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BACKGROUND PAPER PREPARED FOR US-NIGERIEN DISCUSSIONS OF THE NIGER CEREALS PROGRAM

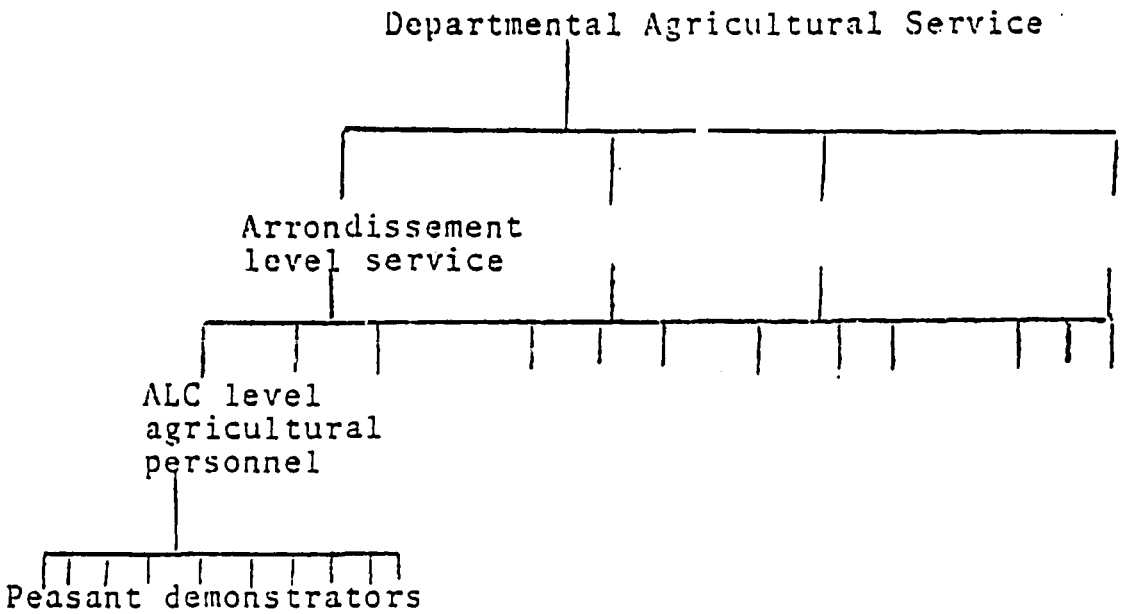
Pursuant to contract no. AID/afr-C-1244 clause B1, the contractor has been asked to prepare a report assessing the field activities undertaken by the UNCC and the GON Departmental Agricultural Services to increase cereal production. In preparation of this report documents were consulted at the national and regional levels and special attention was given to the Project for the Development of the Zinder (Project 3M) as this project represents the longest experience with a Departmental development scheme for productivity in Niger (the project is now officially in its fourth year). Field work at the arrondissement, ALC, and village level was conducted in the Zinder Department from October 16 to November 5, 1976. Additional field work was conducted in Maradi on the background to the as-yet non-operational BIRD Maradi project. This work was accomplished from October 15 to 16th, and from November 6 to 8, 1976. In the course of this field work, extensive tape recordings of interviews with farmers and with Nigerien local-level cadre were made. These interviews are currently being transcribed for future use by project personnel, and constitute a rich resource in terms of reflecting the actual opinions and experience of people involved in the project at

the grassroots level. A systematic questionnaire bearing on farm practices in the project area was developed (see Annex I, for a bilingual version). The questionnaire is currently being administered in five villages in the Matameye arrondissement on which comparable data are available from a study conducted in 1969-70. Processing of this data should give a somewhat more complete idea of how the 3M project has actually influenced farm practices. Finally, I was aided in the gathering and interpretation of local-level data in the Matameye area by Dr. Kaine Sallaw, a trained sociologist of the Study Bureau of the Service de l'Animation, who accompanied me to the area of intensive investigation for a period of one week. I am grateful to Dr. Sallaw for his insightful comments, based on his own first hand experience with Hausa society. In my several trips to Niger I had never had better cooperation at the administrative and intellectual level as I experienced on this field trip.

Agricultural Extension in Niger--Several Models

It is possible to distinguish two working models of agricultural extension in the major areas of Niger (Zinder, Maradi). A third variant model is emerging with the influence of personnel made available at the grassroots level by the Plan Semencier (or Niger Cereals Program).

The first model combines a tiny professional agricultural staff with a network of peasant demonstrators. The structure for this approach is as follows:



The concept of this approach is to demonstrate the superiority of a number of technical themes and new inputs at the farm and village level. It is hoped that by involving farmers, the costs of demonstration will be considerably reduced (farmer-demonstrators are usually unpaid), and that the communication of results will be more direct and convincing. In the Maradi project there is only one layer of farmer-demonstrator--the young farmer trained at CFJA's. These "progressive" farmers, trained in modern farm techniques and equipped with a complete animal traction cultivating unit are supposed to serve as islands of information for other farmers. They are supposed to be supervised by ALC agricultural and UNCC personnel and are to be given specific tasks to accomplish in the framework of project plans. In the 3M project, the peasant level is more complex. Intimately tied into the

animation-cooperative structure, local level farm demonstrators (PDAs) are "elected" by village mutuals. Peasant supervisors are then "elected" by the cooperative group (5-10 village mutuals). These peasant supervisors (AVs) are also frequently named by ALC agricultural agents from among the best PDAs. They are paid a small sum, 3000-5000 CFA per month, to tour their area of five to ten villages, making certain the PDAs follow the technical themes properly. In additon, the cooperative group selects a young farmer each year to be trained at a Centre de Perfectionnement Technique. Four such centers currently exist in the project area and each trains about 25 young farmers each year in farm techniques and animal powered mechanized cultivation. When these young farmers return to their village with their equipment, they are expected to demonstrate the new methods and to spread knowledge of them by hiring out their equipment to others. They are supervised by ALC level UNCC and Agricultural Agents, but are otherwise given no specific and no salaried jobs in the framework of the project. One additional variant on the peasant-demonstrator method has been introduced recently in the intensive zone of the 3M project (Yaouri, Satamawa and Angaol Gao--see below, model 2). In this approach, one peasant is selected for each 15 hectares of land under intensive treatment, and is given a unit of animal traction equipment. This latter approach as yet has so little coherence in terms of an extension technique that it may be passed over by simply mentioning the fact that thus far village and cooperative authorities, and old animators, seem to be the

major recipients. Since no training is provided to these "demonstrators," this approach has all the signs of a simple patronage device.

Extension Assumptions of Model 1, and their reality

The basic assumptions on which this approach is based are the following:

1. Farmers will respond more or less automatically to demonstrations of clear technical superiority.

2. Demonstrations are best achieved and communicated by villagers.

3. The ALC level cadre can adequately supervise the peasant network.

4. Having generated interest in new inputs, the agricultural and UNCC agents can supply these inputs on a reliable basis.

The first proposition is repeatedly cited by arrondissement level cadre when asked what kinds of programs have been organized to communicate the results of technical field trails. The farmer, they say, will more or less understand from mere observation the reasons for the superior yield, and the ways in which he can avail himself of such resources. There is, in point of fact, some basis for this statement in reality, particularly ir the intensive treatment areas (model 2, below). Hausa farmers seem extremely responsive to overwhelming evidence of superior yield, especially when it is clearly linked to commercial outlets and to available inputs. An outstanding example of the rapid and more or less spontaneous spread of new varieties and new inputs was identified in Matameye

Arrondissement where, in the past two years, a new, highly profitable variety of sugar cane has completely displaced the earlier variety, despite the fact that it requires chemical fertilizers. Since farmers are assured of a market at good prices for this commodity, they will seek out fertilizer, even if it is unavailable from government suppliers.

But overall, and particularly in the area of the project where the first extension model predominates, the assumption appears to be false The reasons are multiple, but among the most crucial are:

A. The failure of the system to produce clearly superior results on a consistent basis. In my 1974 report I indicated the degree to which peanut yield tests on farmer plots had failed to produce promising results. The 1975 annual report of the 3M project (Annex 18) gives the following results, which can only be qualified as catastrophic:

Roughly half the demonstration plots were so poorly done that the results were not considered usable.

Farm Peanut Tests, 1975

Nature of Peasant Demon.	Experimental Plots (yields in kg/hec)	Control Plots
21 Matameye Peasant Supervisors	109	73
55 Mirriah Peasant Supervisors	127	86
145 PDA-Matameye	58	41
230 PDA-Mirriah	120	82

As for millet field trails, the situation was even worse. Only 47% of the supervisors (AV) and 9% of the PDAs followed the themes. A very small percentage of the total data was reported. In both Magaria and Matameye field trails for P3Kolo millet as compared to Zongo (local variety of Matameye and Magaria) yielded no output on either control or test plots. In Mirriah the results were somewhat better, with AVs averaging a test yield of 262 kg/hec as aginst 184 on control plots. PDAs in Mirrian averaged only 74 kg/hec on test plots and 53 on control plots.

Of course, 1976 test results are much improved due to the usually good season for millet, and the fact that for the first time demonstration farmers at all levels were supplied with at least some fertilizer (see Annex 2). But the fact remains that over the life of the project the agricultural service has been generally unsuccessful in producing good technical results using peasant demonstrators for field tests.

B. Even were the demonstrations to be technically successful in the non-intensive areas, it is unlikely that the communication of results would take place more or less automatically. We found in our field work that little effort was made to feed back village test results to villagers. The agricultural service did not supervise harvesting of test plots. Farmers were instructed to bring their test and control plot yields to the UNCC office for weighing. Frequently the farmer himself was not even told the results of his test. Comparisons were simply noted for statistical purposes. The peasant

demonstrator himself rarely communicated either his method or his results to more than a few additional villagers (see below). Finally, as we noted in the 1974 report, farmers think they know why some farms outyield others. The reasons, they feel, are generally out of their control. They consist of soil quality and manuring; labor availability at crucial periods; and an element of personal good fortune (sometimes described as the possession of ritual medicines or magic). An unexplained demonstration accomplishes nothing. If the non-demonstrator happens to know that the village demonstrator has employed fertilizer on this plot, he will probably ascribe a significant role in increased production to the fertilizer. But since the demonstrator receives his fertilizer free and the non-demonstrator must pay cash for fertilizer, and often cannot obtain it at all from government stocks, the effects of the demonstration are minimal. Perhaps the greatest skepticism indicated in our interviews with non-demonstrators is of density themes for millet. Farmers still feel that this technique offers high risk, particularly in soil that is not especially fertile, and in years of less than average rainfall. The Agricultural Service has yet to demonstrate the effectiveness of the millet density theme taken by itself.

2. The second proposition, that demonstrations are best achieved and communicated through villagers, is subject to a number of qualifications in the field reality. It is obvious that agricultural agents cannot perform sufficient field trails, and lack the capability to publicize these trails over substantial

distances, to constitute an adequate method of extension. Nor are classical communication devices, such as the printed media or the radio, used by the agricultural service to promote its own work. This, then, is the compelling logic for having farmers do it themselves. However, farmers can only do it themselves with adequate agricultural, technical and material assistance. This assistance seems to be deficient in the non-intensive demonstration areas. It may be argued that the agricultural agent at the ALC level comes to rely upon the peasant supervisor to perform most of his routine contact work with the villages. In villages which do not have the variant approach discussed under model 3, this produces inadequate results. The AVs are inadequately trained and motivated to conduct a close surveillance of the technical problems which arise in field trails. They also have little capability to assure the PDAs that supplies of inputs will be available when they are needed. Despite reports by the local UNCC and Agricultural service, we found that few of the peasant demonstrators invited others to their fields to see techniques or results, and few held any village level meetings other than one following their brief information-orientation session, just before planting. Since it has also been noted that most of the PDAs and AVs use the modern techniques only on their test fields, the villager has reason to question the extent to which the demonstrator himself is convinced of the new techniques. When inadequate supervision occurs few, if any, control plots are placed, making valid comparisons difficult. We noted a number of

cases in our interviews in which the farmer-demonstrators did not themselves understand why a portion of their field had been measured out.

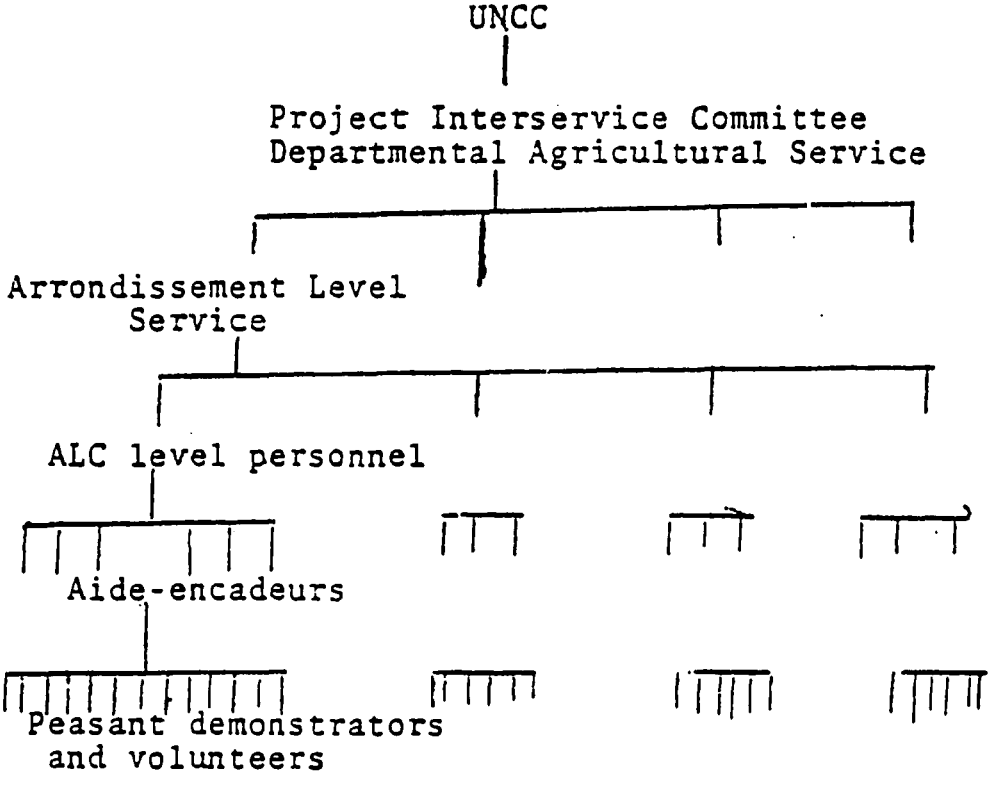
3. We have already touched upon the point concerning adequate supervision of farmer-demonstrators in non-intensive areas. The experience is clearly not encouraging. Overall, both the technical quality of demonstration and the information about the demonstration is notably poorer where this technique is employed.

4. One of the greatest problems which has been experienced by the extension system for cereals thus far put into practice is the failure of the UNCC and the Agricultural Service to be able to supply adequate inputs (fertilizers in particular) to farmers whose interest has been stimulated. The problem may be broken down into two components. First, there has been a grossly inadequate supply of these products for sale in the Maradi and Zinder project areas. Farmer requests for fertilizer, even on a cash basis, are largely unsatisfied. Second, credit is erratic and rare for farmers who wish to purchase farm inputs on anything other than 100% cash-down basis. This is due to the reluctance of the UNCC and CNCA to make credit available, given the risk of crop failures. When credit was made available to non-demonstrators, as was done in Zinder in 1975, the peanut crop failed completely, and no fertilizer credits were extended for 1976 when millet response would have been especially good. This involves the failure of the cooperative and agricultural service to help spread the risk of loss, given the absence of private financial institutions

capable of carrying farmers over an agricultural cycle. We will address this issue in more detail below in discussing the activities of the cooperatives in promoting production.

Model II--Intensive Demonstration with Aide-Encadeurs

This model has been attempted in tiny intensive zones of the 3M Project and presents some difficulties in terms of schematic presentation. These difficulties, as we shall see, reflect a major debate among cadre involved in the project.



The concept of this model is to treat a limited number of areas with intensive doses of fertilizer and to supply farmer volunteers in each village chosen with a village-level agricultural worker. The agricultural worker, recruited for the period of the growing season only, supervises the application of fertilizer, measures test and control plots, and supervises all other relevant cultural practices. He also, in

theory, helps to publicize results of the volunteers field trails to the rest of the village.

With the introduction of village-level aide-encadeurs the role of the peasant demonstrators' network (PDA and AV) seems to be greatly reduced. Responsibility for supplying inputs, for making basic cultural decisions and for supervising work seems to fall entirely on the aide-encadeur. These aide-encadeurs tend to be young, poorly trained (about ten days of formal training was given them at CPTs) and recuited haphazardly. The major criterion for recruitment in a formal sense is level of schooling. Normally the Certificat d'Etude is required. It is quite obvious from our interviews that a number of these individuals were recruited on the basis of personal contacts and had neither the Certificat nor a working knowledge of French. But neither is essential for the job. Demonstration and farm level work takes place entirely in the native language, and the most important criteria of success are likely to be degree of insertion into the local society, and knowledge of the agricultural practices to be promoted. In both these regards the Young Farmers who undergo nine months of training at the CPTs and who come from the villages are better choices. It is one of the continuing errors of the Nigerien agricultural extension service to rely more on formal schooling than on actual knowledge and social acceptability.

In our interviews with villagers in several villages of the intensive area of Satamawa and Yaouri we found little resentment of hostility expressed against the encadeurs. This

stems largely from the massive give-away nature of the program. Each farmer, or farm family, was given fertilizer in relationship to his total farm acreage under production. Many farmers received as much as one ton of super phosphate free of any charge to them. In addition, approximately one farmer per village received a complete animal powered cultivation and transportation rig, also free of charge. The villagers were ecstatic to receive such a largesse, given the almost total absence of input availability in these areas in the past. In theory, villagers pledge to purchase maintenance doses of fertilizer in subsequent years as their part of the bargain. But the actual behavior remains to be seen, and will certainly depend in large part on UNCC-CNCA policies, fertilizer supplies, and results of previous growing seasons.

As for the 1976 growing season, the technical results in the intensive zone of Yaouri for which we were able to obtain yield data are remarkable (See Annex 3). The response of P3Kolo to the well-distributed rainfall and to the large dose of fertilizer was good. It was so good, in fact, that we found villagers from villages 20 or 30 kilometers from the intensive area who had seen or heard of the experience. They wondered when they too would be getting the free fertilizer, and were interested in planting K3Kolo after having observed such outstanding results. Thus, it can be argued that in this case, an intensive demonstration may produce some automatic communication of the desirability of the inputs and methods.

On the other hand, the intensive zone tests were set up very poorly in terms of providing comparative yeilds from traditional fields. Volunteers used the new inputs on their entire farm surface, and no control plots were placed among the non-volunteers. Little effort was made, despite the heavy encadeur structure, to supervise harvesting of yield sample plots, and weighings frequently occurred in the presence of only a few people. The role of the aide-encadeur was strictly circumscribed to the application of technical themes. They were given no training at all on village communication or demonstration methods, and were supervised minimally by the ALC level cadre in these domains.

The major issue which arises from this extension method is one which the cadre from the Departmental level to the Arrondissement level are raising. Essentially they have yet to understand how this heavy encadrement structure can square with the peasant demonstrator system to which the government is committed in all its regional projects. Particularly troublesome for them is the high salary of the aide-encadeurs and the absence of salary for the PDA. They believe that the latter is the healthier course. There is also considerable feeling that the aide-encadeur system does not build any local-level institutional capability to solve problems or to act upon them with their own initiative. Some cadre even argue that aide-encadeurs resist passing too much information on to the peasants for fear of losing their jobs. This statement does not fit the data we were able to collect, which

indicated that the major constraint on information flow was the limited knowledge of the aide-encadeur and the degree to which his time was unsupervised from above.

The second model can be seen, then, as a shock effort to produce quite dramatic results which, it is hoped, will then be incorporated into a more routine and feasible extension method once demand has been generated.

Model III

Model III is really only a variant of Model I made possible by the Niger Cereal's Project funding. During this past growing season, the Agriculture Department hired about 150 additional personnel at the aide-encadeur level. These individuals were subsequently placed wherever the arrondissement Agricultural Chief believed the greatest need for them to be. In some cases they were assigned to multiplication blocs (as in Filingue and Oullaum) and there they worked in much the same way as did the agents in Model II. But in other cases they simply filled in unmanned slots in agricultural districts grouping 10 or 15 villages. This latter case represents the third extension approach used in the 3M project. ALC cadre would use these new aide-encadeurs to do a multitude of jobs for both agriculture and UNCC. The aide-encadeurs worked primarily out of one village in which they resided, and circulated throughout the other villages controlling the work of the peasant demonstrator network. Villagers who did not constitute part of the "autoencadrement" structure had little or no contact with these encadeurs.

In a sense, the aide-encadeur seems to have replaced the role of the AV-peasant supervisor, with what might be considered a somewhat higher level of competence and motivation. In the villages we surveyed, the AVs had virtually stopped making their rounds since the aide-encadeurs were doing it for them. And it is probably true that the aide-encadeurs hired under the Cereals Project are motivated to try to meet the expectations of their superiors, since they are told that their work could well be a permanent position, and they are paid about one-third more than the aide-encadeurs for the FED-3M Project in the Yaouri zone. On the other hand, their training and level of knowledge to perform so intricate a role with so many different dimensions is minimal. They received from two to three weeks training at the CPTs. And they were again recruited in a haphazard way, which took account more of who they knew and what level of schooling they had attained than of what their experience in agriculture or village life had been. We found that most aide-encadeurs that we met, both in the FED and Niger Cereals Projects, are consequently from towns or even cities.

Again, a major weakness of the aide-encadeur program as it is currently being employed is the lack of attention to extension and communication techniques. The encadeurs simply do not have any understanding of the techniques whereby they can attempt to demonstrate and persuade other farmers. This, of course, can be attributed to the absence of these skills higher up the ladder as well. If the debates-on-the-fields technique had been conducted as planned in the Zinder

area, it might well have been done in the villages in which the aide-encadeurs worked. Even this was not the case.

A second major issue which the aide-encadeur program raises is the proper role of the technical assistance worker. It is generally admitted that outsider village-level workers have less effectiveness than workers who visit villages on a regular basis to respond to needs or to offer specific advice. There is the considerable danger that the village comes to substitute the authority of the "Monsieur" for its own decision-making and problem-solving processes. As we will indicate below in discussing the cooperative movement, the problem-solving mechanisms are currently very weak, but the answer does not seem to be to undermime them still further.

General Propositions about the Agricultural Service Extension System

1. USAID should offer to provide technical assistance at the level of each major regional project. The sole task of these people would be to design an effective extension communication method, and to train Arrondissement and ALC level workers in these techniques. All departmental cadre I spoke to recognized the need and endorsed the idea fully.

2. USAID should offer to support much more extensive off-season training for operational level workers both in agriculture and in extension-demonstration techniques.

3. USAID should broach the issue of the proper use of Cereal Project aide-encadeurs, and their proper location in the field, given the above observations.

4. USAID should encourage the Nigeriens to develop a clearer perspective on the role of aide-encadeurs versus autoencadeur workers.

5. USAID should explore the idea of using former graduates of CPTs and CFDTs where these have shown promise as aide-encadeurs, irrespective of their level of education. Instruction should take place in the local language.

6. USAID should attempt to establish with the GON what the major bottlenecks to a reliable supply of farm inputs and credit for these inputs are, and should see in what manner it can attempt to assist in solving some of these bottlenecks.

7. USAID should encourage the GON to set official market prices at planting time, and then to stick by them, so as to stimulate the habit of price responsiveness and choice of field crop mix made at the farm level. In 1976, for example, farmers anticipated a price of 40 CFA/kg for niebe and at harvest the official price was set at 30 CFA. This engendered much farmer complaining, but beyond that it reinforces the farmer's sense of powerlessness to influence his income through planning.

Positive Notes to Stress

1. Field trail techniques seem to be getting better in the 3M project. However, there is still some distance to go to produce reliable statistically significant figures--such as indicating the sampling frame for PDAs in advance, and control of harvesting of test and control plots.

2. Intensive demonstration, combined with heavy fertilization produces good technical results in years of adequate rainfall and has had an impact on farmers outside the intensive demonstration area.

Supplementary Note on Young Farmer Training Programs and Agricultural Extension Techniques

Both the Maradi Project and the 3M Project contain a significant component of young farmer training which is to act as a catalyst for modernizing the local-level agricultural system. The projects differ substantially, however, as to the role proposed for the Young Farmer. In the 3M Project, the farmers are recruited at the cooperative level, and form only one element in the peasant demonstration system In the Maradi project, the entire peasant demonstration system rests on young farmers who are "elected" by groups of three villages. No other peasant demonstration technique is foreseen in the project.

It is useful to inquire firstas to who the young farmers are. In theory they are heads of households who are considered good farmers by their neighbors, and who hold a certain level of respect in their villages. The Maradi project differs in its conscious recruitment of farmers who have been to school, or who have acquired a level of competence in literacy skills through the adult literacy program. In reality, the recruits tend to be overwhelmingly drawn from youthful members of the bigger, more influential, families. In most cases these recruits are unmarried men who do not manage their own farm

enterprise, but rather who are dependents in a joint family production unit. In the case of Maradi, the emphasis on schooling has resulted in a heavy percentage of the recruits coming from the ranks of the primary school leavers. This recruitment process is universally lamented, and efforts are underway to attempt to attract more mature, well established farmers to the centers. One proposal in the 3M Project area is to invite families to move to the centers for the period of training (approximately 7 to 9 months). It is believed that by distributing the yield of farm school fields to these participants that more mature farmers will see that it is in their interest to forgo working their own fields for one season. Assuming yields of approximately the levels obtained in 1976, approximately the same hectarage of millet planted as in 1976, and the reduction of farmers recruited by 50% (to allow for family living) the average farmer-trainee would receive betweer 1200 kg and 2600 kg of millet.*

Given the less favorable yields of 1975, this portion would amount to between 523 kg and 1545 kg.** It remains an open question as to whether these rewards, combined with the payment of 2000 CFA per month, and the according of free agricultural equipment at the end of the training, will prove to be adequate stimul Our interviews cast doubt on the propositions as most heads of hous holds agree that they cannot leave their farms and their non-farm

*Based on an estimate of 1.5 hec. per farmer-trainee at yields experienced in 1976 vary from 800kg/hec for P3Kolo at Doungou to 1790kg/hec at Matameye.

**In 1975 P3Kolo yields for the CPT's in the Zinder project ranged from a low of 349 kg/hec for Dogo to 1030 kg/hec for Matameye.

occupations in the village for this extended period. It would appear to be extremely difficult to recruit farmers who fit the theoretical criteria.

The failure to recruit these mature progressive farmers, however, has jeopardized the entire program. First, the rate of retention of equipment and of its productive use is discouraging. In the Maradi area, for example, the cooperative director for the Maradi project estimates that only about 5% of the graduates of the CFDTs in the past three years still possess equipment in working order. The Maradi regional director of IRSH (Institute de Recherche en Science Humaine) stated that only two of the last 100 graduates were actively using their equipment in 1976. The rate of retention and use is higher in the 3M project, where supervision is somewhat better. In 1976, technical sheets were to be filled out by ALC agricultural agents on every farmer-trainee. A survey of one ALC (Saouni in Matameye Arrondissement) indicated that a substantial percentage of the young farmers were visited at least several times during the growing season. Results of these technical sheets for Saouni were as follows:

Total number of graduates in the ALC	15
Number of graduates working 4.5hec +	1
Number of graduates working between 1 and 2 hecs.	5
Number of graduates working less than 1 hec.	5
Number of graduates doing no animal drawn cultivation	5 (33%)

Unfortunately we do not have comparable data for other ALCs. Local agricultural and UNCC agents stated that their technical sheets were not yet prepared (October 20, 1976). It is evident

both from the estimates of officials and from out interviews with young farmer-trainees in the Maradi area that virtually no follow-up has occurred to see whether graduates are employing their equipment. The supposition must be that they are not.

In Matameye, where the young farmer system has not been a total catastrophe, it is important to establish precisely what role the young farmer has been playing in the extension system. Ideally, the farmer-trainee is supposed to serve as a model farmer who demonstrates by virtue of the work he does on his own fields and on the fields of others (custom work for compensation), a variety of new techniques, including the use of animal traction soil preparation, seeding, weeding and peanut harvesting. Reports both at the department and arrondissement level, as well as our own interviews at the village and ALC level, indicate that this ideal is far from being met. A substantial percentage of young farmers do not apply the new techniques on their fields because they do not supervise a farm enterprise (see UNCC reports on the 3M Project for June, July, and August, 1976). The important density themes, for example, for millet and peanut planting are apparently done only on tiny test plots supervised by agricultural agents, while themes are ignored on the major family fields. Our study of the Saouni ALC indicated that none of the 15 farmer/trainees had begun to do custom work for others, despite the fact that the first group of trainees had graduated two years before our survey was conducted. The reason generally

given for this failure is that money has been tight in the local economy since 1976, but our village level survey shows that very substantial sums were spent by village farmers for hand custom work in the same two year period. Another reason offered to explain the non-use of the equipment is the high percentage of farmer-trainees who received incomplete units. We found a number of farmers who had received oxen but no carts, while others received carts but no oxen. This may explain why the use of the equipment for transport purposes is relatively low, but it does not explain why such a small amount of cultivation is done. A few farmers interviewed in Maradi and Matameye complained that crucial pieces of equipment, such as chains and yokes, were not supplied.

Even in the 3M Project, however, the system of supervision and integration of the young farmers into meaningful development actions has been deficient. As the 1975 annual project report indicats, "nos resultats son partiels d'autant plus que certaines unities en service même dans les ALCs etudiées ont été oubliées." This is a rather shocking admission, as at the time of the report, the first units distributed by the CPTs were only one year old. The real implication of this, however, is that the young farmers have no systematic demonstration role to play and are left to pretty much fend for themselves. Since they are given no role in the project except to run routine demonstration plots--often with hand methods--they have little or no way of earning income to meet the substantial payments due over a four-year period for this equipment. Their

attitude becomes one of disinterest and hostility, rather than becoming one of dynamic agents of local development.

A final crucial issue concerning the young farmers and the extension system involves the communication process which is put into place to recruit, train and supervise young farmers. Our evidence shows that, in most cases, farm families did not have any clear idea of the potential gains or losses associated with sending a member of their family to a farm center. Inadequate information is characteristic of the entire process, even to the point where graduates are not informed of the amount of loans which they incur for equipment they receive. No indication is given that they will be recipients of considerable amounts of free fertilizer in the future as test plot farmers. In brief, people send their sons to CPT for non-economic reasons, usually for the maintenance of the prestige of cooperative, village, or cooperative market authorities. Such a system of communication is unlikely to produce the best recruits in terms of those most interested in agricultural advance, although it is likely to recruit peasants from among the better-off strata of Hausa society.

Evolution of Cooperatives as Instruments for Rural Development in Regional Productivity Projects

In a recent issue of Le Sahel, the Nigerien Chief of State was quoted as stating that cooperatives were based solely on the function of marketing. They have not become "des veritables outils à la disposition du monde rural." This

marketing function, he stated, "parait non seulment revolu mais dépassé."

Our field trips to Zinder and Maradi did little to refute this diagnosis. It is, unfortunately, a fairly accurate view of the actual state of the cooperatives in Niger. In saying this, we must address the question of what a cooperative is in Niger. Officially, there are no legally constituted farmer cooperatives in Niger. There is no association of cooperators at any level above the ALC, and at the ALC the association has no legal rights. Nigerien cooperatives may not borrow, constitute savings institutions, finance construction, or cooperatively purchase equipment or goods in their own name. There is, in effect, only the tutulary organization--the UNCC and its civil servants--which can make any of these decisions. In the light of this fact, it is difficult to understand how the autoencadeurement structure can appear to be anything other than an externally designed and supervised appendage to the state.

What passes for the cooperative in areas of intensive cooperative activity such as Maradi and Zinder, is really the combination of three service extension activities--originally the animation service, with its concept of village delegates, then the UNCC with its organization of peasant market officials, and village credit committees, Animation again with its functional literacy personnel and, finally, agriculture with its peasant demonstrator network. No coherence has ever been brought into this multitude of titles. They are simply known collectively as the "autoencadeurment."

Evolution of Cooperatives and Farmer Needs

Cooperatives generally form out of the common needs of members for services and goods which they cannot obtain individually. In Niger the first UNCC cooperatives did group voluntary members who sought credit for agricultural equipment. This experiment was short-lived, and was rapidly deformed by the administrative creation of the village-wide cooperative grouping all heads of households in an obligatory fashion. Almost as soon as the first credit-cooperatives were formed, the major thrust of the UNCC turned from supplying credit for productive capability, to organizing the farmers into marketing groups to deny the lucrative peanut trade to private and often foreign traders. It can be argued that the major interest which was involved in this "coop" organization was that of the state to get a monopoly on a basic export crop and to allocate for itself a portion of the benefits previously flowing to private individuals, or foreign companies. For the farmer, coop marketing held little interest. To claim his dividend of one or two francs per kg., the farmer or a member of his family had to go to market themselves. In the past, traders purchased crops at the farm-gate. Figuring lost time and transport, the deal was hardly very attractive. In addition, the farmer who had never taken out a loan for equipment, risked losing his dividend if someone from his village was late or defaulted on a loan payment. Finally, until 1974 the peanut price was kept low by the SONARA, and huge reserves were accumulated from farmer labor, over which farmers as individuals or as

cooperators had absolutely no control. In a country where liquidity is often a more important factor than interest on loans, the old trading system offered something which the new one has not replaced.

When several poor harvests set in (1968), the bad debt rate soared, and the cooperative virtually ceased to play any meaningful role in supplying farmer credit. In fact, it can be argued that it retarded the development of credit by blocking loans both to the poor farmer and to the better-off, often more innovative farmer.

Meanwhile, UNCC cooperatives did little to meet other farmer needs. An innovative program of farmer functional literacy did have as its objective the broader goal of creating a communication and organization vehicle. But its focus tended, as always, to revolve around the peanut market and its functions. No savings programs or village cooperative of ALC infrastucture programs have been accomplished. The only construction which has occurred the building of warehousing facilities and offices took place without peasant consultation. Farmer Cooperative Guarantee funds, said to total about 120 million CFA have never been made available to cooperators, either for investment or for loan guarantee purposes (see the Chief of State's speech of October 26, 1976, before the Conference of Cadre de Niamey).

The main interests of the cooperative organization have, in fact, evolved into just two: the interest of the "elected" cooperative officials in holding positions giving them salary, access to agricultural inputs, or simply additional prestige;

and the interest of the UNCC and the CNCA in monopolizing marketing of certain commodities, both as a way to stabilize and set prices, and as a way to generate income. Despite considerable rhetoric to the contrary, and some sincere efforts to put life into the local-level cooperatives, Niger's cooperatives fit almost perfectly Edgar Owen's descriptions of captive non-modernizing organizations. They have been taken over largely by traditional authorities, and in small part by rivals who found a place in the system through early animation positions. Once "elected" office-holders seem to remain in the position, or are perceived to remain in the position by non-officers, for an indefinite period of time.

The fundamental reason for this has been the failure of the government to enforce leadership access principles at the appropriate level. First, basing the cooperative cell on the village naturally reinforces the position of village level authorities. Second, the selection of such a small number of representatives per viallge, with the responsibility of over-lapping roles for various types of autoencadeurment positions almost guarantees that new blood will have little opportunity to enter the system. Finally, the nature of UNCC training programs illustrates the almost total neglect of non-officers.

This last point calls for some amplification. UNCC, particularly in the 3M area, runs a series of training sessions on an annual basis which appear to be quite ambitious. These training programs include "The Cooperative Education Program" attended by cooperative and ALC officers forming a council for each level, as well as specific training programs for PDAs,

AVs and JAs and training for market officers. Of special interest to us is the Cooperative Education program as formulated by the UNCC Zinder Department Office for the 1976 season. We have little way of knowing exactly how the stage was executed, but the broad lines of the approach are clear. The two to three day session consists of reminding the representatives of the formalistic structure of the GMV, the cooperative, and the ALC. With Montesquian logic, the peasants are told that the village assembly--constituted of all the heads of households--is the sovereign decision-making body for the GMV. The village council is merely its executive organ. The presentation proceeds up the line to the ALC. Of course this structure has absolutely nothing to do with the reality of Hausa village or extra-village politics. Telling peasant authorities what the structure should be, without exercising control to assure that at least some basic leadership access principles are assured, can hardly qualify as cooperative education. Leaders cannot absorb the logic of division of powers, nor do they wish to for the sake of their own positions. Non-leaders never even hear the message. In one of the few evaluations of the re-transmission of information through this representative structure which animation ever performed (1974-75 Campagne, see particularly the report of Magaria Arrondissement), it was found that the meetings to transmit the coop structure information are rarely held (p. 10). The report concludes with this note:

Que les criteres de choix de l'autencadeurment doivent etre revus, parce que dans certains cas cet autoencadeurment est toujours choisi à l'interieur de la chefferie, ce qui est a notre avis loin de favoriser la participation volontiers des populations aux actions de developpement.

The UNCC as a Supplier of Credit for Productive Resources in the 3M Project

Generally it was anticipated that with the advent of the much publicized Zinder Regional Productivity project, more agricultural inputs and more credit would be made available to the three priority countries. This could have been anticipated, particularly for fertilizer, as the basis of the project initially was raising peanut production and stabilizing soil fertility. Cereal production became a factor only after the first year of the project, when famine began to set in.

The Table below reveals the actual evolution of UNCC credit for basic farm inputs from 1965 to 1976. I have aggregated the three countries for the the sake of ease in reading.

EVOLUTION OF CREDIT IN THE 3M PROJECT AREA

	Year	Fertilizer tons	Pairs of bulls	Cultivators and hoes	Seeder	Carts
Pre Project						
	1965-66	3.9	17	5	2	34
	1966-67	105.4	81	50	8	101
	1967-68	110.9	37	21	8	35
	1968-69	80.0	2	9	6	27
	1969-70	101.3	27	6	6	24
	1970-71	38.1	3	1	2	8
	1971-72	6.0	0	0	0	0
	1972-73	84.7	0	0	0	0
	1973-74	0	16	0	0	7
First offic. year of 3M						
	1974-75	2.4 (380 free)	46 (to JAs)	47 (to JAs)	0	20 JAs
	1975-76	1148.1 (includes free distribuitons)	117 JAs	151 JAs	79 JAs	0 JAs

This table shows a very erratic supply of productive credit. It does not indicate a massive take-off in credit to ordinary farmers since the period that the project commenced, since most of the inputs recorded here were distributed to peasant demonstrators, to volunteers in tiny intensive demonstration areas. All animal-drawn equipment has been delivered through the CPTs to young farmer graduates since 1974.

Cooperative Credit in Niger--CNCA and Bad Debt Levels

One criterion of the success of the cooperative movement in promoting rural productivity via modern agricultural inputs is the total amount of credit available in areas of high priority productivity projects. Above we have traced the disappointing evolution of credit for fertilizers and animal traction equipment in the Maradi and Zinder Departments. Another criteria of the effectiveness of the cooperative system of organizing rural credit is the recuperation rate for loans made on a short and medium term basis. In the earlier report (Sept. 1974, "Sociological Factors") we reported the very high default rates associated with UNCC loans in the Zinder Department. However, we examined this issue again due to the evidence presented by the CNCA in its annual reports, and in an oral presentation to Aid consultant Charles Sweet (June, 1976). In the PP for the Niamey Productivity Project, for example, the figure of 98% repayment rate over the past two years is cited, leading to the conclusion that "a preliminary assessment of this credit system indicates that it is operating on the sound basis of providing credit to groups of farmers and the repayment rate is high except for periods of drought."

Our summary of CNCA annual reports for the period 1969 to 1974 (last available annual report) indicates a somewhat less optimistic picture, even given CNCA's somewhat questionable practice of reporting "dubious debts" separately from "normal debts." The CNCA reports permit the reader to analyze credit and recovery levels in terms of the duration of

the loan (short term for seeds, fertilizer, foodstuffs, and cooperative commercialization funds; medium term for equipment such as animal-drawn plows, hoes and carts). For some years it is possible to analyze loans in terms of whether they were accorded to individuals or groups (usually village credit mutuals--GMV). It is not possible to determine from CNCA national reports whether recovery rates differ significantly by commodity or by Department. A close reading of CNCA annual reports for this period yields the following conclusions:

1. The volume of loans accorded by CNCA for agricultural material has risen steadily from 1969-70 (the last relatively normal rainfall year prior to the onset of the drought) to 1975. Payments due on short term loans rose from 28.13 million CFA (1969-70) to 76.23 million CFA (1974-75). Payment due on medium term loans rose from 21.55 million (1969-70) to 166.5 million (1974-75).

2. With the exception of the years of most severe climatic stress, recovery rates for both short and medium term loans have been improving from about 45-50% bad debts for individual and group loans (1969-70) to about 13% for medium and 10% for short term loans in 1974-75)

*My computation is based on the pooling for bad debt levels for both "doubtful" and normal categories of loans.

The Non-coincidence of National and Regional Level Information

Interviews with UNCC delegates at the departmental level in both Maradi and Zinder have produced quite a different picture of the credit situation for cooperative loans in two of the most productive areas of the country. We have been unable to obtain overall recovery rates for each department due to record-keeping techniques employed by UNCC. However, two facts stand out. Bad debt rates for medium term loans principally animal-traction equipment loans made to young farmer graduates of CFJAs or CPTs--vary from 80% to 100%. The new credit and cooperative director for the IBRD sponsored Maradi valley project reported that no repayments had taken place on loans of approximately 50 millian CFA accorded to young farmers formed from 1973-75. Bringing this down to the operational level we investigated the credit situation in one country of the 3M Project--Matameye Arrondissement. Here we found that out of a total of 1.16 million CFA loaned to young farmer graduates of the Matameye Centre de Perfectionnement Technique (1974 class), repayments of 279.094 CFA were due as of December 31, 1975. As of that date no repayments had been made. The total credit picture for the five ALCs of Matameye is summarized in the following table. These figures reflect recovery rates for short and medium term loans due as of December 31, 1975--and are heavily influenced by bad debts for short term fertilizer loans made to GMVs.

Recovery Rates for UNCC Loans in Five ALCs of Matameye Arrondissement

Cooperative	Payment due 12/31/75 (CFA)	Payment made (CFA)	Bad Debt rate(%)
Kantche ALC	221605	106000	52%
Matameye ALC	408278	127200	69%
DAN Barto ALC	340386	226140	33.5%
Yaouri ALC	185500	185500	0%
Saouni ALC	422527	114480	73%

Several remarks can be made about the data presented in the above table. First, the total level of credit in this arrondissement is extremely low. After three years of involvement in the 3M Project, total loans due barely exceed $6,300 for an arrondissement of approximately 80,000 inhabitants. Second, repayment rates shown here reflect only current payments due, and do not include past bad debts. As of December 31, 1975, bad debts for fertilizer loans predating the 1974-75 payment due equalled 202,755 CFA. A total of 14 GMVs were considered in bad debt status for these past loans. An additional 260,085 CFA in medium term loans past due for agricultural equipment was recorded on the books of the arrondissement level UNCC office. Some of these loans date back to 1966. In the light of these figures for a single county, it is difficult to understand how the national CNCA loan recovery rates are computed. We do not have data at this

level of precision for other arrondissements in Niger. Matameye may be exceptional in the accuracy of its record-keeping and in the accessibility of its loan records. But these figures alone throw considerable doubt on the soundness of the credit scheme both in terms of the volume of loans accorded and in terms of repayment rates. Additional effort should be made by USAID project personnel to clarify the true situation of CNCA and UNCC loans in areas of priority project development to get a more systematic view of the credit system.

ANNEX 2

TECHNICAL RESULTS OF DEMONSTRATION PLOTS WITH VILLAGE FARMER DEMONSTRATORS (NON-INTENSIVE APPROACH)

ALC OF SATOMAWA (MAGARIA ARRONDISSEMENT)

Name of Peasant Demonstrator	Test Plot Yield (extrapol kg/hec P3Kolo)	Control Plot Yield
1	850	550
2	700	500
3	700	550
4	700	500
5	550	400
6	500	700
Mean yield	667 kg/hec	533

ALC OF SAOUNI (MATAMEYE ARRONDISSEMENT)

1	580	365
2	440	315
3	550	400
4	495	480
5	810	640
Mean yield	575 kg/hec	440

ANNEX 2 (contd.)

MATAMEYE ARRONDISSEMENT TEST PLOTS FOR AUXILAIRES DE VULGARISATION AND JEUNES AGRICULTEURS

(Average extrapolated yield for P3Kolo millet in kg/hec on treated plots.)

Young Farmers from Matameye ALC	700 kg/hec
Young Farmers from Saouni ALC	703
Young Farmers from Dan Barto ALC	721
4 Best AVs from Saouni ALC	965

TECHNICAL RESULTS OF INTENSIVE DEMONSTRATION PLOTS

(YAOURI 1976)

Village of Birgi Babba

(Extr. kg/hec millet yields)

Control Farms		Test Farmers	
Farm A	360	Farmer 1	1010
Farm B	380	Farmer 2	1620
Farm C	280	*Farmer 3	1100
Farm D	400	Farmer 4	1010
mean yield	378 kg/hec	Farmer 5	980
		Farmer 6	1450
		Farmer 7	1100
		Farmer 8	1460
		*Farmer 9	770
		Farmer 10	1290
		*Farmer 11	1050
		Farmer 12	880
		Farmer 13	1100
		Farmer 14	1740
		*Farmer 15	920
		Farmer 16	1470
		*Farmer 17 (village PDA)	1320
		Mean yield	1192 kg/hec

*Indicates farmer demonstrators with whom interviews were conducted.

(9)

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Jim W
To CID Trustees,
Best Wishes for 19

REPORT OF THE COORD[illegible] AGRICULTURAL PROGRAM

Jan 9-10 1977

I. Active Long Term Projects

A. Niger Cereals Project

Staffing was completed in July, and after intensive language training and orientation at Texas Tech University the team reached Niamey in mid-September. Personal automobiles for team members had been purchased prior to the team's arrival, and good housing was made available by USAID promptly.

A plan of work was completed by each member of the team by December 1, and at the initiation of Mr. Albert Baron, RDO, a project review was undertaken during the week of December 6. Dr. William Bennett, Texas Tech, Mr. "Hank" Raullerson, Campus Coordinator for the project and I participated in the project review. The review was initiated by briefing sessions with the USAID Project Manager and the CDO; followed by a general meeting including Director Generals of all general directorates involved in the project, chaired by the Secretary General (Minister of State) for Planning, Ministry of Finance. Then, the CID Review and Evaluation Team met for as much as a full day with each participating general directorate.

The CID Project Review and Evaluation Team agreed to make 27 specific recommendations in the final wrap-up meeting with the relevant Director Generals, under the chairmanship of the Secretary General (Minister of State) for Planning, Ministry of Finance.

Mr. Al Baron personally translated the recommendations, and presented them to His Excellency on behalf of the team. (A copy of the recommendations are attached.) A longer and more detailed report was prepared by Mr. Raullerson. Copies are available.

The CID Trustees should be quite pleased with the way the project is going. The team has been especially well received by the Government of Niger and USAID/Niger. All work plans were prepared with the full cooperation of the team's colleagues in the GON agencies, and are excellent.

Two major problems threaten success for the Niger Cereals Project. The first is the problem of coordinating components. However, while the Review and Evaluation was in progress the new GON Project Coordinator was granted substantially increased power, and he may be able to coordinate the various activities. (However, I have seen this approach tried elsewhere, and it did not work.)

The second major problem is the inadequacy of the outreach (or extension) program. Packages of practices which will increase production substantially already exist and can be improved upon through research, but the GON has not made adequate plans for a delivery system. The assistant extension specialist position which is called for in the contract is badly needed; however, it is very clear that the position cannot be filled until Mr. Williams and other members of the team have established their credentials with the GON, and the need is more fully understood. The evaluation team recommended that the extension problem receive special attention during the next six months.

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The unfortunate problem CID has faced with regard to the assistant extension position is a result of either, (1) a breakdown in communication between USAID and the GON, or (2) a change of mind on the part of GON between the time the verbal agreement was made and the written documents prepared. USAID did its best ipso facto. I sincerely hope a repetition of this type of problem can be avoided in the future.

I urge the Trustees and Executive Director to join me in expressing gratitude to the CID Team, and especially to "Hank" Raulerson, Campus Coordinator, Jim Williams - Chief of Party, and Jim Livingston, Project Manager for the fine progress which has been made.

B. Chad, Range and Livestock Development

A $500,000 contract was signed August 30, 1976. The Range Management/Planning Specialist, Dr. Benjamin Wood, and a Professor of Range Management and Ecology, Mr. Rudolfo Griego arrived at N'Djamena in September and October respectively. The University of Arizona is serving as the lead university.

I had planned to visit N'Djamena shortly after Dr. Wood and his family were to arrive; however, due to an airline strike he did not arrive until a week later. When I arrived I discovered that USAID/Chad was not aware a contract had been signed. In spite of the fact the AID Project Manager had been in position for five months, appropriate contacts had not been made with the general directorates to whom the two team members were to be assigned. Until early in December, both Dr. Wood and Mr. Griego worked out of the USAID office, and their activities were primarily directed to assisting the preparation of a USAID integrated rural development project.

Since December, progress has been more satisfactory. Dr. Phil Ogden, University of Arizona, is now scheduled to visit the project in early February.

The opportunity presented to CID in this project is great. We have personnel involved at levels where substantial leverage in terms of future development can be exerted.

Given the problems we have had so far, this project requires closer than normal monitoring. Dr. Matlock, Campus Coordinator, and/or I should visit the project within the next sixty days.

C. Kenya, Marginal Land Study

The contract was signed in Washington the third week in December after many, many unfortunate delays. Utah State University is serving as lead university, with Dr. Byron Palmer as the Campus Coordinator. Mr. Pickok has been nominated as the Chief of Party; however, a waiver on minimum length of assignment for his family will be required. Hopefully, the waiver will be granted and there be no question concerning his acceptance.

On December 20, 1976, nominees for five of the team positions were reasonably

PRELIMINARY EVALUATION OF THE

C. I. D. COMPONENT OF THE N. C. P.

February 10, 1977

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Colorado State University
Oregon State University
Texas Tech University
University of California
University of Arizona
Utah State University

PRELIMINARY EVALUATION OF THE

C. I. D. COMPONENT OF THE N. C. P.

TO WHOM IT MAY CONCERN:

The attached preliminary reports represent a small part of a continuing attempt by C. I. D. and Texas Tech University, as the lead institution in the contracted C. I. D. participation in the Niger Cereals Project, to evaluate its efforts. There are essentially three purposes to this ongoing evaluation process:

1. to help insure adequate fulfillment of the contract obligations of the C. I. D. component of the Niger Cereals Project;
2. to provide assistance to the in-country team in order to insure that the output of project participants is of high quality; and
3. to determine what revisions in and additions to the training of personnel would be useful in the preliminary stages of future projects in Francophone Africa in which C. I. D. may be involved.

This report comes in three parts:

Part 1 - C. I. D. Team Evaluation;

Part 2 - Training; and

Part 3 - Future Personnel and Recruitment Recommendations.

Part 1 and 2 are attached. Part 3 will be completed and distributed in the next few weeks.

Any comments, suggestions, criticisms, and alternative perspectives would be greatly appreciated.

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PRELIMINARY EVALUATION OF THE C. I. D.

COMPONENT OF THE NIGER CEREALS PROJECT

February 10, 1977

I INTRODUCTION

In this report a preliminary and hence highly tentative evaluation of various aspects of the C. I. D. participation in the Niger Cereals Project will be made. Three major areas, 1. organization of the group, 2. interaction of the group with other components of the project, and 3. the individual performance of team members, will be examined. The three sections are followed by a set of general observations and recommendations to supplement those included in the earlier sections.

II ORGANIZATION

The team concept has proved to be somewhat dysfunctional in the context of the Niger Cereals Project. The so-called team does not function as a unit, and might cause unnecessary difficulties if it did. Ideally, the efforts of the participants can be coordinated. However, the necessary coordination must come from 1. the A. I. D. project director, 2. the GON project coordinator, and 3. the various GON agencies and departments within which C. I. D. personnel are employed. Adding an extra layer of administration at the team level can serve to hinder effective communication and coordination. C. I. D. personnel must learn to adapt to and function in their respective GON positions. Heavy reliance on a team concept can short circuit the development of this type of interaction.

This problem also applies to the C. I. D. subgroup working at the INRAN research center at Tarna. It is extremely important that C. I. D. personnel not be perceived as a threat to the existing occupants of leadership positions, such as the Director of the Research Station. The establishment of a position as local chief of party may cause unnecessary friction, both among C. I. D. employees and between the group and the administrative officers at Tarna. C. I. D. personnel should undertake

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every effort to work within the existing structure and in as cooperative a fashion as possible. Efforts to set up a separate C. I. D. office in Maradi should be cut back. Separate office facilities are

1. unnecessary, and
2. tend to promote a sense of separation which can cause ill will.

Only where the ability to perform contracted services appears in doubt, should alternative routes of action be considered.

The notion of the C. I. D. party as a distinct group should not be entirely abandoned. The Chief of Party serves as an important representative and advocate for the group. These functions need to be continued at the administrative level. However, the current organization places the Chief of Party in the position of having to do two jobs rather than one. In certain circumstances the administrative duties of the Chief of Party can severely interfere with his ability to adequately perform the technical-advisory function for which he was recruited. If feasible, the Chief of Party should be relieved of the day-to-day administrative tasks by a qualified administrative assistant. The administrative assistant should be able to handle bookkeeping, paperwork, and the logistics of the project. In larger projects with a more diverse set of C. I. D. employees, a full-time experienced administrator might be warranted as an integral part of the group. This individual should be capable of negotiating locally (French fluency is a prerequisite), preparing a budget, and serving as a facilitator when needed. Currently one full-time assistant is performing this role in Maradi and another on a part-time basis in Niamey. These two positions, plus the Chief of Party's basic administrative work, could be more efficiently incorporated in a single full-time position.

III INTERACTION

The relationship of C. I. D. workers to the A. I. D. hierachy should be clearly delineated and strictly adhered to so as to avoid duplication of effort, short circuiting of communication channels, and inconsistencies

brought about by conflicting demands. At times these lines of authority have been less than clear cut, both within the C. I. D. group and between C. I. D. and A. I. D. Thus far, these have resulted in only minor inconveniences. A clarification of this relationship is clearly in order.

An additional area of some concern involves the relationship between C. I. D. personnel and their GON counterparts. An integral part of the ongoing efforts of the project include the training of counterparts. In fact there are no Nigerien counterparts to C. I. D. team members. As a result, it is doubtful if projects begun in the course of the project will be adequately carried through to completion or maintained in the future.

Finally, interaction between both the extension and seed multiplication advisors and GON officials has been severely hindered by the fact that they are physically isolated from the Ministry of Agriculture. Many communication problems could be overcome and closer cooperation promoted if these individuals were moved from their A. I. D. offices to offices in the ministry. Pressure should be brought to bear to alleviate this difficult situation.

IV INDIVIDUAL PERFORMANCE

A. Extension Services - Mr. James E. (Jim) Williams

The extension function has proven to be the most difficult to initiate and implement for a number of reasons:

1. initial perceptions of resistance on the part of GON officials;
2. communication problems;
3. unrealistic expectations; and
4. Structural arrangements within the GON which make a broad based extension program almost impossible to implement.

Since extension work provides the basis for implementation of practices designed and developed at the Research Station at Tarna and at the S. M. C. s, it is one of the most important aspects of the entire N. C. P.

Fortunately the first three problems mentioned appear to be on their way toward reasonable and potentially effective solutions. Communication problems are rapidly being overcome by the seconding of Mr. Dennis Panther to the extension advisor. To some extent, Mr. Panther is filling the additional extension role originally included in the C. I. D. plan, but not initially approved by the GON. With improved communications, extensive consultation, and considerable efforts on the part of Mr. Williams and Mr. Panther, a much clearer perspective on the position of GON officials and on the nature of the system within which extension must begin to function has been obtained.

With the easing of the problems of communication and inflated expectations, the design of a sound program of action has begun. Continued contact with GON officials and the presentation of a revised plan of action have resulted in the weakening of GON resistance and the opening of new avenues for action. If the initial, fairly modest, efforts produce the expected results, then an expansion of this role may become possible. However, given existing jealousies among the various services extension programs administered through the Ministry of Agriculture must concentrate on demonstration plots. It will be extremely difficult to sell this limited kind of effort to officials at the department and arrondisement levels. Under present circumstances there is cause for only the most guarded optimism.

B. Plant Breeding - Dr. Clark Harvey

The role of plant breeder is the most clearly defined of the various positions included in the C. I. D. component of the N. C. P. Dr. Harvey is in the process of launching a research program to test a wide variety of strains of millet and sorghum for yield, insect resistance, and quality control, in that order of precedence. Various production packages (crop mixtures, fertilizer treatments, spacing procedures, etc.) will be systematically tested under carefully controlled conditions. The work of plant breeding is currently proceeding on schedule.

Several important questions remain regarding the plant breeding component

of the project:

1. Can successful millet varieties other than P_3 Kolo seed be effectively multiplied and distributed if the tests warrant such action? Is there such a strong commitment on the part of the GON to the use of P_3 Kolo that only a purified variety of P_3 Kolo seed can be distributed in the next four or five years?
   Clearly some of the assumptions underlying a commitment to P_3 Kolo have not been adequately tested. For example, do other local varieties respond to fertilizers? The belief that only P_3 Kolo production can be increased by soil dressing needs careful consideration.

2. An important component of the plant breeding function has been largely ignored. It is necessary to provide for systematic taste tests on the varieties produced. It is recommended that a consultant with experience in the palatability testing of grains in the African context be brought in or recruited locally after varieties have been tested for yield;

3. The total utilization of plant material by Nigerien farmers, rather than just grain output must also be considered. For example, the wide variety of ways in which millet stalks are employed by farmers, and alternative sources of such materials would have to be taken into account in the development of high yield dwarf varieties;

4. Yields of various varieties should also be considered in terms of protein and other nutrient content rather than purely as a function of bulk production per hectare.

C. Agronomy - Dr. Cyril Brown

The position of agronomist with the CNRA (Tarna) involves a variety of research and training tasks, with the major emphasis being placed on soil and fertilizer requirements. Specific activities, including

the equipping of a small laboratory facility at Tarna are still in the design stage. Efforts to obtain fluency in French are proceeding well. This has made it possible for Dr. Brown to successfully conduct a short seminar on soil sampling. Some key questions are being zeroed in on, such as the translation of fertilizer requirements into terms comprehensible to local farmers and extension workers. This will hopefully lead to a close tie-in with the extension and U. N. C. C. components of the project. The major difficulty regarding this position is the lack of a Nigerien counterpart who can carry on the work which will still be in its formative stages at the completion of Dr. Brown's two year tour. Other goals specified in the plan of work need to be placed in operational terms. The idea of establishing a reference library at Tarna is basically sound but requires careful planning and coordination with other INRAN facilities.

There has been some difficulty in locating skilled personnel capable of setting up the soils laboratory in Niamey and training Nigeriena in soil sampling and analysis techniques. Dr. Browns' skills could be put to good advantage as a regular consultant to the lab.

D. Agricultural Engineer - Dr. Eugene Foerster

This position is essentially designed for a jack-of-all-trades. Dr. Foerster has now adapted well to the environment in Maradi and at Tarna, and is performing his basic engineering duties quite satisfactorily. One of the major difficulties with this project is the question of Nigerien counterparts. No attempt has been made to provide such a counterpart. Under these circumstances it is doubtful that the equipment that is designed and constructed will be either adequately maintained or expanded to additional sites after Dr. Foerster's tour is complete. While there are no other agricultural engineers in Niger who hold the Ph.D., a trainee with a B.S. or even some secondary education could be taught to maintain the various types of equipment which will be assembled.

E. Seed Multiplication - Dr. William Hall

The development of the three seed multiplication centers, Guéchémé, Magaria,

and Madaoua seems to be proceeding on schedule. Initial difficulties associated with the differing perspectives of Dr. Hall and his French counterpart have been for the most part eliminated. The flow of conflicting sets of instructions to S. M. C. staff assistants seems to have been arrested. From all indications the technical aspects of S. M. C. design are being completed in a professional and competent manner. Language ability is limited, but improving as the result of a persistant personal program of study.

The S. M. C. s themselves have experienced considerable difficulty in terms of their ability to obtain and maintain an adequate number of good workers. A major factor contributing to this difficulty is the extreme and probably unwarranted delay in paying the workers. A conscious effort needs to be undertaken to institutionalize these centers, that is, to develop close ties between the centers and the communities in which they must function. The establishment of such ties can insure the smooth operation of the centers in terms of a regular labor supply and other support services. To some extent, this has occurred at Guéchémé, but largely through the individual efforts of Mr. Willie Russell. However, aside from the chance meshing of personalities, it is neither appropriate nor proper for A. I. D. assistants to have to finance local workers put of their own pockets, as has occurred frequently in the past. It would be extremely useful to establish a contingency fund for each center. These funds could be used to advance workers pay for work completed. This fund, requiring the equivalent of about one month's payroll could be recovered when GON official payroll checks arrive. Much of the animosity caused by two to three month delays in the payroll process and inefficiency and waste associated with work slowdowns could thereby be eliminated.

C. Credit and Cooperatives (U.N.C.C.) - Mr. Cao Quan

The credit and cooperative component of the C.I.D. group appears to be functioning very well. Training programs have been established. Participants have been screened and selected and a sound instructional program designed. At this point, it is far too early to evaluate re-

sults; but it is clear that both the role and the operational procedures followed by Mr. Cao Quan are in the process of becoming institutionalized. That is, they are becoming widely accepted and firmly entrenched within the U. N. C. C. Mr. Cao Quan has a firm grasp on how the system works and how to eliminate roadblocks through an effective communication network which is highly supportive of his efforts. At this stage, it is important to begin to develop plans for follow-up training programs and for assessing the performance in the field of those who have completed the training course.

V GENERAL RECOMMENDATIONS

A. One of the most important needs is the development by each C. I. D. employee of operational measures of the goals set forth in the annual Plans of Work. These measures need to be unambiguously defined and accompanied by a delineation of precisely what types of data will be used to measure progress.

B. Along with the operational measures of progress which should be developed immediately, a formal system of reporting would be extremely useful. Monthly progress reports should be written in a standardized format. These reports should include the following information: work begun, in progress, and completed during the month, data gathered relevant to the attainment of project goals, a statement of interactions with, support from and assistance given to other members of the N. C. P. equipment purchased, future activities planned, and support--financial and logistical--expected to be needed during the following month.

C. Project progress reports should be made available to the A. I. D. project director, GON project coordinator and C. I. D. chief of party, for a regular monthly or perhaps quarterly review. These reports can be of use for assessing progress, coordinating efforts, and as a record for replacement and new personnel during later stages of the project.

REPORT ON FUTURE TRAINING NEEDS OF

C. I. D. PERSONNEL IN FRANCOPHONE AFRICA

I INTRODUCTION

This report is based on discussions carried out in the field with all members of the C. I. D. team currently under contract with A. I. D. for participation in the Niger Cereals Project. Observations regarding the interactions of C. I. D. workers with the A. I. D. staff, officials of the GON, and other Nigeriens are also reflected in the following paragraphs. Many of the recommendations included below have been discussed with, and in some cases prepared by C. I. D. team members. It should be pointed out that in general, both the language and cultural aspects of the training program received very favorable reviews from C. I. D. team members.

II LANGUAGE TRAINING

Background

Communication with GON officials at all levels is a major problem which interferes with the progress of a majority of the members of the C. I. D. component of the N. C. P. For all intents and purposes, only one member of the team is fluent in French. However, in the case of this individual proficiency in French was developed prior to selection for participation in the project. Two other members of the team are rapidly developing their communication skills and will probably be quite proficient within a few months. In present circumstances they are able to comprehend and communicate sufficiently well to get their work underway. The other three members of the team are generally lacking in language proficiency, but are working to overcome this problem through the use of tutors. For two of the individuals based at the research station at Tarna, this should not interfere with their work as their efforts are research and engineering oriented and require only limited interaction in French. The remaining role, that of extension advisor, was initially almost impossible to fulfill because of communication problems exacerbated by GON resistance to the program thrust.

These, however, are in the process of being overcome through reliance on an assistant and an effort to increase language proficiency

Conclusions

There are two conclusions which can be drawn from the above regarding the language training program:

1. It was for various reasons inadequate in that team members did not obtain the desired level of proficiency;
2. The lack of proficiency has resulted in unnecessary delays in beginning the work in the field and has created some problems of credibility with local officials. These problems can potentially be overcome, but again may result in unnecessary delays in project implementation.

Recommendations

1. Minimum proficiency levels for language competency should be both established and seriously implemented before sending individuals into the field.
2. The language training program in the U.S., 5 to 6 weeks, should place a major emphasis on conversational French, rather than on reading and grammar. This program should remain intensive (6-8 hours daily) and result in at least a minimum performance on the F. S. I. Examination.
3. Formal language training should not stop with the six weeks intensive course. The first month or so in country generally represent an adjustment and orientation. A formal four-week course-probably 8:00 a.m. until noon every day-should be established to reinforce previous training and further emphasize conversational proficiency. In the in-country environment this training will be reinforced by everyday experience and provide participants with the confidence to use the language on a regular basis. The instructor(s) can also be used as a basic resource regarding local idioms and specific conversational problems encountered by individuals in the early stages of contact with counterparts. The

participants should again be given the F. S. I. proficiency test and should meet a preset standard. Where necessary, qualified tutors with a proven performance record should be provided to supplement this training.

Problems

This program will require an increased outlay of funds initially and a larger block of training time. However, in terms of overall effectiveness it is felt that these costs will be recovered in terms of project outputs.

III CULTURE AND SENSITIVITY TRAINING

Background

The C. I. D. team was given fairly limited preparation in the area of cultural training and sensitivity. While this has not proved to be a major stumbling block, it has resulted in a few unnecessary delays. In terms of the unintended consequences of the project, the opportunity to generate considerable good will among the people of Niger as well as with the GON officials has been limited. Team members, in spite of the best of intentions, often find themselves isolated in the European community in general and the American community in particular. The search for solutions to some job related problems might be facilitated through greater emphasis on social interaction with Nigeriens. In a few cases Nigeriens have been mildly insulted by the lack of comprehension on the part of Americans. It should be pointed out that these affronts have not been very serious and in no case have they been intentional.

Conclusions

As expected, there are problems in establishing personnel in the field, facilitating relations with Nigerien counterparts and spreading good will among the Nigerien people. The establishment of a formal cultural seminar in preparation for field work could be valuable to technical personnel, especially those without prior African experience.

Recommendations

It would probably be very useful to establish an expanded and more formal and intensive cultural seminar of about one week in duration. Logically this seminar should precede the language training and consist of lectures by people with intimate knowledge of and experience in Africa in general and the nation in which the project will be undertaken in particular. These should include sessions on history, culture, and culture shock, development, and politics (with emphasis on the role of the bureaucracy). Lectures should be supplemented by assigned outside readings. Especially useful along these lines would be some of the novels in the African writers series. These provide excellent insights into the perceptions of Africans towards Europeans and Americans and their own social and political systems. During the last day of training it might be useful to have the participants take part in a structured role playing situation aimed at further sensitizing individuals to racial and related issues. The week long seminar should consist of lectures, movies, slides, and group discussions of the reading and related materials. A selected reading list should be put together and the books purchased by C. I. D. for circulation among team members, both during the training period and in the field.

These suggestions would formalize the cultural training aspect of the existing program. Therefore, added program costs would be fairly limited. The major additional outlay would be one week's salary for participants and the addition of one week to the training period.

Richard Vengroff