the improved practices are described for cowpeas and millet. Figure 1 is a reproduction of the recommended practices. In fact, the "Optional Animal Traction Package" shown in the figure is no longer the option but the largely predominant practice taught to the stagiaires at the CPTs. The fertilizer recommendation has been modified as well. The original recommendations were based on INRAN experimental station trials. The Ag. Sector Report of 1979 mentions that the INRAN fertilizer recommendations have a sameness about them that indicated a uniformity in soils, crops, and climate that does not exist (Ag. Sector Report, Annex C, pg. 23). Moreover, Appendix B of the same report (pg. 610) mentioned that "specific project innovations have yet to be adequately tested. . . Yields from the 1977-8 demonstration fields did not clearly evidence the efficacy of the production package.<sup>1</sup> As a result, there has been some evidence of package criticism by project staff."

From 1979 until now, package specifics still have not been tested by project technicians. In 1979 and 1980, the village level demonstration plots were poorly managed (eventually, all of the 44 aide-encadreurs hired at that time were fired<sup>2</sup>), and they were originally set up to serve demonstrations not to test the package.

In 1981, an elaborate testing scheme (16 square design, 256 combinations) was designed and put into place at some of the CPTs. However, the results became too complex to analyze the yields for any meaningful results. These results, had they been obtained, may not have provided an adequate response to the appropriateness of the package anyway, since the trial plots were small and were conducted on the CPTs rather than the farms. In 1982, three sets of agronomic

<sup>1</sup> And which included, at that time, donkey traction.

<sup>2</sup> At that time, some 10 of the 44 workers were considered competent and motivated enough to be kept on the job, but so many troubles were encountered in firing the 34 that all 44 were let go with the understanding that the good men would be rehired. By the time rehiring was to be done, these men had found other jobs.

Figure 1: Annex Q of NDD Phase II Project Paper

ANNEX Q.

DESCRIPTION OF IMPROVED AGRICULTURAL  
PRACTICES FOR PRODUCTION OF MILLET  
AND COWPEAS TO BE EXTENDED BY NIAMEY  
DEPARTMENT DEVELOPMENT PROJECT PHASE II

: Basic Practices for Millet

1. Improved Varieties  
Millet-CIVT (Possible use of HPK in northern parts of project zone)
2. Selected seed
3. Treated seed
4. Soil Preparation  
Dry hoeing immediately prior to rainy season
5. Seeding Dates  
Millet - At first rain of at least 10 mm or plant dry after June 15.
6. Optimum Spacing/Plant Density (Use of marking device)  
Millet - 1 metre X 1 metre (Thinned to maximum of three plant/pocket for a density of 10,000 plants/ha).
7. Cultivation  
1st - 8 - 10 days after seeding  
2nd - 10-15 days after first cultivation  
3rd - 10-15 days after second cultivation
8. Thinning  
Thin to three plants per hill approximately twenty one days after first rains
9. Fertilization  
-Manure or compost: six tons to the hectare (when available) spread prior to dry hoeing;  
-Phosphorous: 15 units of  $P_2O_5$  applied in the form of 34 kilos of triple super phosphate broadcast before dry hoeing  
-Nitrogen: 22.5 units in two split applications of 25 kilos each of area banded around the hills at the time of second and third weeding.
10. Rotation  
-Depending on land availability and farmer needs, 1:1 or 1:2 millet cowpeas rotation.

## II. Optional Fertilization Practices

-Phosphorous: "One time" corrective application of 65-75 units of  $P_2O$ /ha applied in the forms of 150 kilos/ha of triple super phosphate or 300-400 kilos of raw Tahoua Phosphate;

-Nitrogen: For higher rainfall areas (above 500 mm) increased use of nitrogen of up to 45 Units of N applied as described above.

## III. Optional Animal Traction Package

### A. Donkey Traction

- Donkey
- Donkey hoe
- Donkey cart
- Donkey collar

### B. Oxen

- Pair of oxen
- Five shank cultivator
- Plow
- Cart and tire repair accessories
- Yoke and Chain

### C. Seeders

trials were conducted which involved fertilizer response levels, mixed cropping, and pesticide testing. Specific testing of the package was not designed at this time because the pesticide testing program, required by the project, took up a large amount of the time on the part of the agronomic researcher and secondly, it was hoped that a successful implementation of this year's extension service would provide a base to follow ex-stagiaires for some Farming Systems Research next year. However, given the importance of the package as a key project factor, plans should have been made to test the package. In two of the three experiments, insignificant responses to fertilizer and pesticide were found to have occurred at two CPTs where rainfall was minimal. In the latter case, the lack of rain kept the insect population low. These results carry the implication that in the drier areas, little difference in yield is obtained from using the package.

2. Reaser, in 1980, however, attempted a benefit/cost analysis for each of the individual improved practices—line seeding, improved variety, fertilizer, weed control, etc.—based on experimental research station results. By valuing farm labor at 500 CFA/day<sup>1</sup>, he determined that certain of the practices were not economically justifiable by themselves (these were rotation, cowpea seed varieties, phosphate on cowpeas, weed control on millet) so that when the practices were combined, a higher crop production value was realized, but at a lower per unit return to labor. By excluding the non-profitable practices, a higher per unit return to labor is realized, although a lower total crop production value is incurred. These findings may help to explain why only a certain percentage of the techniques are adopted or utilized by the farmers especially if the labor were scarce.<sup>2</sup> Other reasons for non-acceptance are:

3. The change-over to monoculture cropping. Mixed cropping has been a traditional mode of farming because it is seen to be a means for reducing risk. A study by Norman, Pryor, and Gibbs also showed that mixed crop farming in Northern Nigeria gave higher returns per unit of labor (the constraining factor) by helping to reduce the labor bottleneck, and a greater value of crops per hectare than the pure stand crops. The mixed crop stand offers protection from insect damage and farmers have a choice of varying plant density by inter-seeding a second crop later in the season. The choice of plant density is dependent on the amount of rainfall that comes after the planting of the first crop. Generally, greater production from mixed cropping could be obtained if complimentary plant relationships exist.

4. It may be that the returns from using animal traction are minimal. In Sargent, et al's survey of animal traction projects, it was found that there was no project that positively increased income net of animal traction costs. The farmers are required to make

<sup>1</sup> The current rate is somewhere between 1000-1200 CFA/day (Sweetman per comm).

<sup>2</sup> Of course, Reaser's results would be different had a lower wage rate been chosen. The farmer may opt for the entire package if he has no alternative activity worth the shadow price of his labor.

heavy payments on the equipment during the first few years of operation when they are least experienced with the equipment. In some cases, the most desirable thing about owning the package is the ox-cart and ox which provides the farmer with a means to increase his off-season earnings, providing transportation services to his neighbors. Such a view, though, only initially benefits the progressive farmer: as animal traction units increase, the supply of ox-carts in any one region will increase. Second, the oxen serve as a form of liquid asset—they could be sold if some need for money quickly arose.

In the NDD project, in fact, the farmers have expressed interest in paying off their equipment loans immediately after the harvest (before December) in order to "get the debt out of the way". To do this, they sell some of their cereal crop and intend to make up for these revenues through the ox-cart profits earned during the dry season (Shaw, per comm.).

5. One factor in the traction package analysis for Niger that has been left unheeded until recently has been the influence of risk. Zones of the Niamey Department are subject to fluctuating rainfall both in terms of quantity and distribution. What may be an acceptable package, given that all of the environmental conditions are right, may not be acceptable in the years of drought or low rainfall. That farmers did not use urea this year in Filingue or Ouallam because of low rainfall (application can be made after planting during weeding times) means that lower yields were realized, with or without the rainfall.

Stier performed a 10-year cash flow analysis of an oxen traction farmer while accounting for risk. Table 7 summarizes the results of her analysis. Under different assumptions regarding improved millet and cowpea yields, whether labor is hired, the amount of land cultivated, the long-term view of production, adjustment for drought, and costing inputs at unsubsidized values, Dr. Stier demonstrates the variability of results.

The set of conditions as stated in Table 22 of her study would probably apply to good farmers in the Kolo arrondissement. With the higher yield, it was considered necessary to have hired labor, thus reducing the potential earnings to an IRR of .17, with no earnings realized from off-farm transportation services. Reduced results are found in Table 25 in which the Northern Zone farm production was modeled. Again, with hired labor, the IRR is .17. However, adjusting for drought, the IRR reduces to .02. In the author's opinion, case C is the scenario out of those shown that best represents the long-term situation in the northern zones of the Niamey Department. A more sobering result is that from Table 27, land is incremented by only 10% as opposed to 20% in Tables 22 and 25, and where inputs are left unsubsidized, a net loss (Stier did not calculate how much, using a fixed discount rate) is incurred. This

indicates that the farmer must increase his acreage of cultivated land if he is to sustain a production that is to be socially profitable. Here, Stier's analysis did not include a scenario, using subsidized costs, so the farmer's economic perception of the package is left unmeasured. At the high improved yield (870 kg/ha) however, (results not shown) the package is socially profitable. The ranges of results obtained here underscore the fact that a full socio-economic study is needed as an element of the FSR program in order to determine the yield level (and the minimum acreage) required to support the cost of the package.

6. The animals potentially do not receive a sufficient amount of care, so consequently, there is a relatively high mortality and sickness rate among them, as evidenced in the 1981 Annual Report (Wagner). The reasons for the lack of care can be attributed to: a) the possibility of the uneconomical cost of feeding the animals, and b) lack of instruction. In Niger, where the hierarchy of feeding proceeds along the order of men first, women second, and children third, and where grain (if fed to the cattle at all) becomes scarce during the "hungry season", it is possible that cattle will receive poor diets (i.e., little or no grain), contributing to animal health breakdown. Also, at the end of the dry season when land preparation is started, forage is scarcest. Second, the instruction given at the CPT regarding animal care may not be adequate (Abrams, per. comm.). The instruction given to the stagiaires seems to have been concentrated more on animal health (medicines, vet care) than on nutrition. Also, since the stagiaires worked with several sets of animals on the CPT, using a number of different techniques, they never really learned the work capacity of the animals, and consequently may overwork them on their fields the following year, while in the process of becoming more experienced with the cattle. Consequently, the potential feed costs (which have not been measured for this project) and oxen sickness will reduce farmer income; first from higher operating costs, second, from lower working power. Both project officials and Peace Corps volunteers made mention of the fact that the oxen are considered to be a status symbol in the village. However, these same individuals reported seeing maltreatment of the animals, most often in the form of beatings in attempting to get a tired beast to do some more work.

7. Students do not appear able to match their needs with the available equipment package. Last year (1981), for example, students were required to purchase an entire animal traction unit, including a 10 inch plow, an implement not necessary in certain areas. This year, all of the students at two CPTs (Boula and Chiliwi) wanted to buy the unit; however, the supply manager refused, knowing that it would be unnecessary for their home fields. The purchase of unnecessary equipment would reduce overall acceptance of the package. Low sales of equipment, not shown in Table 2, to non-stagiaire farmers

TABLE 7

Summary Results of IRR Oxen Traction Analysis

<u>Reference Table</u> 1/	<u>Assumptions</u>	<u>IRR</u>
22	Kolo Arrondissement 870 kg/ha millet (improved)/ 394 kg/ha Cowpea (improved) 6.18 ha (initially); 7.4 ha after 3 years, hired labor, no off-farm work, unsubsidized costs.	.17
23	Smaller Farm, Kolo Arrondissement, same productivity for millet and cowpeas. Some hired labor, no off-farm work, unsubsidized costs 4 ha (initially) to 4.8 ha after 4 years	.13
25	Northern Zone Farm 6.18-7.4 ha (improved) 600 kg/ha (improved) a. no labor hire b. labor hired c. drought adjusted Unsubsidized costs	.28 .17 .02
27	Same as above except 6.18-6.8 ha. Unsubsidized costs 700 kg/ha (improved)	Net loss

<sup>1</sup> Source: Stier, F., Farming Systems Analysis, Farming Equipment Enterprises Development (FEED) PID, Annex C, September 1982.

indicate that, in fact, certain pieces of the original equipment package offered to stagiaires have not been purchased by the community.

8. Donkey traction was also considered to be a viable option, but for several reasons it appears to have taken second place to the less than optimal oxen package. When the first sets of donkey equipment were manufactured, a soft metal was used which led to higher rates of equipment breakages, thus giving the equipment a bad reputation. Donkeys, although cheaper to maintain, do not have the same resale value as oxen, are harder to sell if sick, and take longer time to plow a field. The plowing depth by both oxen and donkeys is the same, however, for the sandy soils; the extra depth (power) provided by the bulls is not necessary for most of the region. A newer donkey model has been designed, but whether the farmers will accept it is not yet determined.

9. One of the other blockages to the introduction of the oxen equipment has been the relatively poor performance of the NDD follow-up in reaching the farmers. A critical part in the implementation, the follow-up service has suffered from a lack of manpower, vehicles, and transportation coordination which has hindered the agents from reaching the farmers. As previously mentioned, the original set of encadreurs were fired. In 1981, funding for Phase II of the project was not received until mid-year, so there were no hired project agents. Thus, the 1981 follow-up service at that time consisted of Debbie Wagner, the Monitoring/Evaluation manager, and Ibrah Innarbah, her assistant. They made contact with the stagiaires, but more for the reason of collecting data for the annual report than for offering advice. In 1981 and 1982, GON was supposed to have supplied extension agents for the follow-up service, but failed to do so. For this reason, NDDP was forced to provide its own agents, who proved to be inadequate by training and insufficient in number for the job. In 1982, NDDP hired 7 agents, one for each CPT. At the end of 1982, 3 were fired for incompetence. During the season, each agent was to have made contact with the ex-stagiaires. Table 8 shows the breakdown of agents and their contacts.

TABLE 8

1982 Extension Agents and number of Contacts

<u>Arrondissement</u>	<u>Number of Villages</u>	<u>Number of Contacts</u>
Filingué	33	51
Kolo	37	38
Ouallam	35	44

Source: NDDP records.

It is apparent from the table that each extension agent would have to reach a large number of villages in order to reach all of his contacts. Since project vehicles were located at arrondissement headquarters, they were difficult to obtain for extension use since the agents were based on the CPTs. The result was that approximately half the stagiaires in Filingué received only one visit for the entire 1982 season; the support for Kolo was nearly as bad. The farmers in Ouallam had contacts amounting to little more than one a month. The proposed project rate was two visits a month. The lack of infrastructural support is harmful to package utilization. A broken piece of equipment, a needed piece of advice, care for the bulls, etc., are examples of critical services needed by the farmers. Failure to provide these services reduces farmer effectiveness and, potentially, his yields.

10. A tenth item related to the project's technical package is the threshold size of farms needed to permit the farmer to cover his increased operating costs.<sup>1</sup> The NDDP project paper points out that "the curriculum of the CPTs has not yet shown it can furnish support services to project participants, and in a zone where roughly 70-80% of holdings are probably too small for ox-drawn traction to be profitable. In parts of the project zone, northern Ouallam and Filingue, there are the added risks of crop failure due to low rainfall, and the possibility that increased tillage would exacerbate wind erosion." (Annex C, page 48).

The annex continued on by saying that the CPTs had fortunately recruited students from the larger farms, and that efforts were being made to make recommendations specific to each stagiaire's fields. However, as of 1982, there is little evidence to show that the recommendations have been made: the extension service has not been successful; no measurements of stagiaires', farm size was made for the 1982 season (individual plot sizes were measured so that yields could be calculated), and the packages are still distributed, en masse, to the CPT stagiaires.

11. Lastly, the environmental effect of the traction units should be noted. Traction packages can be used either for intensification or extensification of agriculture. If greater (deeper) land preparation is needed per unit of land, the oxen would provide the power to accomplish the task; on the other hand, it could permit the cultivation of a greater land area. Provided that land is not a constraint, extensification poses no problem. In an area where land is in short supply, and fallow plays an important role in maintaining soil fertility and/or conserving moisture, the introduction of traction equipment will pressure the farmer to cultivate more land (he needs more land to pay off the equipment costs), thus reducing the fallow, and leading to environmental degradation.

<sup>1</sup> Current estimates as seen in Stier's study put the threshold size at about 6 ha. for oxen, 4 ha. for donkeys. However, only 33, 34, and 27% of the farms are 6 ha. or greater in Kolo, Filingue, and Ouallam arrondissements, respectively. (Table 1, Annex A, NDDP Project Paper).

Partly because of subsidized agricultural inputs, Nigerien hectarage of millet and sorghum increased from 2,194,000 ha. to 3,072,000 ha. and from 567,000 to 768,000 between the years 1972 and 1980, respectively (Mukherjee). If the land is well manured and/or fertilized, the reduced fallow may not be as harmful. However, this is not the case for the Niamey Department. GON officials have expressed concern over the environmental degradation and decline in yields. Certainly; the introduction of traction equipment here does not help the situation.

SUMMARY

A brief presentation was made of the 1982 agricultural season results, demonstrating that farmers have, up to this point, used no more than 52% of the technical package. In one district, it was less than 25%. In explaining why these poor results were obtained, the following reasons were suggested: 1) the package (however defined) has, from as early as 1979 until now, not been tested at the farmer level. Previous attempts at testing were either too complex, or the results were attenuated by poor management; 2) the original package included several cultural practices and had traction listed optionally; however, the main emphasis of the CPTs, since their inception, has been upon the oxen traction unit; 3) the economic profitability of the traction was explored by Stier in a previous study. She found that under drought conditions (1 out of 3 years) the internal rate of return is reduced from 17% to 2%. The package is not socially profitable at unsubsidized costs; 4) the package, under good field conditions, has produced better than average yields, but risk is increased since the farmer must farm in pure stands rather than mixed; 5) according to original NDD project data, close to 70% of the farms in the region, which is already considered to be marginal for agriculture, are potentially too small to viably sustain the package. Farm expansion, on a regional basis, would cut down on fallow acreage, and contribute to environmental degradation; 6) the advantage of deep plowing provided by the oxen is not exploited in most of the Niamey Department. The fragile, sandy soils require only a "scarifiage" for preseeding land preparation; 7) while lacking concrete data, there is evidence indicating that the oxen, relatively unknown as a work animal in the region until recently, are not being properly cared for. This leads to a decline in the oxen's work performance; 8) one major advantage of the oxen, yet currently unmeasured and hence quantitatively unknown in magnitude, is the revenue provided to the farmer by using his ox-cart earned by providing transportation services to neighbors. The oxen are also viewed as a status symbol by villagers. Thus, the farmer may accept the package for non-agronomic reasons; 9) the requirement of cash payment for fertilizers certainly does not help the success of the package which, in part, is largely dependent upon that input as a means to increase yields; 10) all of the above reasons are balanced out by the fact that the failure of the project to provide follow-up service has a large but indeterminate impact on the farmer's ability to use the package; and 11) NDD personnel are aware of the current potential shortcomings of the technological package and poor extension service. Plans have already been made for the 1983 agricultural season to test various cultivation practices, including double oxen traction, single oxen traction, donkey traction and non-animal related practices. Plans have also been made to strengthen the extension service.

CONCLUSIONS

Given the above reasons, the following conclusion is thus derived:

1. There is no conclusive data to indicate that the current agricultural technology package represents the best set of practices for each of the agro-ecological zones comprising the NDD Project area.

Reason: The package has not been tested at the farmer level, and the 1982 survey results showed mixed results; package utilization is less than 55% and low yields were obtained. However, credit availability and failure of the follow-up extension service influences this outcome.

2. There is circumstantial evidence to suggest that it may not be the best package for certain zones, and that it appears to be profitable only in years of normal rainfall in those zones.

Reason: General discussion provided by recent literature and from Stier's study. Most of the Niamey Department has only marginal agricultural land.

3. Until further farming systems research can be performed, the packages may be considered marginally acceptable in those zones because of income earned from non-agronomic activities such as cartage and oxen resale.

Reason: There is no other substitute. Farmers can sell their oxen at any time. It is conclusive, at this point, to determine whether the full benefits estimated in the original Project Paper will be realized. Future benefits will depend on any potential redefinition of the agricultural package, the realized yields, and the acceptance rate that it has among the farmers.

### RECOMMENDATIONS

1. No greater recommendation could be given other than that which NDDP personnel already plan to implement: that of researching the technological package. A thorough economic analysis (including a review of Stier's work) of the package should be performed while making allowances for yield risk. Additional economic studies of mixed cropping studies should also be included. Continued and initial coordination with INRAN, ICRISAT and Niger Cereals Research project should be maintained so that a duplication of effort will be avoided and so that complementary skills will be integrated.
2. The CPT curriculum should be revised to include element (re: emphasis) on animal feed and prophylactic care as well as demonstrating to the farmers individual cultural practices separate from the animal package so that if the oxen (or donkey) component fails, the farmer does not abandon the whole package. In some animal traction projects, the farmer perceives that all of the practices are lumped together so that if one part does not work, the farmer tends to abandon the whole package.
3. Careful implementation of the APS project, in regard to the Niamey Department, should be monitored. The basic underlying premise of that project is that there exists a viable technological package for which APS can provide infrastructural support. That the one currently suggested for NDDP is in doubt has implications for APS, as well as the necessity for potentially revising the FEED PID. All three projects (NDDP, FEED, and APS) are complementary, and build upon the idea that a viable agricultural package exists. The oxen traction might be appropriate for the southern regions of Niger; it is not known, with certainty, that it is appropriate for the northern regions.
4. A credit study is needed to determine to what extent the cash payment requirement by farmers to purchase fertilizer affects their ability and willingness to make those purchases.
5. Lastly, it is at this point, unfortunate to realize that this project has been operating for nearly five years now, yet without concrete assurance that the key basic project component (the traction package) is a profitable and useful tool for the farmers in the long run. Individuals involved with future agricultural projects will certainly need to keep the lessons learned from this project in mind.

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GON CONTRIBUTION TO THE NDD CREDIT  
AND OPERATING ACCOUNTS AND NDD RECURRENT COSTS

C.2. Douglas Barnett, Agricultural Economist

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ACRONYMS

CPT	Centre de Perfectionnement Technique Farmer Couple Training Center
FNI	Fonds National d'Investissement
GON	Government of Niger
LOP	Life of Project
NDDP	Niamey Department Development Project
RCC	Recurrent Cost Coefficient

Report on the GON Contribution to  
Project Finance and Recurrent Costs  
for the NDD Evaluation.

Background

The recent decline in the demand (and price) for uranium, Niger's principal export commodity, has adversely affected Nigerien government revenues and the growth of the economy. In 1979, uranium's contribution to the National Budget was at an all time high of 43%, dropping to a low 12% in 1982. The country's real growth rate has dropped from 12% in 1979 to a rate currently estimated to be less than one per cent "per annum". As a result of the uranium revenue decrease, GON planned investment has fallen off dramatically. Table 1 shows the trend of the national investment fund in relation to the GON budget.<sup>1</sup>

Table 1.

National Investment Fund (FNI) Trends

FY 1977-FY 1983 (Billion CFA)

Year	GON'S National Budget	Planned FNI	Realized FNI	Realized FNI as % of Budget
1977	34.1	8.0	10.0	29
1978	43.4	13.0	18.1	42
1979	56.7	21.0	24.1	43
1980	72.1	26.0	24.6	34
1981	80.6	26.0	13.0	16
1982	93.8	26.0	10.4	11
1983	81.2	7.0	-	-

Source Toh, K. Ibid

Uranium earnings provided close to 100% of the FNI funds. It is from these funds that GON contributes its share of USAID and other donor related projects. Note that planned investment has fallen from 26 billion CFA to 7 billion CFA.

Funding Troubles

In a letter (No. 078/USAID; Nov. 2, 1982) recently sent to the Minister of Rural Development, USAID's Director for the Niamey

<sup>1</sup> This section of the paper draws from Toh, K. "The Current Macroeconomic Situation of Niger", presented at the Sahel Mission Director's Conference, Niamey, December 1982.

Mission pointed out existing problems regarding the GON contribution to the Niamey Department Development Project. As per Project Grant Agreement (pg 86) GON is to "replenish the Project's operations (and credit) account at the National Treasury by November 30 of each year on the basis of a cash needs request submitted by the Project Director to the Ministry of Rural Development by May 31 of each year". GON provided only 50 million FCFA out of a requested 181 million CFA for FY '82 for the project fund operating account; and effectively contributed only 27 million<sup>1</sup> out of 102.4 CFA amount needed for the Project credit fund account. "The 1982 contributions still due, therefore are 131 million FCFA for the operating account and 75.4 million for the credit account". (Letter No. 078/USAID). The November 30 due date for the 1983 GON deposit has also passed when an additional 200.4 million FCFA was requested for deposit. Thus, GON is technically 406.8 million CFA (131 + 75.4 + 200.4) in arrears. Moreover, USAID/Niamey temporarily provided funds of \$958,000 from an unused construction line item to cover local cost items that should have been provided for by GON.

#### The Purpose of the Study

Thus, the purpose of this paper is to explore the various options available to USAID and GON to determine the best course of action given the current circumstances. The following questions are thus posed:

1. How much money and resources has GON actually contributed to the Project so far?
2. What is the likelihood that GON will be able to complete its payments?
3. What are the alternatives regarding the re-structuring of the GON and USAID funding of the project components?
4. Given the nature of the project, what are the estimated recurrent costs for operating the project (in particular, the CPTs) when the project is terminated? What other options are there regarding the CPTs?

The report is organized as follows section II will respond to questions 1 and 2. Section III responds to question 3, Section IV to 4. Lastly, Section V. provides the summary, conclusions and recommendations.

<sup>1</sup> As it turns out, this amount is actually about 52 million CFA due to subsidies paid in 1981.

## Section II

### /ctual GON contribution to date:

In this section, we will attempt to estimate what the actual GON contributions to project have been according to the original and projected figures (based on 1982 expenditures). Second, we will explore the probability of the GON making future contributions.

Table 2 shows the contributions of both parties to date by Grant Agreement category. Not shown in the Table is the sum of 35 million CFA that was deposited by GON as an advance for project expenses, as it gets depleted, USAID reimburses this fund. Consequently, this fund will not be exhausted until the end of the project at which time GON will not receive reimbursement, and the 35 million will be counted as a part of GON contribution.

Table 3 shows actual vs. projected expenditures. It is possible to make a direct comparison: the Grant Agreement wasn't signed until mid-1981, changing the budget for the first year which was to have been based on an entire agricultural season. Nevertheless, the table indicates that AID's expenditures for one and a half years (August '81 - December '82) is approximately one and a half times the first year's budget (3.2 million vs. 2.0 million). The major expenses were in the areas of long term assistance, commodities (equal to the Year I budgeted amount), construction and "other".

It is also clear from the Table 3 that GON hasn't matched the first year's budget. GON's total contribution of 77 million CFA falls short of the budgeted 110 million CFA. The shortfall in GON expenditures was picked up by USAID. Most of the figure listed in the USAID "other" category in Table 2 was used for covering GON costs.

1/ Actually, project related expenses paid for out of the 35 million CFA are charged to the USAID.

Preliminary Results: Table 2 - USAID and GON Contribution to NDD<sup>1</sup> through December 31, 1982

	Total USAID \$1000 (1)	Budget GON (1000) (2)	GON CFA equivalent (3)	Actual Expenditures		Balance	
				USAID 1982 <sup>2</sup>	GON 1982	USAID	GON
				(4)	(5)	(6)	
I. TA Personnel	2.484	-0-	-0-				
A. Long Term	1.940			353	-0-	2.122	-0-
B: Short term	544			9			
II. Local Personnel	62.4	1.077	215.400	13	9.239	49.4	206.161
III. Training	422.2	520.1	104.020	40	4.486	382.2	99.534
IV. Commodities							
A. Equipment/Material	5.055.7	725.3	140.060	1.206	434	3.849.7	144.626
B. Subsidies		2.417.5	483.500		52.629		430.871
V. Construction	2.309	70.	14.000	889	4.409	1.419	9.591
VI: Other	1.222	284	56.800	618	6.480	604	50.320
Subtotal	11.554.3	5.093.9	1.018.780	3.128	77.677	8.426.3	941.103
Imprevu	400	150	30.000	37	-0-	363	30.000
Inflation	1.627.7	1.576.1	115.220	-0-	-0-	1.627.7	115.220
TOTAL	13.582	5.820	1.164.000	3.165	77.677	10.417	1.086.323

1 Source: NDD accounting records. Includes Expenditures for August-December 1981

2 Exchange rate: 200 CFA/1.00 as per original Grant Agreement.

TABLE 3.

Projected and Actual Expenditures for Year 1 and 1982

Cost Input	USAID Projected Year 1	USAID Actual <sup>2)</sup> 1982	GON Projected Year 1	GON Actual 1982
I. TA Personnel	(\$1000) 296	(\$1000) 353	(CFA 1000)	(CFA 1000)
A. Long Term			-0-	-0-
B. Short Term	296	9		
II. Local Personnel	13.2	13	25 780	9 239
III. Training	27.7	40	9 200	4 486
IV.. Commodities	1 207.6	1 206	27 720	
A. Equipment				434
B: Subsidies			22 000	52 269
V. Construction	406.0	889	8 000	4 409
VI. Other	-	618	11 520	6 480
Sub-total	1950.5	3 128	104 220	77 677
Imprevu		37		-0-
Inflation	49.4	0	6 000	0
TOTAL	2 000	3 165	110 220	77 677

1) Year: 1 1981 Expenditures as per Grant Agreements, however, the Project didn't start until mid-1981.  
The projection and actual expenditures are 6 months out the phase with each other.

### Ability of GON to Complete Original Commitment to Funding

The funds for GON counterpart financing of projects come from the Fonds National d'Investissement (FNI). Table 4 shows the relative amounts of FNI funds invested into different sectors of the economy for 1980. Note that in 1980 education had the largest increase in funding over 1977-1979, followed by agriculture. In total, though, agricultural investments were less than 9% of the total FNI investments.

A reduction from 26 billion FCFA, however, to 7 billion CFA will require substantial cuts. (See Table 1). Lacking better data it could be assumed that agricultural investment will not increase beyond the 1980 level of 2.1 billion CFA. More likely, it will be reduced, but perhaps not as severely as some of the other categories. The range of potential values for the agricultural investment budget thus is estimated to vary from .63 billion CFA (9% of 7 billion) to 2.1 billion. It would probably be more realistic to say that the agricultural budget might be at around 1.05-1.4 billion CFA or 15-20% of the total FNI.

Given the obligations that GON has to other agriculture projects (over 7.3 billion CFA worth of exterior agricultural aid in 1980), it is difficult to see how GON will be able to continue its previous level of commitment in light of the current, real budget constraint.

Consequently, a revision of the project funding may be needed, including a shortening of the LOP or the cutting back of some services. These various options are explained next.

### SECTION III

#### RESTRUCTURING THE CONTRIBUTIONS

Based on the input of Jim Lowenthal, USAID Project Manager for the NDDP and the GON project director, budget projections for the remainder of the project's life were made. The cost projections for the various project units were based on actual 1982 expenditures and partial budgeting calculations involving such items as personnel, animal feed consumption, vehicle use, etc. Concomitantly, based on an updated exchange rate set at 330 CFA to US \$1.00, an estimate was made as to how much further USAID could support the project without any further contribution from GON, with the exception of equipment subsidies, which are to be deposited into a credit fund account (explained below). The results are shown in Figure 1 and Tables 5-6.

TABLE 4.

Répartition des dépenses du Fonds National d'Investissement  
par secteur d'intervention: Année 1979/80.

SECTEURS D'INTERVENTION	: Reports : 77/78/79 :	: FNI : 1980 :	: TOTAL
<u>Secteurs directement productifs</u>	<u>1 012</u>	<u>5 304</u>	<u>6 316</u>
Agriculture, Elevage forêt	112	2 000	2 112
Mines	-	262	262
Industrie	855	369	1 224
Energie	32	1 277	1 309
Commerce, Tourisme	13	1 396	1 409
<u>Infrastructure économique</u>	<u>566</u>	<u>2 669</u>	<u>3 235</u>
Routes et ponts	151	1 109	1 260
Télécommunication et information	264	638	902
Transport et navig. aér.	151	922	1 073
<u>Infrastructure sociale</u>	<u>1 825</u>	<u>7 559</u>	<u>9 384</u>
Santé	364	216	580
Enseignement, format, jeunesse	694	6 593	7 287
Hydraulique	498	389	887
Habitat	269	361	630
<u>Infrastructure administrat.</u>	<u>1 180</u>	<u>2 942</u>	<u>4 122</u>
<u>Divers et non ventilées</u>	<u>194</u>	<u>660</u>	<u>854</u>
<b>TOTAL DEPENSES FNI</b>	<b>4 777</b>	<b>19 134</b>	<b>23 911</b>

Source: Min . Plan, D.P.P.

Service, Planif. région: FNI 1980

Figure 1

Determination of GON Grant Agreement Contribution Over LOP and USAID Increase in Contribution Due to Change In Exchange Rate

Total estimated GON contributions

1.	<u>Year</u>	<u>Fond</u>	<u>Amount</u> (1000 Cfa)
	1981	Revolving fund	35,000
	1982	Operation Account	50,000
	1982	Traction Subsidy	52,600
	1983	Traction Sub.(est).	35,000
	1984	"	35,000
	1985	"	35,000
	1986	"	20,000
	1982-1986		
		LOP In-kind contribution	<u>164,500</u>
		(A) Total	427,100
2.	GON Grant Agreement Contribution		
	5.82 million x 200 Cfa = <sup>1</sup>		1,164,000,000
	less (A) projected contribution		<u>427,100,000</u>
	(B) Balance Due		736,900,000 Cfa
3.	U.S. Grant Agreement Contribution, Local costs		3,351,000
	(330-200) <sup>2</sup> = 130 Cfa/ 1		<u>x130</u>
	(C) Marginal increase in Local cost purchase power		435,630,000
4.	GON Balance Due (B)		736,900,000
	Less U.S. increased purchasing power (C)		<u>435,630,000</u>
	GON Recurred payment		301,270,000
	Dol. Equivalent (330 CFA)		\$ 912,939
5.	<u>Sensitivity Analysis</u>		
	GON required payment at 300 CFA		401,800,000
			(\$1,339,330)
	GON required payment at 270 CFA		502,330,000
			(\$1,860,480)

(1) Table 2, Column 2, bottom line 200 CFA was original rate used in Project Paper

(2) Current rate assumed to be 330/\$1 . The rate as of Feb. 8, 1983 was 345/\$1.

TABLE 5

Preliminary Summary of Budgeted Needs  
For Project Years 1983-1986

	(1) USAID \$ (Fx)	(2) CFA (LC) (000)	(3) GON FNI <sup>1</sup> CFA (000)
1983	1,647,000	576,993	15,300
1984	1,622,000	496,912	17,955
1985	973,350	435,330	25,305
1986	322,875	276,792	24,465
TOTAL	4,565,225	1,886,027	83,025
Total \$			
(1) + (2) /330		(A) 10,280,458	
Less Balance (Table 2, Col. 6)		(B) 10,417,000	85,000 <sup>2</sup>
Surplus/		136,542	1,975 <sup>2</sup>

Sensitivity Analysis

At 300 CFA Exchange rate

Total

(1) + (2)/300 10,851,981  
Less Balance (b) 10,417,000  
(Deficit) (434,981)

CFA Equivalent 434,982 x 300) -1,975,000= 128,519,000  
At 330 CFA Exchange rate

5% increase in U.S. project costs = (A x 1.05) - B  
= (\$377480) or (124,568,000) FCFA

<sup>1</sup> Excluding Subsidies on Traction Units Sold Directly to NDD

<sup>2</sup> 50,000 FNI contribution, 1981 + 35,000 FNI revolving fund

TABLE 6

Projected Fertilizer Subsidy Payments  
by GON to Revolving Credit Fund

Year	Actual or Projected (\$1000)	Actual
1981	325	-0-
1982	280	-0-
1983	240	n.a.
1984	250	n.a.
1985	250	n.a.
1986	250	n.a.
Total	1,595	n.a.

It is normally appropriate to include the original budgets along with calculations in order to show how the annual totals were derived. In this case, however, it was not possible to do so because the project officer's budget calculations were quite extensive (on the order of 30 typed pages). Subject to minor adjustments, though, the budget should appear in the 1982 Annual NDDP Annual Report. In any event, the records are on file in the NDD office in Niamey, Niger.

Figure 1 shows that under the original Grant Agreement, USAID is capable of covering an additional 435 million CFA of local costs through the increased purchasing power of the appreciated dollar. Should the dollar decline in value by 10% to 300 CFA, GON required payments, under this scenario increase from 301 million CFA to 402 million. A similar increase is seen for another 10% decline.

However, the situation appears to be different in Table 5. Though the budget calculations, which involved reducing the contingencies and inflation estimates while building inflation into the actual projected expenditures, it is demonstrated that USAID is capable of covering GON local costs line items, again, because of the dollar's increased buying power. The sensitivity analysis shows that if the dollar declines in value by approximately 10%, a budgeting deficit of \$435,000 (128 million CFA) (3% of LOP U.S. contribution) is incurred. At 330 CFA, a 5% cost overrun results in an almost equivalent deficit.

As a result of this funding scenario, USAID has several options to choose from in re-negotiating the project contributions. Briefly, AID can:

1. Pay for all of the project costs through the advantage of a higher exchange rate (original rate: 200 CFA/\$ current:330) which, based on projections, has been shown to be adequate for covering

project expenditures through December, 1986.

2. Require the GON to contribute nothing more to the operating account than what has already been paid - the 35 million and 50 million CFA deposits and;

3. If the exchange rate declines, renegotiate the GON contribution or if GON fails to make the fertilizer subsidy payments, AID can seek other options.

The time of the second mid-term evaluation - at the end of 1984, would be an appropriate time to decide the next course of action, based on GON adherence to the agreement.

In addition, the monitoring of the exchange rate and periodic reporting of the impact of a change in the exchange rate on project finances would be a means to permit needed adjustments.

Other project options which could be implemented now, or held for consideration until the 1984 evaluation, include:

1. Diminishing the project size through closing down of the CPTs or reduction/termination services for an arrondissement. Here, the less productive areas could be singled out for cutting back or stopping project activities.

2. Reduce the project's life by 1 year (December, 1985) or earlier since GON has failed to honor its commitments.

These options will be reviewed at the end of this report following a discussion of the Credit Fund and Recurrent Costs.

#### The Credit Fund and Fertilizer Subsidies

Although direct project activities are not hindered by the lack of GON contributions, there is another fund contribution, required of GON, that needs to be dealt with. The fund in question is the credit fund.

The original project design included the establishment of this fund that was to serve as a source of financing for farmers to purchase needed farm equipment and fertilizer. The credit fund was to have been built up through deposits made by G.O.N. and, indirectly, by AID commodity purchases. Money generated by sales of farm equipment purchased with AID funds was one source of deposits. AID was supposed to purchase the equipment at full price and then, through the project, sell the equipment of credit to farmers at the subsidized price. The credit fund would then be built up by farmers who would deposit their loan repayments into the fund. The GON was to have paid the balance (the value of the equipment subsidy) into the fund as well. As it turned out, GON sold equipment to the Project at the subsidized price.<sup>1/</sup>

<sup>1/</sup> As long as the Project purchases equipment at the subsidized price from GON, it has received an in-kind contribution with the amount of the subsidy (as per figure 1). However, the credit fund does not receive the value of the subsidy and is thus reduced in size.

The same situation was supposed to have been applied to fertilizer as well, but since 1980 GON has required that cash payments be made for seasonal agricultural inputs, i.e. fertilizer. Instead, cash payments are made by farmers for fertilizer, and these payments are deposited into a fund that will be used to purchase future fertilizer imports. In this case, GON is still required to pay the value of the subsidies.

The project imported \$605,000 worth of fertilizer in 1981 and 1982 and has sold approximately 42% of this stock according to project records. Fertilizer is subsidized at about 75% of its true cost in Niger. Thus, at the weighted exchange rate of 248 CFA/\$1 for 1981-2 at the time the purchases were made, GON roughly owes the Project 47 million CFA on fertilizer already sold, and another 65 million CFA on the remaining stock. <sup>1/</sup>

A recent visit by a credit consultant resulted in a recommendation (see the Stickley Report) that two accounts be set up to keep the fertilizer is still sold at the subsidized price on a cash basis, the funds used to purchase fertilizer at the full price would quickly be decapitalized, wiping out available credit for equipment.

Consequently, assuming that fertilizer and equipment sales will be kept separate (as the project credit manager intends to do), the impact of GON payment or non-payment of the fertilizer subsidies is as follows:

1. If the amount of the fertilizer originally projected to be sold were sold, GON's total contribution to the project would balloon to 786 million CFA. This payment would probably pose a financial burden on the government. The projected fertilizer sales in the original project paper amount to \$1.6 million. Since \$.605 million has already been purchased, the remaining one million, if all fertilizer were sold, would require a current average annual payment of over 61.9 million CFA,<sup>2/</sup> or a total payment of 247 million. In addition to the 247 million, a minimum 112 million CFA is needed for the \$605,000 fertilizer purchase. When both sums are added to the GON projected operating contribution (including continued subsidized sales of traction equipment to the project), total GON contribution would then be 786 million (247+112+427), or nearly 67% of the original commitment.

<sup>1/</sup> (1 million x .75 x 330)/4 = 61.9 million

<sup>2/</sup> (60 million/209,500) = 285. 209,500 is the cost for a traction package plus oxen less a 10% down payment. This is assuming a 100% repayment rate.

In this case, the appreciation of the dollar has worked against GON: GON's payment of the subsidy equivalent is dependent, according to the credit agreement, upon the lowest rate of exchange in effect at the time of the fertilizer purchase, at the time of the fertilizer being sold, or at its import date. If, on any of those dates the exchange rate is higher, than the original project rate of 200, or GON has to pay in a large amount of CFA to the credit fund.

2. The credit advisor realizes that GON is selling equipment to the project at subsidized prices, effectively reducing the build up of the animal traction component of the credit fund to only those repayments made by the farmers. He estimates that by the end of 1986, approximately 60 million CFA will be made available from loan repayments for annual credit needs. This amount will be providing equipments to some 260 - 280 farmers per year, depending on the rate of planned decreases in subsidy and on the ability of farmers to purchase the farm equipment on credit.<sup>1</sup> Excluding oxen from the purchase, the number of people using the credit fund could double.

3. By the end of 1986, the credit advisor also estimates that some 132 million CFA will be in the fertilizer account assuming that planned amount of fertilizer is sold at the current subsidized price. With this amount, the project will be able to purchase some 600 tons (at an estimated 1986 price of 220,000CFA/ton) a level thought to be more than adequate for the Niamey Department:

4. Several scenarios can be recognized:

A. If GON were to provide some means of insuring that the credit fund for fertilizer would not be decapitalized because of subsidized controlled prices, it would not be necessary that GON honor its commitment on either past or future fertilizer subsidy payments.

However, under this scenario, USAID and GON may have to accept a lower rate of growth in regards to project expansion: equipment credit availability between 260 and 520 farmers per year may be limiting. This is because the Project Paper (Annex B) indicates that some 1.330 pair of oxen are to be purchased in 1987. Although it is too soon to state whether or not the demand will actually be this high, the credit fund will not match that need.

<sup>1</sup> 1.6 million x 2.5 x 330 = 132 million.

B. If, during the life of the project, GON were not going to reduce further the fertilizer subsidy, USAID should then require that GON pay the full amount to be based upon actual sales to farmers and exchange rate fluctuations.

C. GON should be encouraged to reduce its fertilizer subsidy. One means for encouragement would be to, say, cancel the current outstanding debt in proportion to the reduction in the subsidy. If, for example, over the life of the project, GON further reduces fertilizer subsidies such that they cover only 50% (instead of 75%) of the fertilizer cost, GON should be required to pay an amount equal to approximately 1.65 million CFA ( $\$1 \text{ million} \times .5 \times 330$ ) plus only half of the outstanding 112 million.

If GON further reduces subsidies such that they cover only 25% of the fertilizer cost, the amount then reduces to 82.5 million ( $1 \text{ million} \times .25 \times 330$ ) plus one-quarter of the outstanding 112.

The second interim evaluation in 1984 would be an excellent time to review GON actions regarding subsidy payments. If, by then, GON hasn't taken steps to reduce the subsidy, or if they haven't contributed to the credit fund because they haven't reduced the subsidies, the following options should be considered:

1. Reduce the remaining costs of the project by closing selected CPT's and/or reducing services in one or several (marginal) arrondissements;
2. Stop purchasing fertilizer from project funds;
3. Terminate the project by December 31, 1985 or earlier.

The final set of recommendations are presented in Section V.

1/ This is, of course, dependent on the exact sales and exchange rates.

## SECTION IV.

### RECURRENT COSTS

#### Introduction

Recurrent costs are those which are defined to be:

"the set of annual flows of gross expenditures of the government and its agencies, in local currency or foreign exchange, undertaken in order to generate socio-economic benefits in connection with the operation and maintenance of a unit of installed capacity, regardless of the source of finance of the expenditures in question, domestic or foreign". (Gray and Martens, "Recurrent Costs of Development Programs in the Countries of the Sahel", pg. 19).

A key point is that the production capacity "must have been properly installed and have reached its phase of normal operation before the expenditures associated with it are to be considered recurrent" (Gray and Martens, page 18). All costs incurred before the commencement of normal operations are thus classified in the category of non-recurrent or development expenditures.

It is important that we also distinguish the difference between financial and economic (social) costs. The financial cost involves the valuation of resources at their face value, paid prices. The economic cost is the real value of the good. For example, the price that a farmer pays for his subsidized fertilizer is the financial cost; the economic cost is the full price of the fertilizer. The use of tariffs, market controls, subsidies, trade barriers, etc. often result in economic costs not being equal to financial costs. In dealing with recurrent costs, financial costs will be the status quo unless stated otherwise.

Lastly, a useful measure for recurrent costs is the "recurrent cost coefficient (Rcc)", defined to be the ratio of operation and/or maintenance costs to investment costs in a capital facility. Similar projects should have similar Rcc's and "borrowing" an Rcc from another project aids in the estimation of recurrent costs. Unfortunately, for certain categories of projects Rcc's, and can widely vary in value. Integrated Rural Development projects fit under such a category: Rcc's have been estimated to range from .08 to .43 (Gray and Martens, pg. 33). The study of four World Bank supported Rural Development projects in the Sahel revealed that their Rcc's varied from .10 (an Upper Voltan project) to .25 (Maradi Rural Development Project, Niger).

Still, these ratios have too broad a range to derive any meaningful estimate it may be better to calculate Rcc's from individual project components. A second approach would be to estimate, through budgeting techniques and projections, the recurrent costs for the project rather than rely on the coefficient of other similar projects. This was the preferred method for this project.

#### Cost Estimates

Based on budget projections made by NDD's Project Manager, and making adjustments for reduction in long-term technical assistance, training, and some commodity imports, an estimate for project recurrent costs was derived. These results are shown in Tables 7 and 8. They should be considered as rough estimates and modified after next year's expenditures when a clearer idea of annual project expenses will be known. The recurrent costs estimates are subject to five conditions, however:

1. Vehicle replacement costs were not included;
2. Personnel costs for certain GON Civil Service employees working in the project zone were not included;
3. 1982 prices and costs were used.
4. Foreign exchange costs were not separated from local costs; and
5. Regional fertilizer imports were not included<sup>1</sup>.

It is estimated that the recurrent cost for operating an individual CPT (including fertilizer at unsubsidized prices), exclusive of extension and vehicular support, is 7,706,000 CFA. The estimate is probably low: government farmer training center in Togo and the Gambia average between \$2000 - 2200 per student. The per couple cost at a CPT is \$1167. However, here, it must be remembered that certain services are excluded from the estimation. This CPT cost estimate has also excluded any revenue that have been earned from selling CPT produced grain. Each farmer couple is given an allowance of a maximum 500 kg of millet after the harvest (10 tons/CPT). Each CPT cultivates around 20 hectares. Consequently, production efforts that yield greater than 500 kg/ha will result in a surplus, and generate additional revenue for the CPT. The highest cost category in the CPT is that of training, which includes a 3.6 million CFA allowance for the stagiaires couples (47% of total CPT cost). Under the materials category, it should be recognized that animal feed and fertilizer are the greatest expenses there. Together, they make up 1.3 out of the 1.7 million cost for materials.

<sup>1</sup> Eg. fertilizer purchased for the Niamey Department.

The estimated cost for running 10 CPT's Extension, Co-ops, Input Delivery, Credit, Women's, the Monitoring and Evaluation, and Management Unit is 270 million CFA. The unit with the largest cost (aside from the excluded personnel costs of other units) is Extension, which consumes 38% of the budget. This is because 60 million CFA is budgeted to provide material for village level extension efforts. Another major expense, as developed across all project units, is vehicles expense. Combined, vehicle operating and repair charges are estimated to cost 50 million or approximately 20% of the project. This project component probably has the highest foreign exchange cost because of the fuel expense. Any attempts at cutting down on vehicle costs would be helpful to the project. One possible suggestion is that extension agents at the CPT's use donkey carts for extension visits to villages within a 10 - 15 km radius of the CPT. Not only would this save on fuel cost, but the farmer may actually feel less intimidated if the extension agent arrived by cart rather than Land Rover.

TABLE 7

SUMMARY OF POST - 1986  
NDD PROJECT RECURRENT COSTS

<u>Unit</u>	<u>Estimated Cost</u> <sup>1</sup> <u>(1000 CFA)</u>
CPT 7706 x 10	77060
Extension Service	92980
Cooperatives	18000
Credit	9500
Inputs	21300
Woman's Program	0
Evaluation/Monitoring	11250
Management	15330
	<hr/>
Sub-Total	245420
10% Unforeseen factors	24542
	<hr/>
Grand Total	269962
As 330 CFA/\$1.....	..... \$818,070

<sup>1</sup> Exclusive of vehicle Replacement inflation, and certain GON personnel salaries (see Table 8 for breakdown of project unit costs).

TABLE 8

ESTIMATED RECURRENT COSTS FOR NDD

After 1986, by Unit

Conditions

All prices and costs at 1982 level.  
Salaries for GON Employees Not Included, except at CPT's.  
Vehicle Replacement Costs Not Included.

<u>CPT</u>	<u>1000 CFA Cost</u>
<b>Personnel:</b>	
1 Chef	60 x 12 720
1 Cadre d'Alphabétisation	35 x 12 420
1 Guardian	22 x 12 264
1 Herder	22 x 12 264
1 Worker	22 x 12 264
2 Peace Corps Volunteers	0
<b>Training:</b>	
Student Stipends	
20 couples x 20,000 x 9,40	3600
Refresher Training (CPT pers.)	
4 people x 8 day x 2000	64
Trans Stagiaire	
20 couples x 4000 x 2 trips	160
Porte Ouverte	
50 people x 4 day x 750	150
<b>Material:</b>	
Nursery (est.)	20
Animal Replacement Cost (est. also, resale)	100
Animal Feed 1/2 ton x 180,000/t x 9 non	810
Office and Training (est.)	100
Animal care/medicine (est.)	80
Fourrage animal (on farm)	0
Fertilizer (unsub.) 3 x ton x 180/.	540
Traction Unit Replacement	
(300,000 - 5 year, no resale value)	60
Seed (produce own or APS project)	0
<b>Construction:</b>	
Building Maintenance 30 house x 3000/unit	90
(Note: approx. 15,000 dep./house/year not included here)	
<b>Vehicles:</b>	
See Extension, Management Unit	

TABLE 8, contd.

<u>CPT Sub-totals:</u>		<u>(1000 CFA)</u>
Personnel	1932	
Training	3974	
Material	1710	
Construction	90	
Vehicles	0	
	<hr/>	
Total	7706 <sup>1</sup>	7706
Approximate cost per couple (:20) (at 330 CFA/\$1).....		\$1168

EXTENSION SERVICE - ALL CPTS

Personnel:	2 male, 1 female at CPT (2 x 35 + 7 x 30) x 10 CPT x 12 mo.	12000
	Perdiems 10 CPT x 2 per. x 4 day/month x 1000 x 6 mo.	480
Training:	Refresher course (est.) per diem	2000
	Extension activities	2500
	New agent training or upgrading	1000
Vehicles:	(est. from NDDP budget)	15000
Material:	Village gardens	60000
		<hr/>
	<b>Total</b>	<b>92980</b>

CO-OPERATIVES

Personnel (CON provided)	0
Training (est.)	200
Vehicles	300
Materials (village Dev. Fund)	13000
Construction (provided by village)	0
	<hr/>
<b>Total</b>	<b>18000</b>

<sup>1</sup> Excluding a 10 % provision for unforeseen items

TABLE 8, contd.

	<u>(1000 CFA)</u>
<hr/>	
<b>CREDIT</b>	
<hr/>	
Personnel (GON provided)	0
Training (est.)	2000
Material (credit fund established by deposits of subsidies)	0
Vehicles (should be covered by CNCA interest charges)	7500
Construction	0
	<hr/>
Total	9500
<hr/>	
<b>INPUTS</b>	
<hr/>	
Personnel (drivers)	5000
Training (driver)	800
Material (Inventory control)	500
Vehicles (est. operating exp.)	16000
Construction	0
	<hr/>
Total	21300
<hr/>	
<b>MONITORING AND EVALUATION</b>	
<hr/>	
Personnel (Enquêteurs)	4000
Training	750
Material	1500
Vehicle	5000
	<hr/>
Total	11250
<hr/>	
<b>WOMEN'S PROGRAM</b>	
<hr/>	
Expected to be merged with Extension and CPT activities	0
	<hr/>
Total	0

TABLE 8, contd.

<u>MANAGEMENT UNIT</u>	<u>(1000 CFA)</u>
Personnel:	
1 Director	
1 Technical Director	
1 Administrator/Finance Officer	
1 Accountant	
2 Drivers (All paid for	
2 Secretaries by the GON)	
1 Inventory Control	
1 Evaluation/Monitoring Officer	
1 Planning/Program Officer	
3-4 Janitors	90
Per diem - 5 pers. x 4 day x 12 mo. x 1000	240
Equipment (est. office supplies and	6000
Utilitdes (est.)	1500
Vehicles (est.)	3500
Construction - maintenance	
(80 million/20 year)	4000
<b>Total</b>	<b>15330</b>

Recurrent Cost Coefficients: Some Closing Comments and A Comparison.

Given the current state of GON's economy and government budget, some hard decisions will have to be made now and in the next few years regarding how the decreased budget is to be allocated among various sectors in the economy. It is not unusual to find other projects in the Sahel where, after the development phase has been passed, the project then suffers a lack of adequate operating and maintenance funds. That governments can allocate resources as they so desire among various projects, the case inevitably occurs where after "some projects and sectors have seemed more prone than others to suffer from shortfalls (in fundings) allocation in this regard" (Gray and Martens, pg.200). Gray and Martens found four reasons why governments decide not to continue the necessary allocation of funds to keep the project adequately financed. Only one will be cited here, since it appears to be the most appropriate for future consideration of NDDP operations:

"Technical shortcomings and errors in design and execution." The preceding chapters (of Gray and Martens Report) have illustrated the existence of projects, sometimes on a large scale, based on the introduction of technologies which were unproved or not yet perfected. Agricultural development projects have suffered particularly from this state of affairs -- introduction of insufficiently tested techniques of cultivation, distribution of low-yielding new seeds, etc. In other cases, a superficial knowledge of the conditions in the project milieu has led, beginning with the critical establishment phase, to a poor choice of extension personnel, thus preventing the projects from "taking off" on account of lack of productive contact between this personnel and the population in question. Not only agricultural operations have suffered from this phenomenon (too young and inexperienced extension agents: indeed, agents who are never to be found on the job), it has also afflicted health projects (village health workers lacking sufficient authority in their village). Many of these projects are already faits accomplis: managers have been trained, local administrative structures have been created, and the donors have committed themselves to disbursing large sums over a certain number of years. There are even cases in which projects are maintained by nothing more than inertia, even though donors and recipients agree tacitly on their lack of viability. This applies to some agricultural projects, and also certain education projects based on models diverging sharply from classical education (rural training). On the whole, the situation is related to the fact that project designers have generally under-estimated the establishment period required by such activities, apart from often failing to distinguish between the phases of experimentation and establishment proper." (Gray and Martens, pg.201).

Thus, USAID may want to consider insuring that the project has definitely passed from the experimentation stage and into the establishment phase before finally terminating all funding, even if it means continuing NDDP with a third phase. This is, of course, dependent on how well defined and acceptable the technological package becomes (see report on the Technical Package). As mentioned earlier, other IRD projects have had Rcc's that varied between .10 and .25. Additionally, the NDDP project paper included its own estimates of current costs. Here, these estimates will be compared.

#### Comparing Recurrent Costs

The estimated annual recurrent costs in the original project paper (PP) vary from a total of \$2.7 million (years 6-10) to \$8.1 million (years 11-20). The reason for this high estimate, especially in the latter years, is because \$6.5 of the 8.1 million included represents regional fertilizer sales which are now considered to be too high.<sup>1</sup> By adjusting the sales figures to \$300,000/year, the long-term recurrent costs estimate (years 11 and beyond) reduced to \$1.8 million/year (1980 prices) a little more than double the estimate of .8 million (1982 prices) made in this paper. However, vehicle, purchases, personnel, and regional fertilizer sales were excluded from these estimates. By adding in the PP recurrent cost estimate of \$462,000 and \$300,000 for the vehicles and fertilizer, respectively, this figure now increases to 1.6 million (.82 + .46 + .30). Table 9 shows the comparisons of these figures and their calculated Rcc's. Clearly, this project's estimate for recurrent costs is on the lower side of the IRD 'scale' that ranges from 0.08 to 0.43. However, it should also be remembered that some \$5.5 million of the original \$19.6 million Grant Agreement was supposed to be used solely for the establishment of a credit unit. This exclusion of this fund increases the ratios by 40% (19.6/14.1). Second, GON is no longer contributing the same amount of funding: if GON honors the commitment on fertilizer subsidy payments, its total contribution is reduced from 1.164 billion CFA to .786 billion or a difference of 1.14 million (this figure was derived from combining the GON contributions in Tables 5 and 6). In this case, the Rcc's increase by 7%. Lastly, Rcc's for individual project components were estimated. These were based on the projected budgets made through 1985. Note that the Extension Unit has the highest Rcc; Credit, excluding the women's unit, which was merged into the extension unit, has the lowest.

<sup>1</sup> The local costs, expressed in dollars, were adjusted so as to reflect the new exchange rate.

TABLE 9.

Comparison of Recurrent Estimates  
and Coefficients

(1) Project Grant Agreement: \$19.6 million		
(2) Recurrent Cost Estimates		(3) + (1)
	(3) Amount	(4) Rcc
A. This paper	\$818,200	.04
B. Project Paper	8,124,000	.41
C. Project Paper Adjusted for Fertilizer	1,849,000	.09
D. This paper, adjusted for vehicles (not adjusted for inflation)	1,570,000	.08

Preliminary

Recurrent Cost Coefficient for Project Components

Unit	Project Budget Total (1)	Recurrent Cost Estimate (2)	Rcc (2) + (1)
CPTS	620,270	77,060	.124
Extension	557,991	92,980	.167
Credit	597,837	9,500	.016
Inputs	140,647	21,300	.151
Evaluation	67,014	11,250	.052
Co-ops	213,877	18,000	.084
Women	53,441	0	0
Management	493,012	15,330	.108
	<u>2,764,089<sup>1</sup></u>	<u>245,420</u>	<u>.088</u>

<sup>1</sup> Excludes GON fertilizer subsidy contribution to credit fund and 10% contingency. Not adjusted for vehicles, etc.

## SECTION V

### Summary, Conclusions, and Recommendations

In this report, four areas were examined: GON financial and in-kind contributions to date, the likelihood of GON being able to keep the original funding commitments, a potential means for restructuring the contributions, by both USAID and GON, what GON should actually contribute (the credit issue), and recurrent cost estimates for the project after termination in 1986.

It was found that GON has fallen short in their first year contributions to the project, having deposited only a sum of 50 million CFA out of requested 181 million CFA for the project operating account for 1982, and did not deposit the amount requested for FY 1983. A similar situation exists for the deposit of an amount equivalent to subsidies paid for inputs sold to farmers. Second, it appears to be unlikely that GON will contribute the original amount of committed funding: the national investment fund has been cut from 24, of which agriculture composed 9% in 1980, to 7 billion CFA. Third, it was determined that, in fact, USAID could pay for the remainder of the project operating expenses due to an appreciation in the buying power of the dollar (from 200 CFA to 330 CFA/\$1) without additional funding as long as the dollar does not depreciate. The input subsidies and the credit funds were discussed at length. The real choice that GON faces is either to reduce the fertilizer subsidies or honor their commitment to deposit the equivalent amounts in the credit fund. Otherwise, fertilizer purchases will have to stop. Fourth, recurrent costs were estimated for an individual CPT and the entire project. The operation of one CPT is estimated to cost 7.7 million CFA, the entire project would cost 270 million. Compared to other IRD projects, the NDD recurrent cost coefficient, (Rcc) .04, is low, but it was noted that certain expenses were excluded from the analysis, and that certain services were to be taken over by existing GON agencies. When adjustments were made, to account for these differences, the Rcc figure was not much different than the Rcc value calculated using estimates (which also adjusted) from the original project paper.

### Recommendations

Given the above analysis, it is recommended first, with respect to the operating expenses, that:

1. the GON contribution for operating expenses be reduced so that no additional funding is required. The 35 and 50 million CFA deposits already made plus the subsidies to be paid on the animal

traction equipment purchased by the project plus the in-kind contribution are a sufficient contribution (427 million CFA).

2. USAID pick up local costs, to the extent possible, through the increased purchasing power of the dollar (assumed rate of exchange 330 CFA/\$1). This will require no additional financing beyond the current level of resources and budget projections through December 1986.
3. At the second interim evaluation schedule for mid to late 1984 the team determine what options to recommend if the average exchange rate drops below 330 CFA. The project will monitor the exchange rate through June 1984 and will make bi-annual reports on the impact of such a decline (if occurring) on project finances.  
Such options might include:
  - A. a requirement that GON contribute to local costs in proportion to the decline in the exchange rate.
  - B. that the project be reduced in scope by either
    - 1) closing or terminating some of the CPTs in the marginal agricultural production areas
    - 2) reducing services in an entire arrondissement;
    - or 3) that the project be terminated in December 1985 or earlier.

Second, with respect to the credit fund, it is recommended that:

1. If GON take steps to reduce the amount of subsidy such that the cost of the fertilizer to the farmer is completely unsubsidized by the start of the 1987 agricultural season, GON will not be required to deposit any funds into the fertilizer account;
2. GON currently has an outstanding credit debt of approximately 112 million CFA. It is recommended that this debt be waived in proportion to the GON reduction of its subsidy as a means to encourage subsidy reduction. If reduction of at least 30% hasn't occurred by the time of the mid term evaluation in 1984, GON should be required to begin payments on the debt.
3. If GON appears not to be making steps to reduce the subsidy during the 1984 and 1985 agricultural

season, it should be required to pay the calculated amount of subsidy, based on the annual usage or else face the options listed above regarding CPT closure, premature fund project closure, etc. The exact nature of these options with regard to the credit will also be addressed by the evaluation team in 1984 after reviewing the previous two years of project progress.

Third, with respect to the recurrent costs, no specific recommendation is needed at this time except to note that they should be periodically reviewed with the participation of GON and updated to provide more accurate estimations.

REPUBLIQUE DU NIGER  
MINISTRE DU DEVELOPPEMENT RURAL  
DEPARTEMENT DE NIAMEY  
PROJET PRODUCTIVITE

( 1 9 8 2 RECRUITMENT )

INFORMATIONS SUR LES CPT  
DES FERMES AUX STAGIAIRES ET AUX VILLAGES QUI LES  
ONT CHOISIS

1°) STAGE DE FORMATION

- La vie du centre repose sur les stagiaires ; organisation, collaboration, discipline etc...
- Le programme comprend plusieurs domaines. Agriculture (nouvelles méthodes de culture), alphabétisation (apprendre à lire et écrire dans sa langue), petit élevage (volailles...), eaux et forêts, santé et alimentation, fonctionnement des coopératives et crédit.
- en cours de stage, plusieurs vérifications pour voir si le stagiaire a bien compris ce qu'on lui enseigne.
- chaque couple est logé dans une case semi-paillote (équipée de lits tarras)
- chaque couple peut prendre avec lui deux enfants au maximum.
- les fermes sont stagiaires à part entière (avec un programme spécial).
- La cuisine est faite en commun, par groupe de femmes, pour ne pas les immobiliser toutes.
- Il y a 20 000 f par couple par mois : 13 000 sont destinés à la nourriture ; 4 000 sont remis aux stagiaires (2 500 à l'homme, 1 500 à la femme) ; 3 000 F sont conservés pour la fin du stage : si la récolte est mauvaise, on achète des vivres pour les stagiaires ; si elle est bonne, cette somme servira à l'achat petit équipement, d'engrais et pour l'assurance des animaux.
- à la fin du stage, les couples dont la conduite ou le travail n'auront pas donné satisfaction ne recevront pas d'équipement. L'équipement demandé par le stagiaire en fonction de ses besoins est donné à crédit : le prêt demande un apport personnel de 10 % et doit être remboursé en 4 ans par échéances égales ; la coopérative garantit le remboursement du prêt.

2°) ROLE DU STAGIAIRE A SON RETOUR AU VILLAGE

- C'est la coopérative qui envoie le stagiaire et cautionne son prêt
- Il est formé comme représentant de son C.P.
- Il doit faire profiter les autres cultivateurs et cultivatrices de sa formation : démonstrations de matériel, d'usage d'engrais ; visite de ses champs ; démonstrations de foyers améliorés, de cuisine ; participation aux organisations villageoise ; alphabétisation ; gestion des coopératives.
- Si les femmes s'intéressent à l'élevage des volailles, elles peuvent apporter avec elles quelques poules qu'on croquera avec des coqs de race.
- Les femmes apportent les semences pour leurs cultures de case.

NOTE D'INFORMATION SUR LE CHOIX DES STAGIAIRES DES CPT

1) CONDITIONS DE FORMATION

- Le CPT est un centre de formation destiné à recevoir et à former des couples paysans capables d'accepter la vie en communauté ainsi que les nouvelles techniques d'amélioration de l'exploitation agricole.

- La vie du centre repose sur les stagiaires eux-mêmes. Organisation, collaboration, discipline etc...

- Le Programme du centre comprend plusieurs domaines d'intervention : agriculture ( nouvelles méthodes culturales ), Alphabétisation ( apprentissage de lecture, d'écriture, de calcul dans la langue maternelle ), petit élevage ( volailles ), Eaux et Forêts ( plantation et protection des arbres ), éducation sanitaire et nutritionnelle, fonctionnement des coopératives, Crédits etc...

- Au cours du stage plusieurs vérifications de contrôle de niveau pour voir si le stagiaire a bien compris ce qu'on lui enseigne.

- Chaque couple est logé dans une case semi-paillote mais doit apporter sa lampe à pétrole.

- Les frais d'entretien des stagiaires sont pris en charge par le Projet et leur gestion confiée aux stagiaires eux-mêmes.

- La cuisine est faite en commun par groupe de femmes

- A la fin du stage, les couples dont la conduite ou le travail n'auront pas donné satisfaction ne seront pas équipés.

- L'équipement demandé par le stagiaire en fonction de ses besoins est donné à crédit - L'acquisition du prêt en matériel agricole exige un apport personnel en vigueur à la CHCA ( actuellement ( 10 %) que le stagiaire est tenu de verser auparavant. Le prêt est remboursable en 4 années d'échéances égales, la coopérative garantissant le recouvrement de ces échéances.

- Trafic interdit pour une raison quelconque du matériel agricole et les animaux mais plutôt prendre soin d'eux pour une rentabilisation basée sur de l'exploitation familiale.

- Constitution dès la fin de l'hivernage des stocks de foin et d'aliments concentrés ( grains de coton, son ) pour les animaux pour la période de soudure.

- En cas de maladie, prévenir l'infirmier d'élevage le plus tôt possible pour aider à soigner les animaux.

- Si les femmes s'intéressent à l'élevage des volailles, elles peuvent apporter avec elles quelques poules qui seront croisées avec des coqs de race.

- Les femmes doivent apporter également les semences pour les cultures de cases (oseille, gombo, sésame etc...).

- Enfin, tout stagiaire ne se conformant pas au règlement intérieur du centre peut être exclu à tout moment et remis à son village sans aucun dédommagement.

- Il est institué un fonds de roulement au niveau de chaque CPT. Ce fonds qui sera soutenu par des apports de production annuelle servira à autofinancer le centre en cas du retrait du Projet.

- Pour assurer leur subsistance, une partie de la production sera distribuée aux stagiaires.

## 2) CRITERES DU CHOIX DU STAGIAIRE

- Etre volontaire et choisi par son C... en accord avec la coopérative et les parents - Pour cela la coopérative devra répondre au pourcentage de remboursement de prêts dont les imp. yés annuels ne doivent pas excéder 10 %.

- Etre sérieux, dynamique, travailleur et ouvert aux innovations.

- Etre chef d'exploitation et chef de famille âgé de 25 à 45 ans.

- Disposer suffisamment de terre ( 4 à 5 ha) et en cas d'aide familial, obtenir l'engagement formel des parents en vue d'appliquer l'ensemble des thèmes techniques sur l'exploitation familiale.

- Chaque couple ne peut amener avec lui que 2 enfants au maximum, le plus âgé ne devant excéder 5 ans (scolarité).

- La femme vient au CPT au même titre que le mari et doit par conséquent accepter de travailler dans les mêmes conditions.

Dans ces conditions il est fait obligation au mari d'accepter la participation de sa femme aux différentes activités.

- Les paysans ayant déjà bénéficié d'une formation au C.P.J... le N° Doungé ou au centre de Kaniaba ne seront pas proposés.

- Les détenteurs des unités de culture attelées sont également concernés mais peuvent prétendre à une formation spécialement organisée à leur intention.

- Le Village devra choisir 2 stagiaires et 2 suppléants qui les remplaceront en cas de désistement.

.../...

### 3) ROLE DU STAGIAIRE A SON RETOUR AU VILLAGE

- C'est la coopérative et le village qui choisissent et envoient le stagiaire en formation au CPT

- C'est la coopérative qui garantit le prêt accordé au stagiaire pour son équipement.

- En retour le stagiaire tout en travaillant son exploitation ou l'exploitation familiale doit faire profiter les autres paysans de sa formation :

- démonstration du matériel agricole
- " d'épandage d'engrais
- " d'emploi du fongicide
- conseils d'utilisation des semences améliorées
- " d'apport du fumier au champ.
- Faire visiter ses propres champs et en cas de nécessité tenir des réunions d'information et se rendre chez les compatriotes qui le demandent .
- démonstration de foyers améliorés
- Alphabétisation, gestion des coopératives etc...

- Il doit toujours être ouvert à la population du village en participant pleinement aux activités villageoises ou suscitant les villageois à une meilleure prise de conscience pour le développement du G.M.

- Il arrive bien souvent que le stagiaire manque d'aide familial pour organiser son travail dans l'exploitation. Il peut faire recours au village pour demander une aide. Mais auparavant il doit se faire aider par son épouse qui a reçu une formation dans ce sens.

- Le fait qu'un des boeufs soit faible ou malade ne doit pas donner l'occasion au stagiaire de retourner à ses méthodes traditionnelles. Un boeuf seul peut efficacement travailler au champ . Il suffit de lui atteler un jougnet, un canadien 3 dents (scarifiage) ou une lame soulveuse sarclouse (sarclage) et sarclage

- Dans le cadre de la maintenance du matériel agricole vulgarisé, un certain nombre d'artisans ruraux dont les services sont très précieux ont été formés. Pour ce faire les coopératives doivent prendre attache avec ces artisans pour faire confectionner certaines pièces à usage courant à mettre à titre onéreux à la disposition de leurs membres et plus spécialement les ex-stagiaires . Cela évitera des attentes inutiles au niveau de la centrale d'approvisionnement et une immobilisation injustifiée du matériel.

Niamey, le 2 décembre 1982

REPUBLIQUE DU NIGER  
 MINISTERE DU DEVELOPPEMENT RURAL  
 DEPARTEMENT DE NIAMEY  
 PROJET PRODUCTIVITE

ANNEX 2 pp. V-VI.

N° 2595/PPN/82

Le Directeur du Projet Productivité

A

Messieurs les Coordonnateurs d'Arrondissement de :

- S A Y
- K O L O
- O U A L L A M
- F I L I N G U E

Objet : Recrutement  
 Agent de vulgarisation

J'ai l'honneur de vous demander de vouloir bien prendre toutes les dispositions utiles, pour organiser dans les chefs lieux de vos arrondissements respectifs, en collaboration avec les cellules Suivi et Evaluation, et participation féminine, un test de présélection, en vue de recruter des agents de vulgarisation pour le suivi des paysans modèles, parmi les ex-élèves de l'enseignement secondaire. Les dates des tests sont les suivants

- Say le 10/12/82
- KOLO le 11/12/82
- OUALLAM le 13/12/82
- FILINGUE le 15/12/82

Le nombre de places offertes est fixé à :

a) 12 pour les agents de sexe féminin repartis comme suit :

- Filingué (4)
- Kolo (3)
- Ouallam (3)
- Say (2)

b) 8 pour les agents de sexe masculin repartis comme suit :

- Filingué (2)
- Kolo (3)
- Ouallam (2)
- Say (1)

Peuvent faire acte de candidature, les citoyens ou citoyennes Nigérien (Mes)

\* ayant 22 ans au moins et 35 ans au plus pour les hommes  
 et 20 ans à 35 ans pour les femmes.

\* Etant ressortissantes, de l'arrondissement dans lequel il ou elle pose sa candidature.

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§ Sachant parler, lire, et écrire couramment soit le zarma, soit le peuhl (Say) soit le goumantché (Say), soit le Haoussa (Filingué)

\* Ayant de l'expérience pratique sur le terrain, pendant au moins deux ans dans les actions de développement rural.

\* Ayant normalement atteint le niveau de la classe de 5<sup>ème</sup> de l'école secondaire, au sachant parler, lire et écrire le français à un niveau équivalent.

Dans les procédures de sélection; une préférence sera accordée aux candidats ayant :

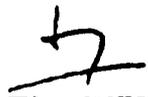
Pour les hommes ; déjà reçu une certaine formation technique dans les méthodes culturales améliorées principalement préconisées par le projet pour le mil, le sorgho, le niébé et la culture attelée.

Pour les femmes : déjà reçu une formation technique dans un domaine pertinent à leur futur travail, tels que l'agriculture l'éducation nutritionnelle la santé maternelle et infantile, les arts ménagers, l'alphabétisation ou l'animation féminine.

LE DIRECTEUR DU PROJET PRODUCTIVITE

COPIATION :

- PREFET DIAKEY

  
SALEY MOUSSA

S E M I N A I R E D E L O S S A

Document N° 2

MODERNISATION DU MONDE RURAL : STRATEGIES DE METHODES

17-22 Janvier 1983

ANNEXES 85

La définition des objectifs pour la fin de la deuxième phase du projet remonte déjà à plusieurs années ; entre temps, certaines conditions de l'environnement ont évolué, en particulier, la récession économique mondiale a une incidence importante sur les ressources budgétaires tant nationales qu'extérieures ; de plus, le document même du projet présente certains volets de façon assez vague ; enfin, les premières opérations menées depuis le début de la seconde phase indiquent déjà quelques réajustements à opérer. C'est pourquoi, à partir du bilan de la campagne 82, il a paru opportun de réviser et préciser les objectifs fixés pour la fin du projet, selon les huit volets de la convention.

1. MISE EN PLACE D'UN SYSTEME DE FORMATION/VULGARISATION

1.1. C P T

La formation intensive dans les CPT se poursuivra cette année, par une extension avec l'ouverture de trois nouveaux centres et jusqu'à la fin du projet à raison de 200 couples par an, soit un effectif total de 600 couples d'ici 85 ; si on ajoute les 140 couples formés en 82, on atteint le nombre de 740.

A priori, aucun obstacle ne devrait limiter cet objectif quantitatif : la demande se fait même plus forte dans les villages pour cette formation.

Quant au programme de formation, la dominante restera, bien sûr, l'amélioration de la production agricole grâce à l'apprentissage de thèmes techniques concernant la culture du mil, du niébé et du sorgho, ainsi que les cultures de case en vue d'atteindre l'auto-suffisance alimentaire. Mais on ne se limitera pas à cet aspect ; on visera aussi toutes les qualifications qui peuvent développer les performances d'un exploitant agricole.

1.2. Vulgarisation

La vulgarisation prolonge la formation dans les CPT, mais elle la déborde. En fait, la stratégie du projet dans ce domaine comprend trois approches.

1.2.1 Suivi des anciens stagiaires

1.2.1.1 Hypothèses pour les projections seront donc formés dans les CPT. En 1982, avec un dispositif de suivi encore précaire, 34 % des 150 stagiaires ont appliqué l'ensemble des thèmes techniques. En améliorant ce dispositif, on peut escompter une progression de 5 % par an dans cette pratique ; de plus, certains stagiaires appliquent certains thèmes seulement, mais ce n'est pas négligeable pour la production. Donc globalement, d'ici 85, on peut estimer la moyenne des stagiaires pratiquant des techniques améliorées à 60 %, soit 111 couples ; ceux-ci peuvent exercer un effet de démon-

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PROJET PRODUCTIVITE KIALEX  
CELLULE FORMATION  
N° 4

APPUI AUX ORGANISATIONS VILLAGEOISES AUTOGEREES  
ACTIONS VILLAGEOISES DE DEVELOPEMENT

METHODE D'APPROCHE

La convention du projet prévoit six volets ou domaines d'action qui déterminent les objectifs à atteindre à la fin du projet :

- 1- formation intensive de couples paysans capables de diffuser les techniques de culture améliorées ;
- 2- appui aux services de vulgarisation ;
- 3- appui aux organisations villageoises ;
- 4- système amélioré d'approvisionnement et de crédit ;
- 5- meilleure participation des femmes au développement ;
- 6- programme de recherche appliquée.

Deux de ces volets restent assez mal définis dans le texte : l'appui aux services techniques et l'appui aux organisations villageoises. Pourtant, ce dernier objectif, en particulier, le moins présent jusqu'ici dans les programmes du projet, constitue le cœur même du projet vers lequel convergent en fait tous les efforts des autres volets. Il est donc indispensable que l'année 83 marque un pas important dans cette direction, sous peine de voir le projet sérieusement amputé dans ses buts. On propose ici une démarche préparatoire à ces actions afin qu'elles s'enracinent solidement dans le milieu rural.

1° Précautions méthodologiques :

- en demandant, directement, à des villageois de quoi ils ont besoin, on aboutit à une liste indéfinie de désirs que personne ne peut satisfaire ; du coup, l'espoir éveillé par la question retombe, déçu ;
- la démarche proposée consiste à faire un détour qui permette aux gens de parler ou de reprendre la parole en responsabilité.
- cette démarche est longue : il s'agit de mûrir une décision ce qui demande du TEMPS (on ne tire pas sur une tige pour la faire pousser !).
- pour utiliser au mieux les ressources humaines disponibles, l'équipe d'arrondissement peut se subdiviser en 3 groupes de 2 personnes prenant chacun en charge deux villages.

2° Les étapes

- a) choisir 6 villages qui semblent particulièrement dynamiques en raison de différents facteurs :
- leaders traditionnels ou naturels (chef de village, sarkin samaria, ancien combattant, instituteur, commerçant, présidente AFN, notables..)
  - organisation ou capacité d'organisation (coopérative, centre d'alphabétisation, équipe sportive...).
  - cohésion interne.
  - initiatives ou idées.

Ce choix peut se faire en salle et rapidement, en fonction de la connaissance empirique et intuitive que chacun des cadres a de l'arrondissement

#### 1.2.2.4. "Portes ouvertes"

Un effet diffus de vulgarisation sera atteint par les opérations "portes ouvertes" qui fonctionneront dans deux sens :

CPT/environnement : le CPT doit s'ouvrir sur son voisinage immédiat et l'entraîner dans son effort pour améliorer les techniques de culture.  
Villages/CPT : par les visites des villageois à leurs stagiaires on présentera les thèmes techniques ainsi que les perspectives de formation des CPT.

On envisage au moins une opération de ce genre par an et par CPT ; comme il ne s'agit que de sensibilisation, il ne paraît pas nécessaire de chiffrer l'impact de cette action. Toutefois, en comptant une quarantaine de personnes par visite au moins  $40 \times 10 \times 3 = 1.200$  paysans visiteront ainsi les CPT.

#### 1.2.2.5 CONCLUSION

A travers ce système de vulgarisation, le projet peut atteindre, d'une manière directe ou indirecte, environ 7.000 personnes, sans parler d'une information plus ou moins diffuse à l'occasion du "portes ouvertes" et des tournées de recrutement comme de suivi des ex-stagiaires. C'est sensiblement l'effectif prévu par la convention du projet.

### 2. RENFORCEMENT DES SERVICES GOUVERNEMENTAUX D'APPUI & VULGARISATION

L'objectif de ce volet est de rendre les services techniques plus efficaces et capables de prendre la relève au terme du projet. Dans ce sens, le projet met à leur disposition un certain nombre de moyens : bureaux et logements équipés, matériel de bureau, ainsi que des véhicules et du carburant ; de plus un programme de formation diversifié qui s'étendra jusqu'à la fin du projet ainsi qu'un système de réunions régulier viseront à répondre aux besoins de cadres, en particulier ; programmation réaliste et précise des opérations ; contrôle et suivi réguliers, sanctionnés par un système rigoureux de rapports ; évaluation permanente des actions capable de les réorienter en cas de besoin.

Par ailleurs, la politique nigérienne définie par la société de développement, précisée par le séminaire de Zinder, vise à transférer progressivement un certain nombre de responsabilités de l'administration aux organisations villageoises ce déplacement du pouvoir de décision demande aux cadres de reconsidérer leur rôle et leurs tâches ainsi que leurs méthodes de travail ; le projet aidera à cette reconversion des mentalités.

En fait, ce volet est étroitement lié au suivant puisque l'appui aux services techniques n'a d'autres fins que de renforcer les organisations villageoises qui sont leurs véritables destinataires ; il est donc subordonné à lui comme le moyen à la fin.

### 3. RENFORCEMENT DES ORGANISATIONS VILLAGEOISES AUTOGEREES

Ce volet constitue l'un des trois grands buts ultimes du projet : en effet, si le milieu rural ne s'organise pas sous forme d'auto encadrement, d'ici la fin du projet, la plupart des efforts des autres volets risquent de s'effondrer faute d'un terrain favorable pour les recevoir et les supporter ; de plus, au terme du projet moins que jamais, les services techniques n'auront les moyens d'aider à cette organisation.

### 3.1 Objectifs

Malheureusement, la convention du projet a laissé les objectifs et les moyens de ce volet dans la vague ; du coup, rien n'a été fait jusqu'ici dans ce domaine ; et il devient très urgent d'entreprendre quelque chose de concret dans ce sens. Souvent on a créé des structures avant de savoir leur raison d'être. La meilleure voie pour leur redonner vie et consistance ou pour donner naissance à de nouvelles organisations villageoises semble être qu'elles s'assignent une tâche de développement : c'est l'action à réaliser qui justifiera la structure, il ne s'agit évidemment pas d'actions ponctuelles, mais d'opérations capables d'effet d'entraînement, pour répondre aux besoins des villageois.

### 3.2. Indicateurs

La création d'1 ou 2 organisations villageoises autogérées par arrondissement et par an - soit de 12 à 24 au terme du projet - semble une ambition à la fois modeste et réaliste, cependant significative.

D'autres indicateurs marqueront le progrès vers l'accomplissement de cet objectif du volet :

#### 3.2.1 Gestion d'un bon système de formation/vulgarisation :

Les centres de formation sont censés passer progressivement sous la tutelle des organisations villageoises ; une attention particulière doit être portée à leur capacité d'autofinancement : une prise en charge financière d'au moins 75 % semble un objectif raisonnable. Pour la fin du projet, on vise une participation active des coopératives au recrutement des stagiaires, à la gestion des centres de formation (matérielle comme pédagogique), ainsi qu'au suivi des anciens stagiaires s'intégrant dans les structures des organisations villageoises au retour de la formation.

3.2.2 Actions de développement : elles visent à conduire aux organisations villageoises proprement dites dont elles seront le cœur et le moteur. Initier 3 actions - par exemple : centre d'alphabétisation, gestion d'une boutique ou d'un magasin de stockage, aménagement d'un puits etc... - par arrondissement et par an semble réaliste, si on veut qu'elles soient réellement choisies et promues par les paysans, sans téléguidage ni substitution par des services techniques. Soit un total de 36 actions.

3.2.3 Remboursement des crédits à 90 %

3.2.4 Livraison des intrants à temps et en quantité.

3.2.5 Intégration des fermes au développement : gestion de 30 moulins à mil et de 5 décortiqueuses par des comités auxquels des femmes participent ; crédits accordés à des groupements de femmes dans 10 villages ; production de manuels sur la santé et la nutrition ; petit élevage dans 5 villages ; diffusion des foyers améliorés auprès de 1.200 couples.

#### 4 & 5 Système de fourniture de crédit - système de livraison d'intrants agricoles

Trois missions évaluent actuellement ces deux volets d'une façon particulière ; il a donc semblé préférable d'attendre leurs conclusions pour reformuler les objectifs pour 85 dans ces deux domaines.

### 6. PARTICIPATION FEMMINE AUX ACTIVITES DE DEVELOPPEMENT

#### 6.1. Formation/vulgarisation

##### 6.1.1 Formation dans les CPT

Les femmes recevront une formation spécifique dans les domaines suivants :

- agriculture : essais sur les cultures de case ; création d'un fonds de semences sélectionnées de culture de case ; initiation à la culture attelée et aux autres thèmes techniques sur les champs de mil, sorgho, niébé.
- alphabétisation : elle sera centrée sur le calcul et l'apprentissage de la gestion ; on élaborera des supports pédagogiques : manuels en langues vernaculaires pour la nutrition, les foyers améliorés, le calcul, et les techniques agricoles.
- santé & nutrition : grâce aux interventions mensuelles du service de santé d'arrondissement, on initiera les femmes au 1er niveau de PMI. apprentissage à préparer la bouillie, à filtrer l'eau
- élevage : de lapins dans deux centres ; construction de poulaillers
- couture à la main.

6.1.2 Vulgarisation

12 femmes seront recrutées début 83 pour suivre les anciennes stagiaires dans les villages pour tous les aspects de la formation reçue aux CPT. On prévoit des défections et donc un renouvellement partiel de ce personnel chaque année.

Il faut explorer les moyens de déplacement de ces vulgarisatrices.

6.2 Organisations villageoises

6.2.2 Comités de gestion

- création de 30 comités pour la gestion des moulins ;
- " 5 " " des décortiqueuses.

6.2.2 Foyers améliorés

Diffusion auprès de 1.200 couples.

6.2.3 Actions villageoises

Création de comités de femmes formées dans 6 Villages.

6.2.4 Système de fourniture de crédits/intrants

Crédits accordés à des groupes de femmes dans 10 villages.

7. SYSTEME DE COORDINATION/SUIVI & EVALUATION

Ce volet sera défini ultérieurement

8. PROGRAMME DE RECHERCHE APPLIQUEE

8.1 Programme d'essais sur les thèmes prioritaires (ceux qui reviennent de plus cher au paysan)

- culture attelée : 3 essais ;
- engrais : 4 "
- culture pure : 3 "

8.2. Aider au système de vulgarisation:

par une collaboration avec :

- service de l'agriculture ;
- les CPT et les agents de terrain ;
- les organismes de recherche (INRAN/ECRISAT/FAO/PN)
- les autres cellules du projet.

8.3 Assister le PPN pour l'utilisation des pesticides

3 essais réalisés avec la collaboration de la PV  
pour tester les pesticides préconisés par l'UBAID.

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b) explorer les besoins du village

- prendre rendez-vous avec le village pour une visite de 2 jours au moins.
- ouvrir un débat sur l'histoire récente du village en posant des questions telles que : qu'est-ce qui s'est passé d'important dans le village depuis une génération ? Qu'est-ce qui a changé dans la manière de vivre ? de cultiver ? de gagner de l'argent ? Différence entre hier et aujourd'hui. Pour permettre à tous de s'exprimer librement, il peut être souhaitable de rencontrer les gens par catégories sociales : notables, jeunes, femmes, chefs d'exploitation...
- déplacer le regard vers l'avenir : en fonction de cette histoire, où va le village ? comment envisager la suite ? qu'est-ce qu'il faut faire pour que le village soit plus vivant ou ne meure pas ? qu'est-ce qu'on peut faire ensemble qui rende la vie plus facile ?

c) recenser les ressources existantes

- infrastructures : + puits (profondeur, aménagement, distance, permanence)
  - + centre d'alphabétisation
  - + école primaire
  - + dispensaire/centre de santé
  - + magasin coopératif
  - + couloir de vaccination/fosse de détiage
  - + moulin (s) : privé/coopératif
  - + point de vente OPVH
  - + boutiques
- ressources humaines : + implantation des agents des services (UNCC, agriculture, élevage, E & F, GR, alphabétisation, animation ; santé, y compris secouriste et matrone) : village le plus proche où réside un agent.
- services : + forgerons  
+ potiers  
+ marché
- démographie : estimation de la population

d) choisir les actions à entreprendre

- mettre en perspective les problèmes du village ;
- établir des priorités : par quoi commencer ?
- aboutir à un planning d'activités à moyen et à court termes (plusieurs années/près l'année en cours). Comment poursuivre ? comment s'enchaîneront les activités ?
- Attention ! savoir faire des choix modestes qui ne dépassent pas les possibilités du village ou de l'administration et qu'on ne maîtrisera pas. Donc, prendre son temps pour peser les choix !

e) déterminer les moyens nécessaires et les responsabilités

Qui va faire quoi ? quelle sera la contribution du village ? Le succès des actions décidées dépend directement de la participation des villageois et de leur engagement ; les services techniques et le projet ne peuvent fournir qu'un appoint soit matériel, soit logistique, soit de conseil.

nb : sur les 6 villages explorés, il est probable que seuls 3 ou 4 répondront assez vigoureusement pour que le projet y appuie des actions de développement avec quelques chances de succès.

3/12/1982  
J.L.M.

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## 2. Coordination des cellules

### 2.1. CPT/Vulgarisation

- 2.1.1. Le maître d'oeuvre de ce volet est l'agriculture ; l'appui du projet par le canal des cellules de formation, participation féminine, évaluation et suivi (ainsi que crédits/intrants) est coordonné par le Directeur des opérations techniques.
- 2.1.2. Deux conseillers pour les CPT et le suivi des anciens stagiaires se partagent la zone du projet. Leur tâche consiste à :
- vérifier que toutes les dispositions sont prises pour l'exécution des activités prévues ;
  - suivre l'avancement de la campagne agricole ;
  - enregistrer les problèmes ;
  - conseiller les agents de suivi.
- 2.1.3. On propose que le départemental de l'agriculture, les responsables des cellules concernées et les deux conseillers se réunissent tous les 3ème Mardi du mois sous l'autorité du directeur des opérations techniques.
- 2.1.4. Pour mémoire, voici la liste des réunions institutionnelles de coordination :
- réunion d'arrondissement : 25 du mois ;
  - réunion départementale : 5 du mois ;
  - réunion de la direction : 2<sup>e</sup> et 4<sup>e</sup> lundis du mois ;
  - réunion CPT/Vulgarisation: 3<sup>e</sup> mardi du mois.

### 2.2. Organisations villageoises

Le responsable de la formation coordonnera les activités des cellules formation et participation féminine ainsi que crédits/intrants pour ce volet sous la supervision du directeur des opérations techniques.

## 3. SECRETARIAT

Le fonctionnement défectueux du secrétariat pèse lourdement sur la direction du projet : temps perdu pour les responsables, documents et courrier en panne...

### 3.1. Secrétariat de direction

- Le directeur des opérations techniques prendra des dispositions pour recruter d'ici le 1er février 83 un secrétaire de direction ayant 3 ans d'expérience en administration et documentation, si possible bilingue. La priorité ira d'un nigérian à un africain, un américain, à tout autre ; un homme aura la prééminence sur une femme.
- il dépendra du directeur général

### 3.2. Dactylos

- on formera sur le tas les dactylos de la direction ;
- on les spécialisera selon les différentes fonctions du secrétariat
- elles dépendront du secrétaire de direction

## 4. AGENT DE L'USAID

- il représente l'USAID auprès du projet ; il est aussi l'avocat du projet auprès de l'USAID ;
- on souhaite qu'il participe plus régulièrement aux réunions de la direction et qu'il se rende plus souvent sur le terrain.

PROJET PRODUCTIVITE NIAMEYDOCUMENT 4S E M I N A I R E D E L O S S ADYNAMISATION DU MONDE RURAL : STRATEGIES ET METHODES17-22 Janvier 1983STRUCTURES DE LA DIRECTION

En marge de l'atelier de Lossa (4-7 janvier 1983), l'équipe de direction du projet s'est réunie pour évaluer son fonctionnement au cours de l'année 82. Quatre domaines critiques ont retenu l'attention : la répartition des responsabilités entre les deux directeurs ; la coordination des différentes cellules ; le secrétariat ; le rôle de l'agent de l'USAID.

1. Répartition des responsabilités entre les directeurs1.1. Directeur Général

- L'arrêté nommant le directeur du projet définit ses tâches ainsi :
- il est responsable du management du projet, à savoir : élaborer, exécuter et contrôler le budget ; évaluer et réorienter au besoin les actions du projet ;
  - il rend compte au préfet du fonctionnement du projet ;
  - il assure les relations extérieures ;
  - il négocie les contrats.

Pour que le Directeur puisse se consacrer à ses tâches essentielles de management, il est donc souhaitable que lui soient retirées certaines charges secondaires qui prennent beaucoup de son temps et qu'il peut aisément déléguer : il n'en gardera que le contrôle.

- au Directeur des opérations techniques :  
la gestion du parc automobile corrélative de la coordination des missions ;  
la gestion des activités du personnel
- au comptable :  
la comptabilité ;  
la gestion administrative du personnel ;  
les petits achats jusqu'à un plafond à déterminer ;  
le contrôle des fournitures des bureaux ;

1.2. Directeur des opérations techniques

- il coordonne les opérations du projet, plus particulièrement CPT et suivi des ex-stagiaires, ainsi que les activités des aides-cadreurs. Il supervise l'appui aux organisations locales.
- il programme, gère et contrôle les moyens pour la direction comme pour les services techniques (véhicules, carburant, matériel).
- il supervise les activités du personnel du projet.
- il collabore à la conception et à l'exécution des programmes annuels des services techniques.

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PROPOSITION DE TERMES DE REFERENCE  
ET OBSERVATIONS PRELIMINAIRES

I. Préambule

Par Lettre en date du 30/12/82, l'USAID a saisi le Ministère du Développement Rural d'une proposition d'évaluation provisoire de la phase II du Projet Productivité Niamey.

L'énoncé du travail tel qu'il est décrit prévoit une mission de quatre semaines pour trois consultants (soit environ 2 hommes-mois/expert).

Le Ministère du Plan a été saisi le 20/01/83 par transmission d'une copie de la lettre ci-dessus mentionnée.

L'arrivée de la mission consultante a été indiquée par lettre en date du 11 Janvier 1983 (N° 00336 MAE/C) et coïncidait avec la tenue à LOSSA du 2ème Séminaire d'autoévaluation du Projet.

II. Observations Préliminaires

La mission américaine était déjà là quand le Ministère du Plan a été saisi de l'information, notamment les termes de référence indiqués pour les consultants par l'USAID. Cependant le Service Départemental du Plan a toujours été associé aux activités de suivi/évaluation du Projet.

La phase II du Projet (1980-1985) se trouve à la fin de la 2ème année et l'objectif de cette évaluation à mi-parcours est moins de souligner les réalisations quantitatives du projet que ses résultats au niveau de la création de capacités locales de développement auto-portant. D'où la difficulté de cette évaluation : la durée de la mission (4 semaines dont une semaine sur le terrain)

permet-elle notamment au sociologue de tirer suffisamment de renseignements pour élaborer les indicateurs de dynamique nécessaires à l'appréciation du projet ?

Enfin il faut signaler que cette mission d'évaluation a lieu en dehors de la campagne agricole et risque donc de se heurter à l'impossibilité de vérifier certaines informations de suivi par absence des ex-stagiaires notamment.

### III.- Indicateurs de référence.

Le caractère auto suffisant(ou auto-portant) du projet doit se mesurer pour une part croissante des producteurs dans la prise en charge des vecteurs du changement technologique et organisationnel devant une meilleure productivité.

De ce fait il faut non seulement prendre en compte les résultats du suivi mais aussi l'apport de la phase II par rapport à la phase I.

#### 1°)- Indicateurs de suivi.

1.1.- <u>EX-STAGIAIRES :</u>	1 <sup>ère</sup> année	Phase I			Phase II			
		2 <sup>e</sup>	3 <sup>e</sup>	1 <sup>e</sup>	2 <sup>e</sup>	3 <sup>e</sup>	4 <sup>e</sup>	5 <sup>e</sup>
1.1.1. <u>Application des Thèmes techniques</u>								
Couples formés								
Couples appliquant								
1 Thème								
2 Thème								
3 Thème								
Tous les thèmes								

1.1.2.- Liste des ex-stagiaires et nombre de contacts avec les encadreurs - période du contact - objet du contact.

1.1.3.- Utilisation du matériel agricole : type de matériel vulgarisé. Degré d'utilisation par catégorie de pièce travaillante.- Travail accompli pour d'autres paysans par l'ex-stagiaire avec le matériel.

1.2. - Impact de la vulgarisation.

Phase II

	1 <sup>er</sup>	2 <sup>e</sup>	3 <sup>e</sup>	4 <sup>e</sup>	5 <sup>e</sup>
PAISANS touchés					
Paysans appliquants					
Superficie touchée					

1.3. - Auto-encadrement.

Fonctions	Distribu- tion des intrants	Distribu- tion du crédit	Gestion du magasin coopératif	Convocation des réunions de GMV	Etc....
- Agents					
Coordonnateur					
Cadre de l'ar- rondissement (Agricult, UNCC)					
Encadreur					
Agent de suivi					
Coopérative (responsable?)					
GMV (responsable?)					

N.B. Chaque agent doit être indiqué avec le plus de précision selon la question: qui accomplit effectivement la fonction indiquée ? indiquez (F) s'il agit d'agent féminin.

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#### 1.4.- Organisation Coopérative (Niveau GHV et niveau ULV)

Qui est mobilisé par la Coopérative ?

Ex-stagiaires? - paysans touchés par la vulgarisation ? - Paysans les plus motivés ? - Pourquoi ?

Quelles sont les fonctions les plus sollicitées ? Pourquoi ?

( Relations avec les activités du projet ).

Quelles sont les demandes faites à la coopérative et qui ne sont pas satisfaites ? Pourquoi ?

Les producteurs souhaitent-ils élargir les activités de la coopérative ? Dans quelles sens ? Comment ? Sont-ils disposés à fournir : - plus d'effort ? - plus de financement ?

Quels sont les membres les plus actifs de la coopérative ?

Chef de villages, simples paysans, ex-stagiaires, etc.... Quelle est la participation des femmes : situation matrimoniale, âge, types de fonctions et d'activités.

#### 1.5.- Participation des femmes.

Quelles sont leurs activités habituelles ?

Comment ont-elles été sollicitées par le projet ?

Quelles sont les femmes qui participent ?

(âge, situation matrimoniale, lien parent. avec les responsables locaux - chefs de villages, chef de canton - responsable de GHV, etc...)

Leurs activités sont-elles: - ménagères/extra ménagères

- individuelles/collectives

- autonomes/dépendantes (de celles des hommes) etc...

#### 2°) - Indicateurs de situation.

2.1. Situation de l'infrastructure (1980-1982)

2.2. Situation du personnel (II)

2.3. Situation financière.

#### 3°) - Ratios d'efficacité

3.1. Coût de l'encadrement par stagiaire

.../...

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	Phase I		Phase II	
	Infra	Total	Infra	Total
1978		108		
1979		182		
1980				

Nombre d'heures de formation par stagiaire (Heures/formato. s)

	Phase I	Phase II
1978		1981
1979		1982
1980		

3.2. Coûts de la vulgarisation par paysan et par superficie.

3.3. Coûts d'infrastructure, et du fonctionnement par rapport au coût de la formation, au crédit agricole.

3.4. Taux de réalisation des sous-objectifs.

CREDIT MANAGEMENT

SPECIALIST'S

JANUARY 17-29, 1983 CONSULTANCY

TO NIAMEY DEPARTMENT DEVELOPMENT

PROJECT PHASE II 683-0240

BY

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NIAMEY, NIGER

JANUARY 19, 1983

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## SUMMARY OF FINDINGS

A credit management specialist was called to Niamey to look at the credit problems of the NDD Phase II Project. He looked at the problems of the CNCA, the NDD Credit Advisor, loan distribution procedures, loan repayment and recording and accounting of loan activity.

The main problems were sluggish disbursement procedures, low repayment rate and irregular statistical reporting services.

The main solutions proposed were to decentralize loan disbursement procedures, proceed aggressively toward collecting overdue loans and computerize the loan Portfolio management at the CNCA.

The implementation of the short term (by March 31, 1983) recommendations of this report along with actions already undertaken by the project, will be responsive to the issues raised in the recent NDD Audit report.

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- E. Liste de prix de cession des mini materiels vendus au comptant aux cooperateurs et aux stagiaires des CPT dans la zone du projet productivité Niamey. Campagne Agricole 1982.
- F. CNCA note de service N° 531/ du 21/5/82 portant modification des taux d'interet.
- G. CNCA tableau d'amortissements des prets materiels et animaux 1982. CNCA tableau
- H. CNCA Demande de Pret Collectif
- I. PPN Bon de Livraison
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- M. CNCA Bon pour Franc
- N. CNCA Contrat de Pret
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- W. Monthly Report of Loans
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- Z. "The Computer--An Appropriate Technology for managing a viable Agricultural Credit System in a Low Income Country--Upper Volta" by Thomas Stickley.
- Z1. NDD/CNCA Draft Protocol: "Programme Credit Agricole Projet Productivité Niamey" 17 July 1981.

I. INTRODUCTION

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A. CREDIT COMPONENT OF NDD

The Niamey Department Development Project Phase II--683-0240 has the following purpose: "To institutionalize a process of rural development through the establishment of self-managed village organizations capable of assisting farm families with the achievement of increased food production on a self-sustaining basis."

The NDD Project outputs include:

- A system of technical service delivery established and functioning in the Project Zone.
- A system of self-managed village organizations established and functioning.
- Systems of credit delivery established and functioning.
- System of agricultural input delivery established and functioning.
- System to increase women's access to development activities established and functioning.
- Coordination and management system for the Project Zone functioning effectively.

It is in relation to the third output "Systems of credit delivery established and functioning" that the following scope of work was written for this two-week (January 17-29, 1983) consultancy.

B. SCOPE OF WORK

The scope of work for the credit management specialist is as follows:

- Review the current system of providing credit to farmers in the Project Zone.
- Review the procedures by which the proceeds from cash sales (in the case of fertilizer) and farmer reimbursements (in the case of animal traction equipment) are collected by UNCC agents, recorded at the cooperative level, forwarded to the CNCA, and correctly entered into the project's credit account.
- Design a system of monthly credit reports for the cooperative, arrondissement, and department level.
- Make a detailed report of all changes and action steps recommended for CNCA lending procedures, loan collections and overall management and accounting of the project's credit fund.
- Assess the capability of the CNCA to manage a re-designed system and make recommendations for technical assistance to overcome area of institutional weakness; the assessment may address alternative institutional mechanisms for providing agricultural credit to small farmers.

The final report is to contain a detailed description including all forms and reporting formats, of a revised system as well as the institutional setting in which such a system can realistically succeed.

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C. MAIN ISSUES CONSIDERED

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To accomplish the scope of work as stated above I have focused my attention on the following main issues:

- Prospects for CNCA becoming a self-supporting institution.
- The role of USAID's credit advisor on the NDD project.
- The ability of CNCA/UNCC/NDD to distribute loans efficiently.
- The potential for CNCA/UNCC/NDD to receive a high rate of loan repayment.
- The capacity of CNCA/UNCC/NDD to maintain a set of loan records and accounts adequate to the administrators of the credit program for management and control.

In October 1982 an audit of the NDD project was conducted by a regional inspection group from REDSO/WAFR (See "References consulted", Annex C) and recommended that credit activities be suspended until remedial action could be taken to correct the management and accounting problems with the credit program. Both Straughter's (See "References consulted" Annex C) and my report address the points raised.

TABLE 1

AMOUNT OF LOANS MADE BY NDD PROJECT FROM THE BEGINNING OF THE PROJECT THROUGH DECEMBER 31, 1982 (IN FCFA)

FISCAL YEAR IN WHICH LOAN WAS MADE	SOURCE OF INFORMATION (STRAUGHTER REPORT TABLE NUMBER)	EX-CPT	COOPS	BLACK SMITHS	BEEF FATTENING	TOTAL
<u>Qualles</u>						
1977-79	1-7	2,895,900				2,895,900
1979-80	2-7,3-7,4-7	5,931,150	4,984,550	645,610		11,561,310
1980-81	5-7,6-7	3,619,800	5,745,000			9,364,800
Total Qualles		12,446,850	10,729,550	645,610	0	23,822,010
<u>Filingué</u>						
1977-79	1-9	7,362,362				7,362,362
1979-80	2-9,3-9,4-9,5-9	7,952,584	5,977,000			13,929,584
1980-81	5-9,7-9,8-9	3,827,000	7,231,416		3,478,825	14,537,241
Total Filingué		19,141,946	13,208,416	0	3,478,825	35,829,187
<u>Kolo</u>						
1977-79	1-9					0
1979-80	2-9,3-9,4-9,5-9	4,776,486	1,990,000			6,766,486
1980-81	6-9,8-9	3,052,500	9,391,000			12,443,500
Total Kolo		7,828,986	11,381,000	0	0	19,209,986
TOTAL NDD		39,417,782	35,318,966	645,610	3,478,825	78,861,183

TABLE 2

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NUMBER OF LOANS MADE BY NDD PROJECT FROM THE BEGINNING OF THE PROJECT THROUGH DECEMBER 31, 1982.

<u>FISCAL YEAR IN WHICH LOAN WAS MADE</u>	<u>SOURCE OF INFORMATION (ST (AUGHTER) REPORT TABLE NUMBER)</u>	<u>EX-CPT</u>	<u>COOPS</u>	<u>BLACK-SMITHS</u>	<u>BEEF FATTEN-ING</u>	<u>TOTAL</u>
<u>Ouallam</u>						
1977-79 //	1-7	7				7
1979-80 -	1-7,2-7,3-7,4-7,	36	14	5		55
1980-81	5-7,6-7	8	19			27
Total Ouallam		51	33	5	0	89
<u>Filingué</u>						
1977-79 //	1-9	16				16
1979-80 -	2-9,3-9,4-9	43	16		5	64
1980-81	5-9,8-9	7	30			37
Total Filingué		66	46	0	5	117
<u>Kolo</u>						
1977-79 //	1-9					0
1979-80 -	2-9,3-9,4-9	28				28
1980-81	5-9,8-9	5	8			13
Total Kolo		33	8	0	0	41
TOTAL NDD		150	87	5	5	247

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TABLE 3REPAYMENT ON ALL NDD PROJECT LOAN PAYMENTS DUE FROM BEGINNING OF PROJECT THROUGHDECEMBER 31, 1982.

<u>FISCAL YEAR IN WHICH LOAN WAS MADE</u>	<u>SOURCE OF INFORMATION (STRAUGHTER REPORT TABLE NUMBER)</u>	<u>BORROWERS</u>	<u>AMOUNT REPAID BY DEC. 31 1982 (FCFA)</u>	<u>AMOUNT DUE BY DEC. 31 1982 (FCFA)</u>	<u>REPAYMENT RATE</u>
<u>Ouallam</u>					
1977-79	1-7	EX-CPT	1,822,088	3,174,671	57.4%
1979-80	2-7,4-7	EX-CPT	730,266	3,743,968	19.5%
	3-7	COOPS	2,920,652	9,927,338	29.4%
	4-7	Blacksmiths	22,000	407,610	5.4%
1980-81	5-7	EX-CPT	0	1,142,500	0%
	<u>6-7</u>	<u>COOPS</u>	<u>0</u>	<u>2,898,555</u>	<u>0%</u>
Total Ouallam			5,495,006	21,294,642	25.8%
<u>Filingué</u>					
1977-79	1-9	EX-CPT	3,305,490	6,082,632	54.3%
1979-80	2-9,3-9	EX-CPT	2,036,855	3,784,382	53.8%
	4-9,5-9	COOPS	3,464,690	9,772,816	35.5%
	8-9	BEEF FATTEN-ING	3,310,685	3,478,825	95.2%
1980-81	6-9	EX-CPT	0	1,207,900	0%
	<u>7-9</u>	<u>COOPS</u>	<u>0</u>	<u>5,974,694</u>	<u>0%</u>
Total Filingué			12,117,720	30,301,249	40.0%
<u>Kolo</u>					
1979-80	2-9,3-9	EX-CPT	673,823	3,240,511	20.8%
	4-9,5-9	COOPS	148,830	3,647,242	4.1%
1980-81	6-9	EX-CPT	0	1,152,820	0%
	<u>5-9</u>	<u>COOPS</u>	<u>247,190</u>	<u>6,755,761</u>	<u>3.7%</u>
Total Kolo			1,069,843	14,796,334	7.2%
<b>TOTAL NDD</b>			<b>18,682,569*</b>	<b>66,392,225</b>	<b>28.1%</b>

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(Annex H) and move from the borrower to the CNCA agency at the Department Level through the GM, COOP, Arrondissement (UNCC Delegate), and COTEDEP.

## 2. Delivery of Inputs

The inputs (Credit in kind) move from the factory to the borrower through the UNCC (National--Centre D'approvisionnement), UNCC Department warehouse, UNCC arrondissement warehouse, and Cooperative. Each movement is made with a "Bon de Livraison" (Annex I). At the cooperative level the delivery is confirmed by a "Bon de livraison" (Annex I). At each level each kind of equipment is registered and controlled on a "Fiche de Stock" (Annex J).

## 3. Handling cash

If upon delivery of the inputs they are paid for with cash, the buyer is given a receipt (Annex K) and the money moves to the CNCA Headquarters through the cooperative, UNCC (Arrondissement delegate), UNCC Department office, and CNCA department agency. Each time the money changes hands a similar receipt is written and the transaction is recorded on a "Livre de Caisse" (Annex L).

Cash received as repayment of loans, loan down payments and animal insurance (FAMAT) premiums follow the same route from borrower to CNCA national level and are acknowledged at each level with a receipt (Annex M) and an entry on the "Livre de Caisse" (Annex L). When a receipt is issued at the cooperative level the names of individuals and the amount each has paid is noted on the back of the receipt.

## 4. Loan Contracts

Loan contracts (Annex K) are issued at the CNCA Department agency level receipt of a copy of the "Bon de Livraison-Facture" (Annex O). Copies are distributed as follows: CNCA National, CNCA Department Agency, NDD, UNCC (Arrondissement Delegate) and cooperative. While waiting for the arrival of the official contract from the CNCA agency a provisional contract is held by the UNCC Delegate (Annex P). These loans are registered at the arrondissement level on a CNCA Comme Client form (Annex Q) and at the Coop level on a Registre des Prêts (Annex R).

These procedures are summarized in "Flux physiques et Monétaires" (Annex S) and "Liste des Documents de Gestion" (Annex T). Also suggestions for making these procedures work more smoothly appear in "Propositions de Resolutions Presentees par Les Delegués" (Annex U), prepared by arrondissement delegates attending the Hamdallaye Credit and Inputs Workshop, December 1982.

## C. PROBLEMS

In this section several problems of the current system will be pointed out but the main problems can be summarized as follows:

- Low Loan repayment rate (28% as of Dec. 31, 1982)
- Sluggish Loan Disbursement procedures.
- Irregular, inconsistent, and incomplete accounting and reporting procedures.

# Best Available Document

## 1. CNCA Management Problems

### a. New need for concern for Self-Sufficiency.

Limitations on GON financial resources reduce prospects for receiving government subsidies in the future. Therefore management to achieve the goal of a self-supporting institution are more important than ever.

### b. Management procedures

Following are a few of the procedures being used by CNCA that create problems:

- Loan disbursement and contract issuing is handled at the high level of Department agency.
- Identical detailed information is maintained at different levels
- annual financial statements are late in coming out (FY 1980-81 statement is still out).

## 2. NDD Credit Advisor Problems

USAID's credit advisor for the NDD Project has had to handle many of the details of the day-today administration of the credit system (handling money, delivering inputs, delivering contracts, etc.) which takes time away from the long term management aspects of the system. Also his office is located at USAID rather than at CNCA.

## 3. Loan Disbursement Problems

The long and complicated procedures described earlier for processing loan requests, delivering inputs, and issuing contracts have resulted in:

- Animal traction packages being delivered after they are needed for the current crop season.
- Delays of up to two years in delivery of loan contracts.

## 4. Loan Repayment Problems

In the earlier stages of the NDD project (Both Phase I and Phase II) attention was focused on distribution of animal traction packages and training with relatively less emphasis placed on the importance of loan repayment. The result was the 28% repayment rate as of December 31, 1982 (Table 3). Consequently several aspects of the low repayment problem have emerged.

### a. Motivation of Agents

The task of collecting loan repayments from borrowers who had understood poorly the terms of their loan is distasteful to the field level UNCC encadreurs charged with this responsibility, especially if no reward is given for a good result and no sanction is suffered from a bad result. Also the fact that UNCC agents are asked to collect loans given by another institution, the CNCA, is a problem.

### b. Procedures

Under "Loan Disbursement Problems" above it was pointed out that loan contracts come out long after the animal traction package is delivered and often after the first or second repayment due dates. Naturally, borrowers are not inclined toward making a loan repayment on a contract they have not yet received.

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Loans are made to farmers collectively through a single loan to a cooperative. If farmers appear voluntarily with money in their hands it is very difficult for the collection agent to tell them specifically how much each should pay as their part of the collective loan.

A shortage of receipt forms at the level of the UNCC encadreur who serves as the loan collection agent has been the reason these agents have discouraged (and in some cases refused) repayment by borrowers in small amounts.

Niger does not appear to be different from Upper Volta in loan repayment problems. That is high delinquency rates are more the result of shortcomings in the performance of the lending institutions themselves than from the borrowers (Annex V).

#### 5. Accounting and Reporting System Problems

Though Straughter (see "References consulted", Annex C) has proved that the data exists, no systematic procedure is working to produce the basic statistics needed by management like those in Tables 1, 2, and 3. Duplicate sets of data are being kept at too many different levels.

Stock of agricultural production inputs are loosely controlled at each level.

Loan repayment procedures are relaxed and inconsistent. For example loan repayments are received at different levels in the structure making it difficult for those keeping accounts at lower levels to keep their accounts up-to-date. This casualness in procedures may encourage embezzlement.

### III. RECOMMENDATIONS

Although several recommendations will be made the main ones may be summarized as follows:

- Decentralize loan disbursement and record keeping authority to UNCC Arrondissement level.

- Systematize and regularize loan repayment collection procedures.

- Stop keeping duplicate detailed records at different levels.

- Shift duties of NDD credit advisor away from trivia to a higher level of planning and scheduling through a CNCA counterpart to meet three annual deadlines:

- May 1 for loan disbursement,

- Dec. 31 for loan repayment,

- Sept. 30 for statistical reporting.

- Computerize CNCA/UNCC for:

- Loan Portfolio Management

- Stock Management

- Employee Payroll

- Calculation of efficiency premiums for employees

- General accounting

- Set up profit centers in both CNCA and UNCC

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### A. Short term (1983) Recommendations

The date of March 31, 1983 should be set as the deadline to accomplish the following:

-Satisfy all unresolved points of the Straughter report (See "References Consulted", Annex C).

-Organize meetings of leaders of cooperatives to set specific dates to return to collect all loan repayments now overdue.

-Complete all loan contracts for loans already made.

-Sign revised Protocol between CNCA/UNCC/NDD.

#### 1. CNCA Management Recommendations

Clarify lines of direction/authority from CNCA to borrowers through UNCC Delegates and encadreurs and cooperatives. Linked to this is the recommendation that all CNCA/UNCC Agents in this newly clarified chain of command received annual cash performance premiums based on performance criteria as established by the institutions involved (CNCA/UNCC/NDD) such as:

-Number of small farmers receiving loans.

-Amount loaned.

-Repayment Rate.

-Profit earned by the Profit center which includes the employee in question.

-Special premium for hard-to-collect oldest overdue loans.

Establish a clear policy for writing off uncollectable loans. If this is not done then these uncollectable loans show up on the CNCA's annual financial statement as assets when in reality they are not collectable.

Establish a clear philosophy at all levels in the CNCA/UNCC/NDD that interest income is to be used to cover the three elements of costs of administration, cost of money, and uncollectable loans. If CNCA is charging 12.5% interest, and they pay BCEAO 10% for money, they allow 2.5% to cover costs of administration, then this leaves nothing to cover bad debts--in other words a 100% repayment rate is assumed.

#### 2. NDD Credit Advisor Recommendations

It is recommended that the NDD Credit Advisor be installed in the Niamey Department Agency of the CNCA to encourage a more active relationship with his counterpart, the Chief of the agency.

Although the early years of this project required the time and attention of this NDD Credit Advisor to follow details of the day-to-day operations of the credit system (handling money, delivering documents, distributing farm equipment, etc.) The system has evolved to the point where the Nigerian staff can handle the mechanics of operations thereby freeing up the time of the Credit Advisor to work more closely with his counterpart in doing the planning required to meet the three key deadlines of the credit system:

- May 1 - Loans made -- contracts signed
- Dec. 31 - All repayments collected
- Sept. 30 - All statistical reports completed

### 3. Loan Disbursement Recommendations

It is recommended that, effective immediately, money being used for manufacturing farm equipment, buying traction animals or buying farm inputs be charged interest from the day it leaves the CNCA. The cost of this money should be added to the price of the inputs. The date the inputs move from the supplier to the cooperative would be the date that interest is stopped being charged to the supplier and started being charged to the cooperative. The cooperative would pay interest on the money tied up in the inputs from the day it receives them until the day they are delivered to the farmers. The cost of this interest would be added to the price charged the farmer. The farmer should start paying interest on any part of the animal traction package the day that part arrives (even if the package is incomplete).

It is also recommended that CNCA make loans to a union of cooperatives organized at the arrondissement level and let the union of cooperatives (under the guidance of the UNCC delegate) on-lend to farmers through their respective cooperatives and GM's. This will have the effect of shifting the loan contract preparation from the department to the arrondissement level. This decentralization should allow contracts to be written the day inputs are delivered rather than with the one or two year delay as in now the case.

### 4. Loan Repayment Recommendations

Develop a schedule of meetings with representatives of cooperatives to announce precise dates for returning to the cooperatives for collecting loan repayments--all to be completed before the due date: December 31.

Distribute an ample stock of printed loan receipts to eliminate the lack of sufficient receipts as the excuse encadreurs have used for not wanting to accept small amounts on loan repayments.

In case of crop failure or other valid excuse for deferring a loan repayment the decision to defer should be on a case-by-case base and not a decision that would apply to everyone in an area. Many farmers have alternate means of making their loan repayments and would prefer to do so. In no case should interest charges be deferred.

### 5. Accounting/Reporting System Recommendations

As a minimum an accounting/reporting system should answer the three basic questions posed earlier. How much has been loaned, how many loans have been made, and what is the rate of repayment. Additionally; it should show how many people have been served and this should all be broken down by year, zone, purpose and source of funding. The system in place provides the basic information required to do this. From the existing Bon de Livraison (Annex I), Recu (Annex K), Livre de Caisse (Annex L), Contrat (Annex M) or Contrat Provisionnelle (Annex P), and Registre des Prets (Annex R), the

information can easily be found to produce the monthly reports I am proposing to be filled out at four levels of the system: Cooperative, Arrondissement, Department, and National levels. One report is for loans given (Annex W) and the other report is for receipts (Annex X). If these two reports are produced at these four levels then tables like those in Tables 1, 2, and 3 of this report will be produced.

To address the problem of not having detailed information at the cooperative level on individual loan accounts, Thomas Shaw has developed a form to do the job. I endorse this proposal with the small changes as noted on this "Compte Individuel" (as shown in Annex Y).

A basic principle of record keeping recommended is that duplicate records not be kept. Basic details should be kept at the level of arrondissement, and at higher levels all that is needed is summary data on the detail found at lower levels.

One modification is recommended in the "Livre de Caisse" (Annex L) kept at all levels and that is that a balance ("Solde") column be added at the extreme right as is done for the compte client (Annex Q). This balance should equal the amount of cash on hand and serves as a means of control for the credit agents from CNCA who make periodic visits to arrondissements and encadreurs of cooperatives.

It is recommended that Column 7 of the "Monthly Report of Receipts" (Annex X) be split into principal (7A) and interest (7B). This is convenient for the "Profit center" managers to see clearly what goes back into the revolving credit fund (the principal) and what is available from the interest income to pay for administrative costs; the cost of money, and bad debts to be written off.

#### B. Long Term (1984 and 1985) Recommendations

##### 1. Computerized management

It is recommended that a systems analyst look at the management needs that can be helped through computerization in both CNCA and UNCC. Programs could be developed to help manage:

- the loan portfolio
- the stock of inputs
- the payroll of employees
- the calculation of efficiency premiums of employees
- general accounting

Computerization of the loan portfolio would eliminate the need for field agents to produce:

- Fiche de Stock (Annex J)
- Compte Client (Annex O)
- Registre des prêts (Annex R)
- Monthly report of loans (Annex W)
- Monthly report of Receipts (Annex X)
- Compte Individuel (Annex Y)

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In fact, the computer would furnish this information to the agents in the field.

2. Financial Management

The services of a financial management specialist could help CNCA in this regard.

3. Organizational Structure and Personnel Administration

The organizational structure and personnel administration of CNCA may also benefit from the assistance of specialists in these areas. For example the installation of a computer might cause some positions to be redefined. Also, productivity of employees might be increased through training, improved logistical support, additional administrative support, a system of premiums to be paid based on efficiency criteria as defined by the institution and fair/equitable salaries. All should fit within the overall goal of self-sufficiency of the institution which would come not as much from reduced costs but from the possibility of increased volume of loan activity without increasing the fixed cost base.

4. Profit Centers

Under "Loan Disbursement Recommendations" in Section III.A.3. above is the idea of each level holding a stock of input supplies, pay interest on the money invested in that stock and pass this cost on to the buyer of that stock. This is presented as part of the philosophy behind the notion of setting up "Profit Centers" in which each center of activity would manage its affairs on a profitable basis in which revenues exceed expenses. If Government subsidies are received these are simply treated as income on the income statements.

#### IV. CONCLUSIONS

The main points of this report were presented orally before the directors and staff of USAID/CNCA/UNCC/NDD before my departure from Niger. The Director of CNCA reacted by saying that he fully endorsed my points regarding self-sufficiency of the institution and my proposal to computerize the CNCA/UNCC and added a point of his own. He suggested that CNCA try to find additional capital with which loans could be given to cooperatives for buying farm products, storing them until the price rises and selling them at a profit. He pointed out how this would help directly with the problem of loan repayment on animal traction loans. This is consistent with the four points guiding the direction of AID presently: private sector development, institution building, technical transfer and policy development. The CNCA concluded his remarks by endorsing my reservation that the low loan repayment rate is more the fault of the lender than the borrower (Annex V).

A draft protocol agreement between NDD and CNCA was drafted on July 17, 1981 (Annex Z1) and is now being revised. I would suggest that the following points be incorporated into the revision:

-Reconciliation of points raised in Straughter report (See "References consulted", Annex C) be accomplished by March 31, 1983.

-Role of NDD advisor be redefined (See "NDD Credit Advisor recommendations" in Section III.A.2. of this report) and that a more active counterpart relation be developed by moving the NDD Credit Advisor to an office near his counterpart, the Chief of the Niamey Department Agency of the CNCA.

-Priority should be given to collecting loans now overdue (See "Loan Repayment Recommendations" in Section III.A.4. of this report) by March 31, 1983.

The system of monthly reports proposed (See "Accounting/Reporting System Recommendations" in Section III.A.5) in this report should be adopted immediately.

-Loan contracts should be written at the arrondissement level (See "Loan Disbursement Recommendations" in Section III.A.3 of this report) and effective March 31, 1983.

-Systematic programs should be developed to meet the three key deadlines of the credit program:

May 1: Loan Disbursement

Dec. 31: Loan Repayment

Sept. 30: Statistical Reporting.

-Premiums should be given to amount cooperatives, encadreurs and delegates as follows:

Loans due Dec. 31, 1979: 10% of amount collected

Loans due Dec. 31, 1980: 10% of amount collected

Loans due Dec. 31, 1981: 15% of amount collected and that this cost be paid

from NDD Project funds if possible.

It is my belief that the recommendations of the "Audit Report" (See "References Consulted" Annex C) will all be satisfied from:

1. Actions NDD has already taken,
2. The recommendations of the Straughter report, and
3. The recommendations of my own report, here.