PD-AAR-391

EG-AAD-440

40420

EGYPTIAN AGRICULTURAL MECHANIZATION PROJECT

Contract Number 263-0031-[illegible]-01

Activity Report Number 3

1 October 1981 - 31 December 1981

SUBMITTED BY

LOUIS BERGER INTERNATIONAL, INC.

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1.0 PROJECT SUMMARY

The overall thrust of this reporting period has been: (1) centering upon documentation to penetrate the USAID funding system; (2) continuing the various data collection activities, and (3) implementing a procedural methodology within each of the six subprojects. On the procurement side, the major result was submission to USAID the specifications for the soil improvement equipment totalling approximately US$ 1.5 million and requesting a PIO/C for that equipment. Since this reporting period represents the first quarter in Year 2 of the Project, an analysis of Project needs was made based upon the Project's first year experience. This resulted in a series of Project amendments that were submitted to USAID reflecting:

a) implementation of Inception Report recommendations;
b) budget adjustments of project line items, and
c) amendments to the technical assistance contract with Louis Berger International, Inc.

The implementation schedule is slightly behind but reasonably close to the anticipated schedule in the Inception Report. The reader is referred to section 4.0 for a detailed description of each subproject. But this brings to the forefront several critical implementation issues that need to be addressed if the Project is to achieve its objectives:

1. USAID processing time for funding and operational procedures has delayed implementation of the Service Center Fund, Waterlifting Fund, and Applied Research Fund. This is clearly not the fault of any individual but is reflective of the system's deficiencies.
2. In addition, the operational level of review by USAID before disbursements are made will be critical. If each "nut and bolt" must meet USAID approval, the paperwork and time delay will make it very difficult to expend the obligated monies and to carry out the technical functions of the Project.

3. Action on Project amendments, which reflects the experience of the Project's first year operation, is now necessary if the Project is to proceed along the lines of the Inception Report.

It should be emphasized that these issues reflect concerns with the USAID system, not with individuals working on this Project.

Briefly, the major efforts of the subprojects were:

1. Planning and Evaluation: In the farm management study, the data collection phase was in full stride with all farms in winter crop production. The area mechanization survey finished its pretesting in Gharbia. The Minia teams in the village studies program focused on their second questionnaire (machine owners and maintenance/repair facilities in the Project villages); the teams in Behoira, Gharbia, Qalioubia and Sharkia are being activated and trained.
2. Research and Development: Half of the bids for shop equipment have been awarded and installation started. USAID approved and committed funds for Phase I research prototype equipment. Initial applicants for Applied Research grants are under review.
3. Machinery Management Extension: The workplan has been finalized, approved by the Machinery Management-Training advisory committee and the Extension service, and submitted to USAID for approval. A field day on tillage, wheat planting, irrigation, and landleveling was held at Sheikh Ahmed with 100 people attending. A wheat mechanization program was developed with 200 feddans planted.
4. Soil Improvement: An initial tractor and equipment procurement order was prepared with an estimated value of US$ 1.5 million. Plans were formulated for a detailed topographic survey in Minia to identify landleveling needs. A pre-survey data collection was completed in Minia identifying saline/alkaline conditions, groundwater level, and gross landleveling

requirements. A preliminary workplan has been completed; this will be finalized this next quarter.

5. Training: An extensive workplan for the 1980-82 period was developed, initial commitment, US$ 888,510. Field site training at Sheikh Ahmad involved 119 trainees in: wheat planting, implement adjustment, landleveling, tractor preventive maintenance, irrigation pump care and operation, and ditch cleaning backhoe maintenance and operation.

6. Service Center: The Service Center Fund has been approved by USAID and a check for US$ 1.5 million has been requested. Applications were received for both the service center program and upgrading of village workshops, which the Service Center Fund will finance. Area market surveys and solicitation of fund participants continues.

The Project's level of effort is measured by two indicators: man-month and financial expenditures. The accumulated man-months since inception of the technical assistance contract totalled 304.1 man-months compared to 108.5 man-months anticipated in the Inception Report at this time in the Project's Development. Excluding coordinator support, this represents approximately 1?% of the total technical input. Evaluation of financial expenditures is viewed in three stages: (1) funding requests in the process of review by USAID, (2) funding approved and committed by USAID, and (3) funds physically expended. On this basis, accumulated funds in-process,committed and expended totalled US$ 11,256,003, or 28% of the US$ 40 million obligated for this project. Excluding the uncommitted inflation-contingency factor (US$ 13,801,000), this represents 43% of the basic line item grant (US$ 26,199,000).

2.0 PROJECT ACCOMPLISHMENTS

The impetus during this reporting period centered on administrative documentation needed to penetrate the USAID funding system, continuation of the various data collection activities, and initiating a procedural methodology within each of the six subprojects. On the procurement side, the major result was submission to USAID of the specifications and PIO/C request for soil improvement equipment with an estimated value of US$ 1.5 million.

2.1 Overall Project Accomplishment

1. The following credit fund documentation was completed:
   a. Service Center Development Fund guidelines have been approved by USAID, and a deposit for an Egyptian Pound equivalent of US$ 1.5 million requested.
   b. Applied Research Fund guidelines have been revised and submitted to USAID.
   c. Waterlifting Fund guidelines have been submitted to USAID for approval.
2. Project amendments have been submitted to USAID reflecting:
   a. Implementation of Inception Report recommendations;
   b. Budget adjustment of Project line items;
   c. Amendments to the technical assistance contract with Louis Berger International, Inc.
3. A comprehensive training plan has been submitted to USAID for 1980-1982 funding totalling US$ 888,510. This includes a coordinated training effort for each subproject involving: in-country training, overseas academic training, and observational training tours. Approval of this plan will satisfy the training conditions precedence requirement.
4. The Machinery Management Extension plan has been completed, approved by the extension service, and submitted to USAID for approval to satisfy this conditions precedence requirement.

2.2 Planning and Evaluation Subproject

1. Service Center Credit Fund terms and conditions have been revised to meet the concerns of the major equipment importers; a bank account established; and an initial deposit of US$ 1.5 million requested from USAID (see Mr. Shepley's report, Annex A.1, for Fund details).
2. Waterlifting Credit Fund: A proposal was completed establishing loan selection criteria and loan terms as a result of in-depth interviews with farmers in the targeted random villages and discussion with officials of the PBDAC. Details are given in Mr. Shepley's report, Annex A.1.
3. Applied Research Fund: Revised guidelines were prepared and submitted to USAID for their action.
4. Farm Management Survey: The data collection phase was fully activated during this reporting period in Beheira, Gharbia, and Qaliubia with all randomly selected farms now in winter crop production.
5. Waterlifting Costs and Returns: Seventy observations were collected in Beheira Governorate concerning the real and opportunity costs of animal powered irrigation means.
6. Proposed Project Amendments: Proposed amendments in line with the Inception Report were submitted to USAID for approval. Briefly, these amendments included:
   a. For demonstration-training equipment, US$ 306,000. Funding for demonstration equipment was not included in the Project Paper.
   b. Establishment of an introductory equipment fund, US$ 3.9 million.
   c. Soil improvement research, US$ 320,000.
   d. Waterlifting Fund increased from US$ 2 million to US$ 4 million.
   e. Applied Research Fund increased from US$ 1 million to US$ 2 million.
   f. Planning and Evaluation surveys increased from US$ 300,000 to US$ 512,000.

g. Soil Improvement equipment increased from US$ 4.3 million to US$ 6.45 million.

h. Technical position extensions: agricultural extension director, research technical director, and machinery development advisor.

i. Creation of an additional technical position: Senior Accounting Advisor. The considerable accounting and fiscal management requirements associated with Project funds, Applied Research fund, and training funds led to discussions with the MOA and PBDAC, and it was decided that neither is able to adequately administer these funds without technical assistance. At the time of the Project Paper, this problem was not anticipated. The additional funding would come from the inflation/contingency line item, reducing it from US$ 13,805,000 to US$ 4,902,000.

7. Area Mechanization Survey: The survey team has been assembled, and the final pretest versions of the four questionnaires (village leaders, farmers, machine owners, and workshop owners/managers) have been completed, reviewed, and accepted. In December, the pretest was conducted in two villages in Sharkia and analysis of the results is presently in progress.

8. Village Studies Program:

a. Minia: The Minia Team, under the supervision of Dr. Sabgat Abdel Maksoud, Agricultural Extension and Rural Sociologist at Assyut University, are conducting the second questionnaire, which focuses on all machine owners and maintenance/repair facilities in the Project villages. In addition, this team is conducting an internal Project questionnaire focusing upon soil and water problems on behalf of the Soil Improvement subproject.

b. Qaliubia: Dr. Abdel Basset El Sayed, Agricultural Extension and Rural Sociologist at El Azhar University, has been appointed to supervise the Qaliubia Team. The team has been assembled and is conducting the first questionnaire focusing on village leaders' perception of agriculture and agricultural mechanization problems. As in Minia, this serves as a pretest and training exercise also.

c. Gharbia: Dr. Abdel Tawab El Yamani, Agricultural Economist at Tanta University, has been appointed to supervise the Gharbia team. Team selection and training is in progress.

d. Sharkia: Dr. Shahat Mohamad Zaki, Agricultural Economist at Zagazig University, has been appointed to supervise the Sharkia team. Team selection and training is in progress.

e. Beheira: Dr. Ahmad El Adly, Agricultural Extension at Alexandria University, has been appointed to supervise the Beheira team. Team selection and training is in progress.

2.3 Research and Development Subproject

1. Bids for machine shop equipment at the Alexandria workshop have been tendered, approximately one-half of the bids were accepted and purchased. Installation has commenced. Re-bidding on the balance is continuing.
2. The R&D Advisory Committee has met to review the Applied Research Grant applications.
3. Cooperation with West Nubaria mechanized farm has continued and have observed and advised on mechanical cotton harvesting problems.
4. USAID has approved and committed funds for the Phase I prototype research equipment, shipment of the equipment remains to be arranged.
5. Training: Twenty-three Center employees have taken an English proficiency examination preparatory to English courses during the next reporting period.
6. Specifications were developed and tenders issued for three research tractors of 60, 100 and 140 PTO horsepower.
7. Research and Testing Center facility: Open drains were installed and the offices nearly completed; the facility is in the final stages of completion.

2.4 Machinery Management Extension Subproject

1. Machinery Management Extension workplan developed, approved by the Extension Service, sent to USAID for approval.

2. A wheat mechanization plan was developed involving nearly 100 feddans. The plan calls for Project equipment to be used for leveling, seedbed preparation, planting, and irrigation. In total, the grain drill was used on 200 feddans in the Sheikh Ahmad area.
3. Field demonstrations were a major thrust during this reporting period:
   a. Tillage and planting of wheat;
   b. Landleveling;
   c. Backhoe use for ditch cleaning.
4. In addition, a field day on tillage, wheat planting, irrigation and landleveling was held at Sheikh Ahmad with 100 people attending.
5. Extension personnel have been selected from Beheira, Gharbia, Sharkia, and Qaliubia to be trained as mechanization specialists. Group I (Beheira and Gharbia mechanization specialists) will commence their program February 1, 1980.

2.5 Soil Improvement Subproject

1. Specifications were prepared for an initial tractor and equipment procurement order, estimated value US$ 1.5 million. A PIO/C was requested from USAID so that U.S. procurement can proceed. This order will concentrate upon landleveling tractors and equipment but also includes a limited number of tractors and equipment for testing subsoiling, mole plowing, ditch cleaning, and gypsum application activities. An important result of this first order will be to evaluate appropriate traction and horsepower relationships for these different activities.
2. Plans were formulated for a detailed topographic survey in Minia to identify landleveling needs.
3. Visits were made to:
   a. Delta Sugar Co. to evaluate landleveling activities;
   b. Water Use and Management Project at Sakha to evaluate landleveling as pertains to costs, crop yields, and water use efficiency.

c. Delta Sugar to evaluate land reclamation program, drainage problems and soil amelioration in the northern area of the Delta.

d. Zawyia-Delta area to evaluate a mole drainage project.

e. Minia, to evaluate the SAO's field demonstration using various tillage implements, and the Water Use and Management's basin development program.

f. Qena, to evaluate subsoiling and deep tillage activities.

4. A preliminary workplan has been drafted indicating the extent of the various soil improvement activities, the proposed organization of the Minia operation, and the conceptual time frame.

5. Pre-survey data collection completed in Minia, identifying saline/alkaline conditions, groundwater level, and gross landleveling requirements.

2.6 Training Subproject

1. An extensive training workplan for the 1980-1982 period was developed and submitted to USAID, involving an initial commitment of US$ 880,510.

2. Course information sheets were distributed to all subproject managers so that appropriate programs can be planned and initiated.

3. Training courses were held at Sheikh Ahmad during this reporting period:

Course Title	Participants
1. Planting: wheat	25
2. Implement adjustments	25
3. Landleveling	3
4. Preventive maintenance: tractors	23
5. Irrigation pump: local pump	23
6. Irrigation pump: Blackstone pump	22
7. Operation and maintenance: backhoe	21
Total:	119

4. Considerable preparatory time has been spent in contact with training centers in preparation for in-country training needs.

3. Counterpart staff have been appointed for field training and development of training programs.
6. Course materials were developed in Arabic and English for: tractor preventive maintenance, water pump operation and maintenance, and backhoe operation and maintenance.

2.7 Service Center Subproject

1. Considerable groundwork has been laid out towards establishing the Service Center Credit Fund. The Letter of Understanding was submitted to and approved by USAID, with an amendment adding a 3-year grace period for 100% financing and a 5-year grace period with a 20% down payment.
2. Four written proposals have been received for participation in the Service Center Development program, and four others have been verbally expressed to the participants.
3. Contacts have continued with prospective Credit Fund applicants.
4. Training plans have been developed in cooperation with the Training Subproject and the local village workshops have shown strong interest in these training programs.
5. Counterpart for Machinery Repair Advisor was selected.

3.0 TECHNICAL AND FINANCIAL LEVEL OF EFFORT

3.1 Level of Effort: Technical Staff

During this period, no additional technical positions were activated, but three positions remain to be filled: Machinery Development Advisor, Local Manufacturing Advisor, and Agricultural Engineer/Soil Improvement Advisor. Firm candidates have been submitted for the first two positions, and they should be activated this coming quarter.

The actual level of effort (104.1 man-months) and the anticipated level of effort (108.5 man-months) in the Inception Report are compared in Table 3.1. The technical input is basically on schedule except for the agricultural engineer in soil improvement. Although the machinery development advisor and local manufacturing advisor are behind the Inception Report's activation schedule, all of their time can still be recovered within the contractual period; this is not the case with the agricultural engineer/soil improvement advisor, whose total time on the project would be less than that originally anticipated.

3.2 Level of Effort: Financial Expenditure

The financial level of effort is reviewed in Table 3.2. Three stages of funding commitment are considered: 1) funding requests "in-process" are requests being reviewed by USAID; 2) "committed funds" are funds approved and/or committed by USAID but not yet physically disbursed, and 3) "funds expended" are funds physically disbursed. Funds in-process, committed, and expended totalled US$ 11,256,003, which is 28% of the total US$ component (US$ 40 million). Excluding the uncommitted inflation-contingency factor (US$ 13,805,000), this represents 43% of the basic grant (US$ 26,195,000).

TABLE 3.1. LEVEL OF EFFORT: TECHNICAL STAFF, FROM 15 SEPTEMBER 1980 THROUGH 31 DECEMBER 1981, IN MONTHS.

Position	Starting Date	Actual Effort	Anticipated Effort
1. Task Leader	[illegible]	[illegible]	[illegible]
2. Planning/Financial Advisor	[illegible]	[illegible]	[illegible]
3. Research Director	[illegible]	[illegible]	[illegible]
4. Evaluation Advisor	[illegible]	[illegible]	[illegible]
5. Extension Advisor	[illegible]	[illegible]	[illegible]
6. Data Management Advisor	[illegible]	[illegible]	[illegible]
7. Services Center Director	[illegible]	[illegible]	[illegible]
8. Equipment Repair Advisor	[illegible]	[illegible]	[illegible]
9. Soil Improvement Director	[illegible]	[illegible]	[illegible]
10. Soil Improvement Engineer	-	-	[illegible]
11. Training Advisor	[illegible]	[illegible]	[illegible]
12. Short Term		[illegible]	[illegible]
Total Man-Months		[illegible]	[illegible]

TABLE [illegible]. FINANCIAL LEVEL OF EFFORT: [illegible] COMPONENT AND [illegible] INTERNATIONAL, INC. LOCAL COMMERCE FUND, [illegible] (1)

Project Item	Purpose Attach		
	Co-previous (1)	Committed (2)	Expended (3)
1. Technical Assistance Contract			
a) [illegible] Component	[illegible]	[illegible]	[illegible]
b) Local Currency[1]	[illegible]	[illegible]	[illegible]
Subtotal:		[illegible]	[illegible]
2. Competition			
a) Vehicles	[illegible]	[illegible]	[illegible]
b) Forklift ([illegible])	[illegible]	[illegible]	[illegible]
c) Research Prototype Equipment	[illegible]	[illegible]	
d) Computer ([illegible])	[illegible]	[illegible]	[illegible]
e) Unit Improvement[2]	[illegible]	[illegible]	[illegible]
Subtotal:	[illegible]	[illegible]	[illegible]
3. Funds			
a) Applied Research[3]	[illegible]	[illegible]	[illegible]
b) Service Center[4]	[illegible]	[illegible]	[illegible]
Subtotal:	[illegible]	[illegible]	[illegible]
TOTALS, by Outlook:	[illegible]	[illegible]	[illegible]

TOTAL, Outlook 1/2: [illegible]

TOTAL, Outlook 2/3: [illegible]

[1] Local Currency converted to US dollars: [illegible]. Actual US for Outlook 2 & 3 respectively: [illegible].

[2] Estimated value of equipment being ordered for the [illegible].

[3] Total Fund is US$ [illegible]. This request for initial disbursement is [illegible] percent of the Fund.

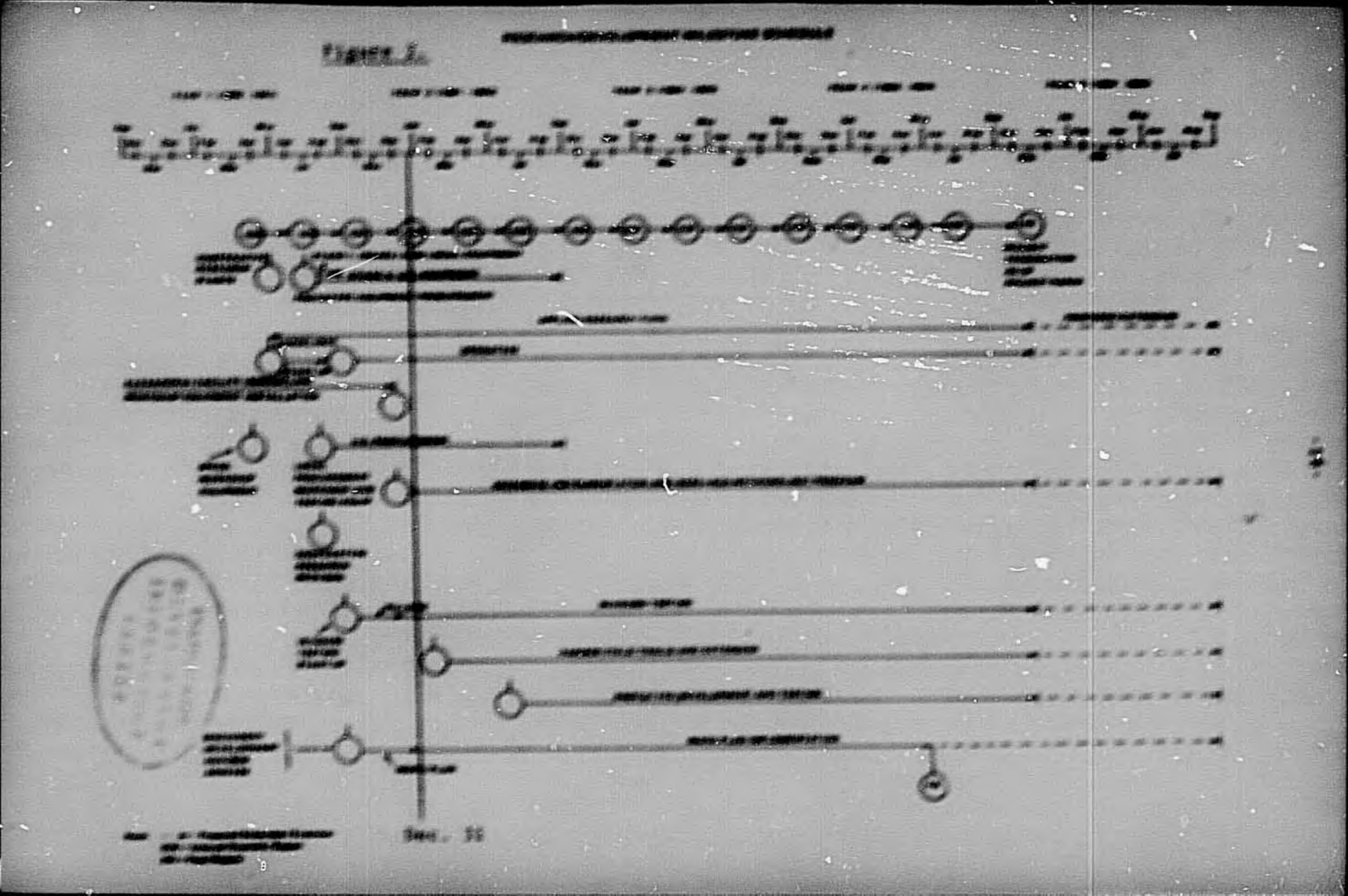
[4] Total Fund is US$ [illegible]. This request is for the initial disbursement.

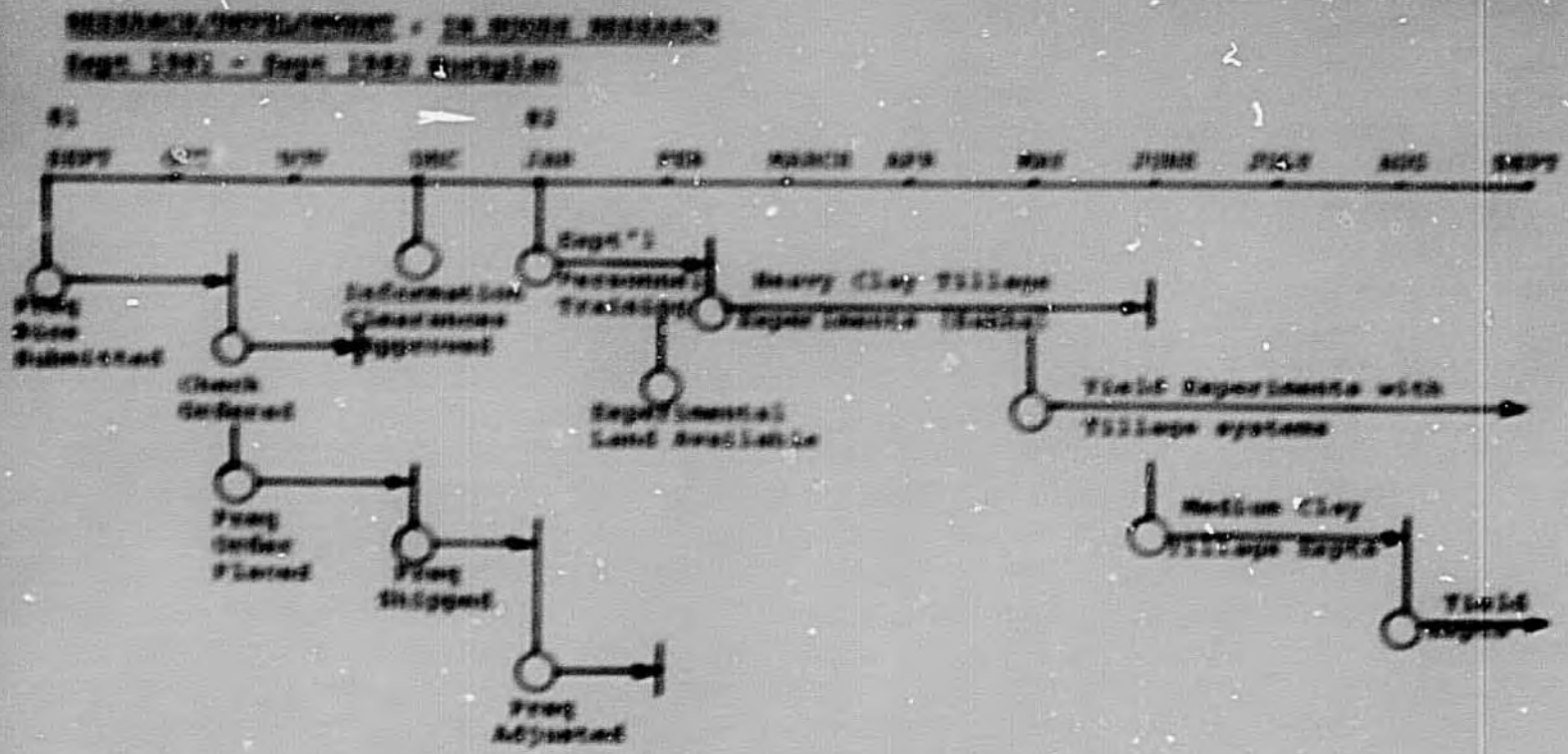
4.0 PROJECT IMPLEMENTATION

4.1 Workplan Implementation Schedule

The milestone workplan for the Planning and Evaluation Subproject is presented in Figure 1. The area mechanization survey is on schedule except that the starting date was a month late due to the logistics of initiating the survey. The main consequence of this is that the final report will be made in April rather than in March. The farm management study is in progress and on schedule in Behaira, Sharkia, Dakahlia, and Qalioubia. The farm management survey in Minia has been postponed until next year of the Project. The village (extended) research is in progress in Minia and is starting in the other governorates. This is slightly behind schedule since the Inception Report anticipated full implementation, except for Sharkia, by December 31, 1981. This, however, does not pose a serious problem since these areas will be fully activated during the January-March 1982 quarter. Fund development has been somewhat slower than anticipated due to the lengthy time for USAID approval. The Service Center Fund should be activated in January 1982 and the Rehabilitation Fund in February 1982, if USAID approval is forthcoming.

Progress of the Research and Development Subproject is reviewed in Figure 2. Procurement of the Israeli greenhouse research equipment still is in a state of flux. As a result, it has not been possible to initiate in-house village experimentation, and this activity is far behind schedule. Starting had been anticipated in September. Because a September startup was not possible, a new activity schedule was projected for 1982 at (Figure 3). Implementation, as seen in Figure 3, was proceeding on schedule until the Egyptian Government changed importation procedures for Israeli equipment in December. Consequently, the previously obtained clearances were no longer valid and the equipment could not be shipped as scheduled.





NOTE:
FREQ: Prototype Research Equipment

The Applied Research Fund is still not approved by USAID so it is not operative as indicated by the schedule in Figure 2. However, the Advisory Committee is proceeding with the evaluation of grant applications.

The workshop was to be operative by December 1981, but this will be delayed until the next quarter, partly because bidding on local equipment has been a longer process than originally anticipated. On the other hand, the workshop would not be operative until later into year two had not the MOA been willing to procure on the local market rather than waiting for USAID funding.

The Machinery Development Advisor will not arrive until January, so this program has not commenced. Although the startup date is later than expected, this has no effect upon Project implementation, and it is better in fact to delay this appointment until the facilities are operative so that in-house research and testing can begin in his presence.

The nature of the Machinery Management Extension Subproject is changing in ways that require revision of the milestone activity plan (Figure 4). The activities have not changed but the implementation sequence and timing will change. Figure 4 reviews this subproject's current activity plan. The extension programs were initiated during this reporting period: tractor maintenance and machine adjustment programs, as scheduled. These extension programs will be an on-going activity rather than terminating in January 1982, as indicated in the current plan. In addition, machine management will follow the principal cropping pattern as the agricultural year progresses. Farm trials, with locally available equipment, have been pursued and are on schedule.

However, two activities have been dependent upon Project amendments: demonstration equipment and the introductory machinery fund. Until USAID approves these amendments, these activities will be active only to the extent that MOA is willing to fund them. In this regard, the Ministry has funded an initial set of demonstration equipment that has kept the farm training and demonstration activities alive.

FIG. 11

The arrival of the local Manufacturing Adviser will not be until February 1982. Consequently, this part of the program, including the manufacturing feasibility study, must be rescheduled for the period February 1982 to February 1983.

The Waterlifting portion of this subproject will begin this coming quarter.

The Soil Improvement Subproject is reviewed in Figure 3. This program was only roughly outlined and needs more detailing of activities. A new preliminary workplan has been drafted and this will be completed in the next quarter. Although it might appear that the program is behind schedule, it is not, since much of what has been implemented is not reflected in Figure 3. A more appropriate activity schedule will be presented in the next quarterly report. In terms of Figure 3 implementation, tractor evaluation has been made and tractor and equipment specifications have been submitted for U.S. procurement. Full research activities cannot begin until the Project amendments are approved, thus creating this line item within the Soil Improvement Subproject.

Figure 4 reviews the Training Subproject, which also requires rescheduling. The workplan has been submitted to USAID for approval, at which time a revised activity schedule will be prepared. The current milestone schedule is on target: the workplan has been finalized, implementation has begun, extension training programs have been initiated, and preliminary work has started with the academic and participant training programs.

The Service Center Subproject (Figure 5) will also be rescheduled during the next reporting period. Implementation is slightly behind schedule due to the delay in getting the Service Center Fund processed through USAID. Consequently, funds have not been received so that they could be lent as anticipated, according to the current implementation schedule. However, loan applicants are being solicited and the Principle Bank has established the account which should be activated during the next reporting period.

Figure 1.

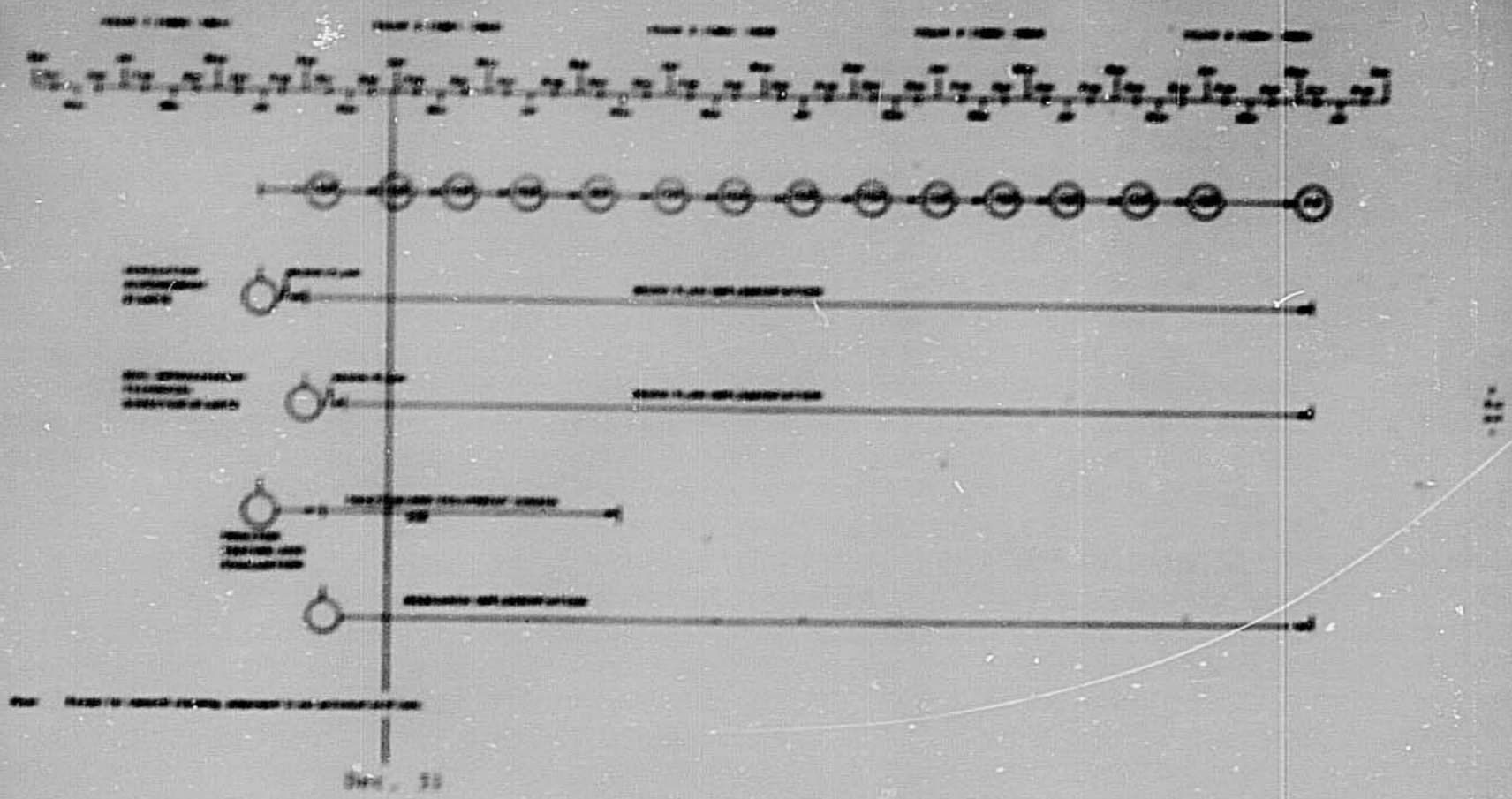
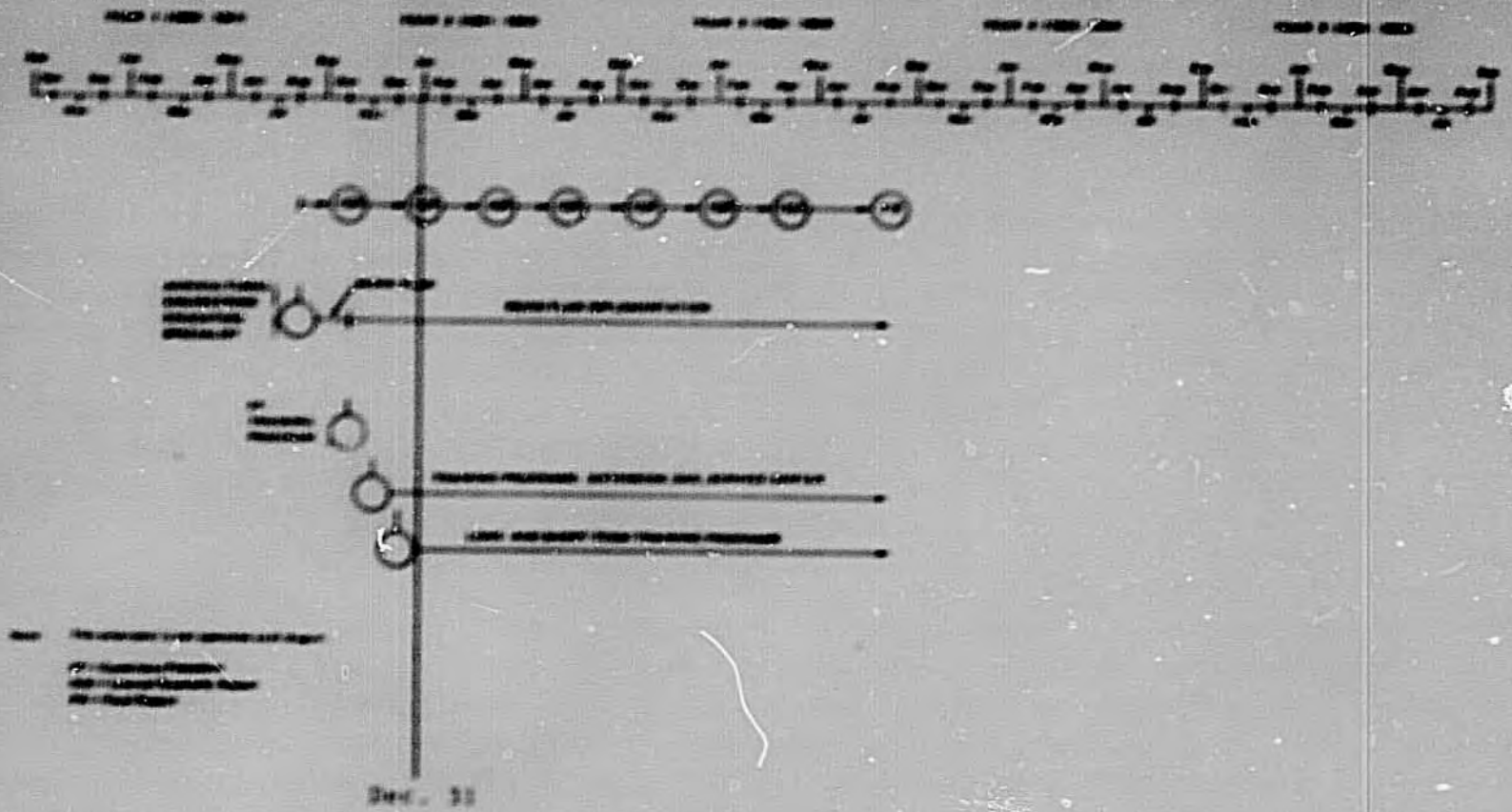
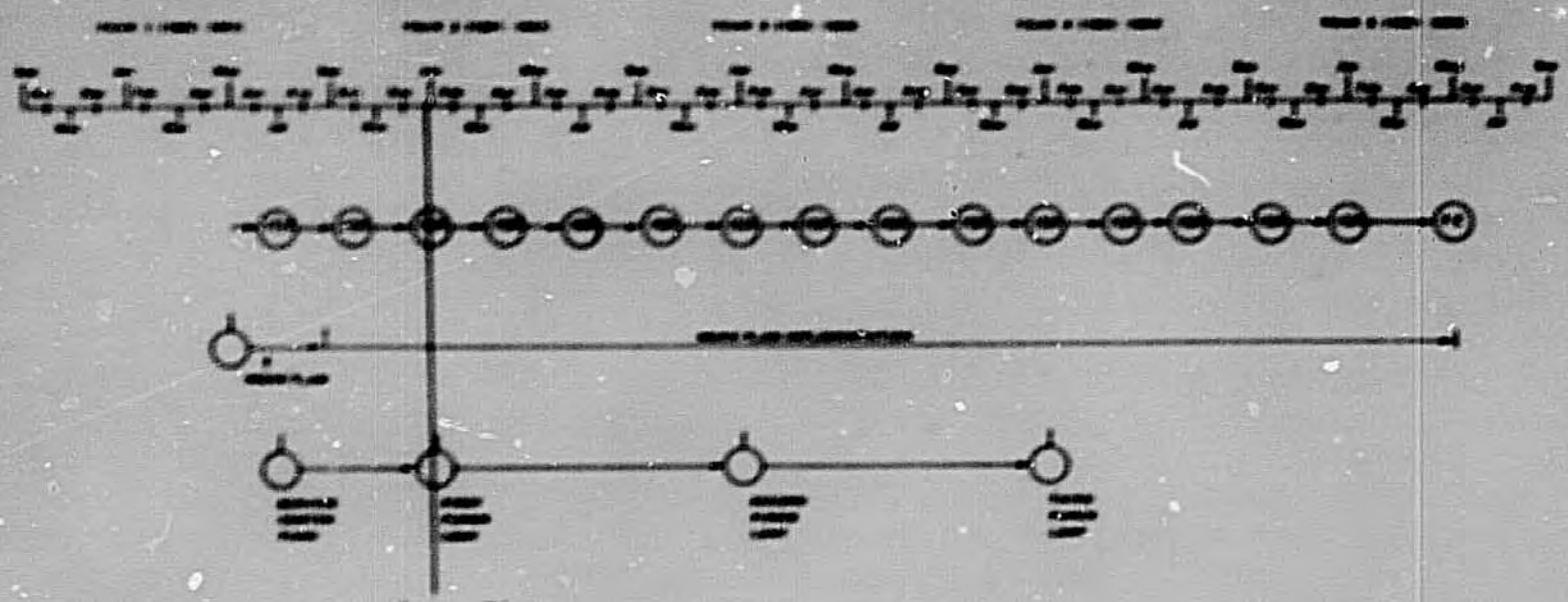


Figure 6. [illegible]



Dec. 31

Figure 1. [redacted]



[redacted]

4.2 Previous Implementation Issues

Previous implementation issues have been addressed in a manner that they are no longer a hindrance to Project development.

4.3 New Implementation Issues

1. USAID processing time for funding and operational procedures has delayed the implementation of the Service Center Fund, Waterlifting Fund, and Applied Research Fund, so that their implementation schedule as developed in the Inception Report cannot be met.

   Remedial Action: Discussions with USAID; otherwise, there is none at the Project level.

2. Project amendments submitted the middle of November, if not acted upon in the near future, such inaction will cause significant implementation problems.

   Remedial Action: Discussion with USAID to take action.

3. Research prototype equipment: if not recieved in February 1982, the Research and Development Subproject will be seriously delayed.

   Remedial Action: Attempts to get the needed governmental clearances.

4. Transportation needs: [illegible] will be greater than anticipated in the Project Paper, when the Project expands beyond the pretesting phase into the [illegible] Project villages. This could seriously affect the implementation of this phase of the Project program.

   Remedial Action: Subproject directors are now being requested to project their future transportation needs.

5.0 MAJOR OBJECTIVES, JANUARY-MARCH 1982 PERIOD

5.1 Overall Project Objectives

1. Activate Machinery Development Advisor and Local Manufacturing Adviser positions.
2. Action anticipated on the part of USAID with regard to:
   a. Project amendments
   b. Applied Research Guidelines
   c. Waterlifting Fund
   d. Local Currency Fund
   e. Machinery Management Extension Plan
   f. Request for technical assistance relating to USAID accounting procedures
   g. Training Plan
3. When USAID action is completed relative to the various credit funds, initial applicants will be identified and processed.
4. Activation of the Supreme Advisory Committee.
5. Commencement of the Project's computer tracking program.

5.2 Planning and Evaluation Subproject

1. Farm Management Study: Field data to be organized and collated.
2. Waterlifting Fund to be in place for pretesting at Sheikh Ahmed.
3. Area mechanization survey: Pretest analysis to be completed and the full survey underway; pretest report completed.
4. Village studies program: All village teams in operation and training seminar for village researchers to be concluded.

5.3 Research and Development Subproject

1. Complete purchase and install Alexandria workshop equipment.
2. Shipment of phase I research prototype equipment; equipment testing begins.
3. Basic remodeling of the Alexandria facility should be completed during this quarter.

3.4 Machinery Management Extension Subproject

1. Complete plans for the six-week orientation session for the mechanization extension trainees.
2. Start orientation training of machinery extension specialists from Beheira and Gharbia governorates.
3. Continue field demonstrations with emphasis upon cotton and other crops appropriate for this reporting period.
4. Prepare a program for a pump testing program with farmers.
5. Appointment of a waterlifting counterpart to be initially involved with pump survey and credit fund procedures; commence work in pretest area.

3.5 Soil Improvement Subproject

1. Finalization of soil improvement workplan.
2. Selection of trainees for overseas courses.
3. Design of deep tillage and subsoiling experiments at selected experimental sites in Upper Egypt.
4. Initiate laboratory research program, e.g., nature and property of clays under saline and alkaline conditions, and dispersion of soil air under different tillage practices.
5. Topographical survey: collate data, analyze data; selection of areas for detailed topographic survey.
6. Evaluate RMC tractor costs and landleveling costs on a material basis.
7. Prepare workplan for irrigation advisory activities and appointment of counterpart.

3.6 Training Subproject

1. Continuation of Project training activities, including:
   a. Field training of tractor operators
   b. Initiate training at Dakha Training Center for the first group of mechanization extension specialists
   c. Initiate mechanics' training program at Mamoura Training Center
   d. Register participant training candidates with OSAID training office.

2. Conduct periodic meetings with the extension subproject for coordination of effort.
3. Develop a cost accounting system for the training and extension subprojects.

4.7 Service Center Development

1. The effort will continue to develop Service Center fund applicants and process existing applications for both Service Centers and upgrading of village workshops.
2. Identify participants in the mechanics training program at Manuwa Training Center.

[illegible]

[illegible]

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A.1. PLANNING AND EVALUATION SUBPROJECT

A.1.1. Economics and Financial Planning Subunit

Mr. Jabi Meier

Mr. Steven C. Shepler

ACTIVITY REPORT, OCTOBER 1981

During the reporting period, the following actions were taken:

1. Service Center Credit Fund. On Tuesday, 27 October 1981, a meeting was held with representatives of the major equipment importers to discuss the draft Letter of Understanding which was submitted to USAID on 3 September 1981 for final approval. The importers said they found the terms and conditions of the Credit Fund outlined in the Letter of Understanding to be acceptable for equipment loans but unacceptable for building loans. Their principal objections to the payback and downpayment requirements stated in the Letter of Understanding centered around what they believe to be undue risks associated with the building component of the proposed program.

As a means to alter this approbancies, we formulated an alternative set of proposed terms and conditions for construction financing. These are summarized as follows: interest will be fixed at 8% maximum, including a 2% service charge to be collected by the PBDM. Financing would be offered for up to 100% of the construction costs with up to a 20-year payback and a five-year grace period for loans for which there has been an initial downpayment. For loans without downpayment, the grace period would be shortened to three years. All in attendance expressed interest in these modified terms and conditions for construction loans. This modification has since been incorporated into the final draft of the Letter of Understanding and the revised version has been sent to USAID for approval. It is hoped that USAID approval can be secured to that the fund can become operational by 30 November 1981.

2. Waterlifting Credit Fund. A draft proposal was prepared establishing loan recipient selection criteria and loan terms for review and approval of the Client and USAID. The proposal has been developed following in-depth interviews with farmers in the target random villages, discussions with officials of the Principal Bank for Development and Agricultural Credit, and with selected members of the Ministry and Mechanization Project staff.

Briefly, the proposed credit fund seeks to establish a revolving credit system for waterlifting equipment that is both flexible in terms of providing easy access to credit for the neediest of the farming population and sufficiently safeguarded to afford reasonable protection against loan defaults and possible mismanagement.

Following our discussions with farmers and various officials, we are proposing that the fund start up initially in the extension pretest area of Sheikh Abnud village of Itay El Barud district in Beheira. We believe it would be advantageous to initiate the program in the extension pretest site as the Project currently has technical staff working in that region who would be able to monitor performance of the program during the trial stage and provide the necessary complimentary extension inputs.

During this pretest phase, lasting one year from the date of fund activation, all elements of the program would be evaluated and modified as required prior to beginning the second phase which is extension of waterlifting credit facilities to the 23 random villages of Project emphasis.

During the second year, the fund would become operative in the 23 random villages, following which it would be extended to other areas of the country.

According to the proposal, recipients must be registered landholders or tenants within their respective cooperative areas, show reliable credit history and general reputation, and cultivate an area not to exceed 5 feddans. This last criteria was included to focus the application of these special credit facilities on the least affluent segment of the cultivating rural population. For purposes of this special program, existing land ownership requirements currently imposed by the PBDAC are to be waived. Loans will be made for up to 100% of the purchase value of equipment at 8% simple interest over a seven-year payback period.

It is believed that this special program, if successful, may serve as a blueprint for restructuring agricultural machinery credit programs of the PBDAC along more flexible lines, and extend credit facilities to elements of the farming community who have heretofore been excluded.

Details of the fund procedures and management structure are contained in the Draft Letter of Understanding which is on file in the Planning and Evaluation Subproject's Planning and Financial Subunit offices.

On Tuesday, 3 November 1981, we met with Messrs. Abdel Salaam El Sharkawi, Chairman of the Beheira Governorate Bank and Sherif Osman, General Manager for Development, to discuss all provisions of the draft proposal. Both of them were enthusiastic about the program and promised their full support in the program implementation. The proposal will be presented to Mr. Adel Shenab, General Manager of the Investments Sector of PBDAC in Cairo on November 8, 1981, for final review and approval prior to submission to USAID. We hope to have the fund operational by November 30, 1981.

If the November 30 deadline for the Service Center and Waterlifting Funds can be realized, we shall be one month ahead of the Inception Report schedule (December 30) for startup. Realization of this objective, however, is contin[illegible] upon: the ability of the Service Center Subproject to [illegible] loan applications for the Service Centers; the [illegible] of the Extension Subproject to publicize the

Waterlifting Fund and to provide basic training courses in pump operation and maintenance; and finally, the timely approval by USAID.

With respect to the Service Center Fund, it is recommended that the Service Center Subproject, in addition to ongoing discussions with major importers, survey the village workshops in the targeted districts to identify likely candidates for loans, and to assist such perspective operators in processing their applications.

Concerning the Waterlifting Fund, an extension program should be initiated without delay in Sheikh Ahmed village. The program should focus on disseminating information on specifications and costs of available equipment and locations of retail outlets, publicizing the credit program, providing instruction on proper operation of waterlifting equipment, and conducting training courses on recommended preventive maintenance.

At this stage, there appears to be a major constraint on the desired high impact of the Waterlifting Credit program. The budgeted funding level of US$ 2,000,000 seems insufficient--from our investigations--for high impact coverage. This amount is adequate for the purchase and distribution of 2000 units (costing approximately $1000 each). The land area of the 13 randomly selected villages is some 65,000 feddans. Pumps currently on the market can irrigate about 3 feddans in one irrigation cycle or 10 feddans per week. This translates into a theoretical requirement of some 7000 units. From our visits to the field in conjunction with our Farm Management Survey supervision, it appears that approximately 50% of existing water lifting needs are being met by mechanical devices, with the remaining 70% of the area being irrigated by sakkia, shadoof and archimedean screw. If we subtract the 50% of theoretical demand currently satisfied by available operating units, we are left with a potential requirement of 7000, 2100, or even 4000 units. Applying the above cost figures, it would appear that the funding needs could go as high as $4.9 million.

A recent survey of mechanical waterlifting needs in Behaira Governorate by the Governorate Bank would suggest that our demand assessment may be quite conservative. There are currently some 600,000 feddans under cultivation in Behaira. According to the survey, there are presently 9,263 operative units within the Governorate. Only 35.4% of these were manufactured after 1978. The total requirement within Behaira Governorate alone for the 600,000 feddans under cultivation is 600,000/10 feddans, or 60,000 units.

3. Farm Management Survey. The survey is progressing satisfactorily. As anticipated, the field enumeration is requiring considerable supervision by Mechanization Project staff. In spite of the training given to enumerators and Governorate supervisors prior to deployment of the survey teams, we have found numerous incidents of misunderstanding concerning the manner in which data is to be recorded. As noted in the previous report, the Farm Management Group has been divided into two field inspection teams, with Messrs. Faltas, Ismail and Stringer assigned to continuous supervision in Qalioubia and Sharkia Governorates and Messrs Helmy and Shepley supervising the activities in Behaira.

Supervision--which is consuming all of the first team's time and some 40% of the second team's efforts--has consisted of weekly visits to each of the 30 village enumerators and 3 governorate-wide supervisors. During these visits, data forms are checked for accuracy and completeness, and continuing guidance and instruction in data collection requirements are provided. In addition to record checking, we have found it necessary to visit each of the 210 farmers to verify the accuracy of recorded data and to help alleviate fears and mistrust on the part of farmers concerning the intent and utilization of the survey material. Initially, farmers showed understandable reluctance to cooperate. The visits, however, have helped to allay some of these fears, as participating farmers are beginning to understand that the Project is designed to assist them rather than provide a basis for taxation--or other nefarious assumptions that caused concern in the beginning. In spite of the time and money involved in such close supervision--and risk to life and limb over the not-so-safe Agricultural Highway--we believe that this effort is useful, as we are observing a marked improvement in the quality and quantity of data that is being collected.

Another very positive advantage arising from our frequent trips to the field is the opportunity to talk with the participating farmers about a variety of issues related to the mechanization effort. In advance of information coming from the village and area surveys to be undertaken by the Evaluation Subunit, this contact provides the Project with a useful vehicle for informally sampling attitudes and opinions of the targeted farming community concerning various aspects of the mechanization program. During each visit, we try to meet with individuals and groups of farmers to discuss their views of key subjects. To date, we have obtained some very useful feedback on willingness to allow different mechanized activities on their farms.

From our discussions, there appears to be a widespread willingness to allow collectivized ploughing and seedbed preparation, planting, cultivating, and irrigation. There also seems to be almost universal refusal to allow collective harvesting, as farmers express strong insistance on harvesting and weighing their own output. The reasons they give for this determination are that they don't trust anyone else to harvest their crops and do not want their yields averaged in with anyone else's, which a collective operation would entail. These views have important ramifications for the mechanization project in that they suggest the feasibility of larger-than-individual-farm holding scales of mechanized farm operations for all activities except for harvesting--where indeed smaller individualized technology may be culturally more appropriate.

One disturbing trend uncovered during our meetings with farmers is the escalating price of farm land in and around (10-km radius) provincial and district towns. In Beheira, for example, the going price of agricultural land in contiguous areas is LE 35-45/M², or LE 147,000 to LE 189,000/feddan. These amounts, converted into hard currency at the parallel rate of exchange of LE 1.05-$1.00, gives figures of $140,000-180,000 respectively--amounts that can be invested in Eurodollar accounts at a (current) 15%, yielding $21,000-$27,000 annually.

By comparison, the net income per feddan of prime agricultural land in Egypt is only about LE 200, or $134 at the parallel market rate.

It is believed that Egypt is losing some 100,000 feddans of farm land annually to new construction. We have encountered instances within our Farm Management Survey area where farmers have sold out their land to builders in expectation of the much higher returns to be made on their invested capital. If this trend continues, and there is no reason to suppose why it will not, an alternative mechanization model for Egypt may have to be considered. This alternative would concentrate capital resources on the reclamation of large tracts of desert land which could be profitably farmed on a larger economy of scale. Failure to address this problem could result in an "Iranian" style food deficit situation where Egypt might find itself importing most of its food in a 50-100 year industrial travel. In the course of our village and area surveys, a close look should be made on the regional and annual variability of agricultural land values.

4. Financial Administration. During the reporting period, Mr. Shepler supervised all of the Budget contract accounting activities. This entailed the preparation of monthly cash reports, foreign and local currency invoices, and preparing cash need statements for local currency advances. An analysis was made of future contract needs and funding availabilities in addition to required alterations in the Project budget financed under the grant. These proposed amendments will be submitted to the Client and to USAID for approval during the next reporting period. As the administrative and financial management workload is currently occupying 20% of Mr. Shepler's time, we have hired an additional financial and administrative assistant to assist the Senior Accountant and the Planning/Financial Adviser in these duties.

5. Liaison with USAID. Considerable time is being allocated by Mr. Shepler in meetings with USAID with respect to financial matters, clearances and conditions precedent required for release of project funds. During the reporting period, another 20% of Mr. Shepler's time was spent on this function.

A.1.1 Economics and Financial Planning Subunit

Mr. Zaki Malmy

Mr. Steven C. Shepler

ACTIVITY REPORT, NOVEMBER 1981

Major activities during the reporting period were focused on continuing management and supervision of the farm management survey and on completing final negotiations with the Principal Bank for Development and Agricultural Credit concerning the Waterlifting Credit Fund.

1. Farm Management Survey: Supervision of the survey is now moving from the training and guidance phase to actual field verification of data sheet entries. During the initial stages of this survey, supervisory time was spent primarily in providing classroom type instructions concerning the content and purpose of the survey and procedures for observing and recording farm input-output data. During the past four weeks, the Farm Management Group has allocated its inspection and supervisory time to randomly visiting enumerators at their respective sites of work to verify the accuracy of recorded data against actual field observations. This approach has uncovered incidents of inaccurate entries and is serving as a warning to the enumerators that information entered on their survey forms is being, and will be, verified for accuracy. To date, three of the 30 enumerators working on the survey have been fired for willful negligence of their assignments and the salaries of several more have been reduced for careless reporting. Conversely, salaries of several enumerators whose performance has been outstanding have been raised, both in recognition of their high quality work and as a demonstration that poor work is not acceptable.

Several visits to Sharkia governorate were made to inspect and evaluate the farm management survey work being carried out by FINTECH under Work Order No. 1. It was found that the supervisor has set himself up in a nicely furnished office and that he conducts daily meetings at the office with the field enumerators to check the appearance of their data forms. When questioned, the supervisor stated that all of his contacts with the enumerators have been in the office, and that he saw no necessity to visit them at the sites of work.

We take issue with this manner of supervision, as there is no way to verify accuracy of collected data without on-site inspection. These concerns have been officially communicated to FINTECH in a formal letter from the Ministry of Agriculture posted on November 13, 1981. On December 3, 1981 Messrs Zaki and Zaitas of the Farm Management Group will return to Sharkia to ascertain whether or not FINTECH has succeeded in getting the supervisor to perform the required on-site monitoring and to check the quality of the enumerators' recorded data against filed observations. A report of their findings will be circulated shortly after the inspection.

The degree of on-site supervision required for the survey has exceeded expectations. In order to provide adequate supervision and monitoring of the 32 enumerators working on the 216 survey farms, we have found it necessary to allocate 24 hours of expatriate, and 120 hours of counterpart, staff time per week to this effort. In addition to the 12 hrs/week required for maintenance and transport of the enumerators and field supervisors, we are currently spending an additional $1,112 per week in expatriate salaries, 18 $ per week in counterpart salaries, and 18 $/ per week in vehicle operating costs to finance the total survey effort.

Even with this level of effort, we have found it difficult to provide complete coverage of the entire survey area, and will probably have to increase both the expatriate and counterpart inputs within the next four to six weeks to provide the depth and breadth of supervision requiring for development of a reliable farm productivity data base.

2. Service Center and Rehabilitation Credit Fund. The final draft of the Service Center Credit Fund Letter of Understanding was submitted to USAID (as noted in the previous report) on 8 October 1981. On November 1, 1981, a one-paragraph amendment related to loan terms and conditions for building credits financed under the Service Center Fund was submitted to USAID for approval.

Until now, no response from USAID has been received concerning approval or disapproval of either the Letter of Understanding or the amendment. All activity under this Fund program is now in a state of suspended animation awaiting formal approval of USAID. In this regard, it is noted that, due to circumstances beyond the control of the project, there appears to be growing evidence that the Fund may not start up on the planned starting date of December 1, 1981 (shown in Figure V-2 of the Inception Report).

During the first two weeks of the reporting period, final negotiations were concluded with the FBDAC concerning the Letter of Understanding for the Rehabilitation Credit Fund. This document was approved by the MOA and submitted to USAID for approval and release of funds on November 13, 1981. The Inception Report schedule calls for Fund startup on December 1, 1981.

In preparation for the activity startup, the Economic and Financial Planning Unit has provided guidance and assistance to the Machinery and Extension and Training extension programs for the credit fund activities' support. The extension input is scheduled to begin in the project area of Sharik Ahmed village, Iraq El Berum district, Nineveh, on December 16, 1981.

3. Project Amendments. During the period covered by this report, an extensive analysis was made of project-wide funding requirements through scheduled completion in September 1981. This analysis included a thorough investigation of needs to support the various implementation activities and individual personnel and commodity needs for achievement of project implementation targets and objectives. To the extent that these

requirements--based upon a year of firsthand experience with project implementation--are at variance with the Project Paper, they are identified in a special report that was approved by the Ministry of Agriculture on November 10, 1981, and forwarded to USAID for approval on that date. Briefly, the proposed amendments developed by the Subunit include:

a) Demonstration and Training Equipment for the Machinery Extension Subproject:

It was noted that the Project Paper calls for demonstration of selected appropriate machinery, but that the budget makes no provision for this purpose. An amount of $100,000 has been proposed for procurement of five sets of basic equipment to be used in the five targeted villages of Project emphasis.

b) Introductory Equipment Credit Fund:

The most single important constraint to mechanization of Egyptian agriculture has been found to be the absence of adequate credit facilities for machinery purchase at the village level. To overcome this obstacle, the amendment package has proposed creation of a Machinery Introduction Fund in the amount of $3.9 million to be administered by the FRDAC on a revolving and concessional basis to permit farmers, groups of farmers and custom operators to gain more ready access to equipment and implements which have been introduced at the village level by the Machinery Extension Subproject.

c) Soil Improvement Research:

An assumption of the Project Paper--that there exists an adequate body of research to substantiate current modalities of soil treatment programs being carried out by the Soil Amelioration Organization--has proven to have been somewhat overstated. The existing body of data has been examined and evaluated and it is concluded that these data are generally obsolete and contain insufficient observations and replications for meaningful statistical analysis. To correct this deficiency, it has been proposed that a modest program of soil improvement research ($320,000) be carried out to upgrade the data base from which the parameters of improved soil-improvement techniques can be formulated and incorporated into a long range development strategy.

d) Waterlifting Credit Fund:

We have reviewed the potential demand for mechanical waterlifting devices within the targeted areas of project emphasis and have determined that the original budget estimate for this activity ($2 million) meets only half of the requirement. Consequently, we have proposed an increase of $1 million to finance the needs of this activity.

e) Planning and Evaluation Surveys:

The $300,000 originally budgeted under the FINTECH subcontract portion of the technical assistance contract shall be

completely utilized in implementation of the ongoing farm management and area surveys now being carried out by the Planning and Evaluation Unit. An additional $112,000 is required to complete the farm management survey work in Upper Egypt and to finance follow-on surveys which will be conducted later on.

f) Soil Improvement Equipment:

It is proposed to increase the funding for soil improvement equipment by $2.14 million to cover price escalations that have occurred since formulation of the Project budget.

g) Contract position, Extensions and Additional Accounting Advisory Assistance: We have requested an increase in technical input for the Agriculture Extension Director, the Research Technical Director and the Machinery Development Adviser because of faulty input scheduling laid out in the technical assistance contract and for commodity procurement delays affecting input timing. Logically, introduction of new agricultural machinery requires, in sequence, problem identification, research, farm trials, followed by extension. By necessity, machinery introduction based on the research effort will be concentrated during the latter third of the project implementation schedule, after the Extension Director's input is due to terminate. Similarly, the time lag between research commodity procurement and actual starting of the Project's research activities will necessitate an extension of the Research Director's input beyond the planned termination date so that he will be available during the entire research phase of the project. The input of the Machinery Development Adviser will also have to be extended since his major input will not be made until the research phase has been completed.

After reviewing the considerable accounting and fiscal management requirements associated with the three Project credit funds, the Applied Research Fund and the training funds, and following discussion with the Ministry of Agriculture concerning their accounting procedures and capabilities to satisfy USAID procurement and fiscal management regulations, it has been concluded that the Ministry and the FEDAC will be unable to satisfactorily administer these funds without technical assistance. To meet this urgent need for accounting assistance, we have proposed the creation of a Senior Accounting Advisor position under the technical assistance contract.

Total funding requirements to cover the salaries, overhead and support costs of these position extensions and new position come to US$ 1,247,992.

Total additional funding required to support these proposed Project amendments described above amounts to US$ 3,502,992, which can be taken from the inflation/contingency line items of the Grant. If this is agreed to, the inflation/contingency availabilities would be reduced from US$ 15,401,000 to US$ 4,902,008, leaving an adequate amount to cover future contingencies and cost escalations.

4. Guidelines on Project Funding Requirements and Procedures. The multiplicity of funding sources, waiver authorities, conditions precedent, and approval processes related to the Agricultural Mechanization Project have generated considerable confusion among project staff and counterparts as they attempt to secure resources for their implementation activities. To clarify these procedures and processes, a comprehensive table of project funding resources was developed and disseminated among the project team members.

A.1.1. Economics and Financial Planning Subunit

Mr. Steven C. Shapley

Mr. Zaki Helmy

ACTIVITY REPORT, DECEMBER 1981

The major emphasis of the unit's activities during the month were concentrated on conducting a general review of the Agricultural Mechanization Project's conditions precedent for funding disbursements. This review was conducted in consultation with the Ministry and USAID and included a general review of the current status of all conditions precedent cited on pages 46 and 47 of the Project Paper. Where certain CP's were found to be unmet, the unit prepared and obtained Ministry clearance on required documentation for submission to USAID. Below is the current status of all CP's cited above:

Condition Precedent	Current Status
1) CP to initial disbursement	The Ministry has already furnished specimen signatures of of all persons acting on the grantee's behalf, evidence of the creation of a Planning and Evaluation Unit within the Undersecretariat for Engineering Affairs, and evidence of the appointment of a Project Director.
2) CP for subsequent disbursement of up to six months of technical assistance for a procurement specialist	This CP has not yet been met as the Ministry is planning to utilize US procurement agents in the initial phases of project commodity procurement from the U.S.
3) CP for subsequent disbursement for other technical services	A technical assistance contract was signed between the Ministry and Louis Berger Int'l, Inc. on July 29, 1980.
4) CP for subsequent disbursement of commodities	A commodity procurement plan was submitted to USAID on July 7, 1981. Notification of approval was received from USAID on July 12, 1981.
5) CP for subsequent disbursement of training funds to be financed under the Project	The Training Plan was submitted to USAID on November 23, 1981. USAID approval has not yet been received.

6) CP for subsequent disbursement of service center funds	A letter of understanding between the Agricultural Mechanization Project and the Principal Bank for Development and Agricultural Credit outlining procedures for management of the loan fund, including terms and conditions, procedures for selection of borrowers, and lending criteria was submitted to USAID on October 9, [illegible]. Approval of USAID was received on December 11, [illegible].
7) CP for subsequent disbursement for the Local Manufacturing Feasibility Study	This CP has not yet been met as the Project will not be ready to commence this activity until results from the project's research activities have been compiled and until the Local Manufacturing Advisor has mobilized.
8) CP for subsequent disbursement for the Research and Development Center	Evidence of site availability and establishment of the Center with broad responsibilities for stimulating and coordinating applied fore mechanization research and machinery development was prepared by the Economic and Financial Submit and submitted to USAID on December 19, [illegible]. A detailed implementation plan for Center activities, operating procedures for the Agricultural Research Fund including criteria for selection of research topics, the grant approval process and the mechanism for monitoring project funded research was submitted to USAID for approval on November 13, [illegible]. USAID approval has not yet been received. The Ministry has recommended that CP(-)(1) of the Research and Development CP requiring a detailed plan for operation of an Egyptian-American collaborative research exchange program be cancelled as the Inception Report and the Amendment request submitted to USAID on November 11, [illegible] recommend

that this component be cancelled and the budgeted funds be transferred to in-country training in research methodologies. USAID has not yet responded to this request.

c) If for subsequent evidence that the Machinery Extension

On November 23, 1981, the Subsector submitted the final draft of the Rehabilitation Credit Fund Letter of Understanding negotiated with the GOAU to USAID for approval. In addition, the subsector, in collaboration with the Farm Technical Advisor, the Extension Technical Director, and the Training Advisor, has worked on operational plans for working with the Extension Service to establish effective support for farmers in which on December 15, 1981 their approval of both of these documents has not yet been received. The Monitor has proposed that funds for the Rehabilitation Credit program and for training efforts to upgrade the Extension Service's machinery extension capabilities be approved in advance of full approval of the plans for the Credit introduction and of Credit program for small local manufacturers of agricultural implements. The request for the former is based on an amendment request submitted to USAID on December 15, 1981 which has not yet been approved by USAID. The request for the latter is based on the fact that the Local Manufacturing Advisor has not yet arrived.

d) If for subsequent evidence that the Soil Improvement

Specifications for the first sites of subsoiling and land levelling equipment were submitted to USAID Dec. 21, 1981, with request that a PIO/T be issued of a procurement agent be opened. We are awaiting USAID action.

Other activities undertaken during the reporting period included:

1. Ongoing supervision of the farm management survey. The continuous supervision of survey activities in Bahaira, Charbia, and Dakahlia by Mechanization Project staff described in previous reports has significantly upgraded the quality of the recorded data. We have found, however, that the random appearances of project staff in the survey is not only desirable but absolutely necessary to maintain the quality of data obtained. We have started to vary our appearances to include spot checks on weekends and holidays as some enumerators have assumed that no one from the project will appear on those days and we have uncovered instances where some have not gone to their assigned farms on those days on the assumption that there would be no inspection of "days off." Even though the supervisory staff is fairly large, consisting of one expatriate and three counterparts, we have found that this level of effort is inadequate to cover the magnitude of supervision requirements on the widely scattered 210 farms. For this reason, we have requested the assignment of an additional counterpart from the Ministry and an expatriate, Mr. James Mullung of Louis Berger Int'l Inc., to be hired on the short term technical assistance provisions of the Berger contract. The Ministerial counterpart, Mr. Fouad Abdel Aziz, has already been assigned and we are awaiting USAID approval of Mr. Mullung's nomination.

During the reporting period three separate spot inspections of the farm survey work being conducted by FORTECH in Charbia governorate under Work Order No. 3 were carried out. Several apparent deficiencies were noted: a) farm management survey information collected there appears to be corrected through interrogations of farmers rather than through the observation method; b) data is not being entered properly in the established format.

Payment of Invoice No. 3 has been held up pending correction of these deficiencies, as communicated to the FORTECH Technical Director on December 7, 1981. In order to ensure consistency with the format and content of data collected in Charbia with those collected in Bahaira, Charbia and Dakahlia, the Economics and Financial Planning Unit plans to include Charbia in the regular schedule of field monitoring supervision.

The Ministry has completed renovation of the Farm Management Survey room on the third floor. Within the next ten days, the entire farm management staff shall move to that location where files will be kept and tabulated for each of the survey's 210 randomly selected farms. At the request of the subunit, a second HP 85 microcomputer unit has been procured for the Farm Management Study and will be used to tabulate monthly data coming in from the survey areas. Training of all staff in the programming and operation of this equipment shall commence during the month of January.

2. Service Center Credit Fund. The long awaited approval of [illegible] on the Letter of Understanding was received December 13, 1981. Following this approval, meetings were held between the Economics and Financial Planning Subunit staff and bank officials to arrange for the establishment of the special account for receipt and disbursement of funds and for setting up the details of the accounting system which will be employed for funds control. The bank has also been requested to appoint personnel for fund administration and to appoint regional loan committee members as well as the members of the central coordination group.

In continuing discussions with bank officials and with expatriate staff of the Small Farmer Production Project, there is considerable concern that the bank may have difficulty in following USAID accounting and procurement procedures. A memorandum to this effect was sent to USAID on December 16, 1981. Therefore, the Ministry has requested technical assistance from USAID in training the bank in its accounting and fiscal control procedures. To date, no reply has been received concerning this request, nor has a reply been received concerning the Ministry's request to add an advisory component to the Berger technical assistance contract to provide needed technical services to the bank as outlined in the Project amendment proposal submitted on December 11, 1981.

3. Analysis of [illegible] costs and returns. Seventy observations were collected in Bahaira governorate concerning the real and opportunity costs of animal powered irrigation means. These data are now being tabulated and will be combined with data which is being collected in Bahaira, Sharkia and Sharkia governorates. When completed, a complete cost/benefit and internal rate of return analysis will be compiled to evaluate the benefits of mechanized irrigation practices.

4. Tractor operations costs seminar. On December 28, 1981, a seminar was held by members of the Economics and Financial Planning Subunit and the Soil Improvement Unit to discuss alternative methodologies of costing tractor operations. The procedural approach using component breakdown of variable and fixed costs with capital recovery and inflation factors developed by the Economics and Financial Planning Subunit was adopted as the Project's methodology. The Soil Improvement Unit has agreed to collect available data on small scale tractor costs from the governorates and agricultural cooperatives and will prepare a research plan and program to collect empirical data on these costs related to larger sizes of tractors. This analytical work will constitute a major component of the Subunit's evaluation work over the next three months.

Major Problems and Issues

The major implementation problem faced by the Economics and Financial Planning Subunit is the closeness with which USAID approves requests for program funding and operational procedures. As noted above, it took over nine weeks to secure approval of the Service Center Credit Fund Letter of Understanding and it has already taken six weeks for USAID's review

of the Waterlifting Credit Fund Letter of Understanding. Similarly, an amendment request for technical assistance to the Principal Bank for Development and Agricultural Credit to facilitate management of the credit funds has been with USAID since November 11, 1981, with no indication of when or whether this will be approved. Because of these delays, the Project will not be able to meet its credit funds startup deadline of December 1981 as planned in the Inception Report.

A.1 PLANNING AND EVALUATION SUBPROJECT

A.1.2 Farm Management Staff

Mr. M. Ismail

Mr. M. Faltas

Mr. C. Stringer

ACTIVITY REPORT, OCTOBER 1981

1. Activities during the month:

   a) Distribution of and training with the measuring wheels (one revolution equals 5.8 feet, conversion factor to meters, 5 .5608)

   b) Payment of salaries for staff in three governorates

   c) Survey activities: consisted of visiting all cooperatives and most of the individual farmers with their enumerators in the two governorates in which we are now operating. These visits have allowed us to check all the data being collected, the method of collecting the data and its accuracy. In effect, this is the culmination of the training process. Carrying out these on-farm inspections has been greatly facilitated by the allocation of another vehicle. This allows a much greater area to be covered each day.

   d) As a result of these on-farm inspections there have been some final corrections made in the enumerator staff. These changes were due to the fact that some of the enumerators were not doing their job correctly.

2. Other observations:

   a) The first berseem seen that had been cut and was for sale was on 23 October. At this date a high percentage of the berseem has been planted, cotton harvest is nearly complete and many of the cotton fields have been cleared. Rice harvest is well underway. Citrus harvest has started although color development is far from adequate, as is sugarcane in most cases. Land is being prepared for wheat planting.

   b) To date, the collection of data seems to be going on most accurately in Qaliubia governorate.

   c) It would seem that it is now time that the FINTECH operation should be checked in the same manner that the other three governorates are being checked.

A.1.7 Farm Management Staff

ACTIVITY REPORT, NOVEMBER 1981

1. During the month, planting of winter crops has continued to increase in volume. Survey activity has been concentrated at the farm in an effort to insure that data collected is accurate. During the month one enumerator was changed in Gharbia, the salary of one enumerator was reduced in Behaira, and the better enumerators and supervisors have received small raises. This is in accordance with the budget. There have been no visits to Gharbia.

2. The winter crop work is progressing in good fashion, the main crop planted to date being berseem, other crops are mainly vegetables. Wheat planting has not yet started. By the end of December the winter crop will be in full swing. This means that in order to complete the crop year we will need to extend the planned survey time by at least two months. It is hoped that during the month of December we will be able to finish the intensive work with the enumerators and will then be able to make an occasional inspection in Gharbia. With regard to the extension of the time needed to complete a crop year on all the farms, it should be noted that we are running below the budget which was submitted to USAID and can thus complete the extra time and still be within our funding limit.

3. Since the survey activity started, as here, as has been directed by Mr. Shapley, devoted all our time and effort to the training of the survey people and the production of accurate survey data. During the startup of the actual cropping activity we have asked for additional Egyptian supervisory help in order that we could properly cover the 110 farms in the survey. Up till now, no additional help has arrived. This means that visits to the individual farms have been less than would produce completely accurate data collection in the early stages of the survey. This condition has resulted in the need for on-farm data correction which is still being carried out. Each week, the amount of correction required declines. We feel that during December we will be able to complete the correction of this problem. The reason we have not already completed this task is due to the large geographical area that has to be covered. Now that we have the use of two vehicles, we are able to spread the task over more farms each day we are in the field. Another factor that has helped in this effort is the coverage of Behaira by Mr. Zaki Dulay and Mr. Steven Shapley.

A.1.2 Farm Management Staff

ACTIVITY REPORT, DECEMBER 1981

1. Winter crop activity is intensive and includes citrus harvest, vegetable planting and harvest, banana harvest, wheat planting and land preparation for cotton where chione will be interplanted.

2. Farm/field inspection has been carried out in both Charkia and Qalioubia governorates. Mr. Shepley has carried out the same activity in Behaira as well as overseeing the FIRTACS operation in Sharkia. There have been no changes of personnel this month. Enumerator errors are on the decline as a result of their experience and the constant field inspection.

3. The FIRTACS area has been inspected several times this month. These inspections indicate that data from Sharkia is not as valid as that being obtained from the other three governorates. This may be due to several factors, among which are the lack of proper supervision and the fact that the people employed by FIRTACS are not on this job full time.

4. Changes during the month:

a) Form No. 9 regarding lost crops in the farmer has been added;

b) The extra forms for Mr. Shepley have been completed and returned;

c) Mr. Jim McClung has joined the survey group and will take over the Behaira governorate area;

d) Mr. Yousef Abd El Raia has joined the survey group and will rotate between Behaira and the other areas assisting where needed to insure validity of data being collected.

A.1 PLANNING AND EVALUATION COMPONENT

A.1.3 EVALUATION SUBUNIT

Dr. Peter Reiss

ACTIVITY REPORT, OCTOBER 1981

1. Mechanized Farming Survey:

During the period:

a) The work order submitted to USAID, with an operating budget of [illegible], has been approved. Funds should be available for disbursement within the near future. The one uncompleted element involves the hiring of Dr. Nicholas Hopkins as Survey Director. Under question are the terms of his compensation.

b) During October the survey leaders (including Dr. Hopkins, Sohair Mohanna, and Bahgat Abdelmaksoud), Dr. Sabil Habashi (part time counterpart from the Agricultural Economics Research Institute in the MOA), and I met frequently to discuss the initial drafts of the survey questionnaires. Copies were submitted to all members of the project at the September staff meetings and comments were requested. Many of those who did not relay their comments were contacted directly. On the basis of these remarks and those of Dr. Habashi and F.A. the questionnaires were extensively revised. At present, Hopkins and Mohanna are preparing final pretest versions. When ready, the entire group with the addition of Dr. Salah El Abd (Director of the Integrated Development Center in Marsut and senior consultant to me) will meet to discuss the survey before it is conducted. Through the services of Dr. El Abd and Mamduh Jabi in Minia we now have a list of every village in the nine districts where the survey may be conducted. This information includes the name of every village, their population, presence of a general cooperative society and land reform cooperative, and the number of farmers and feddans within it. The interesting point here is that on many occasions I was told that information at the level of the village was not available in Cairo, yet Dr. Salah El Abd was able to secure such information for the Delta from Ministry officials in residence here. The crucial factor in data collection in Cairo then is finding and persuading the appropriate individual to release the needed information.

Follow-up for November: With the approval of the work order and the release of funds for the survey we may proceed as planned. Unfortunately, the delays have added more than one month to the time of survey period. As a result, we cannot expect a final report to be submitted until late April. Sohair Mohanna and Bahgat Abdelmaksoud are expected to hire the research assistants and enumerators, and their training ought to begin in November. The final pretest version to be conducted in Gharbia will be presented by the survey team and approved or reworked in a meeting with Habashi, El Abd, and Reiss.

2. Village Studies Program

During the period:

a) I have visited Minia for two extended periods during the month, meeting with the team and visiting project villages. The team has been very busy working on the second questionnaire which focuses on all machine owners in the villages and requests information concerning credit and maintenance/repair facilities. In addition, they have been given another questionnaire which focuses on soil and water problems in the villages to be used with a random sample of farmers. Drainage and salinity are particularly severe problems in Upper Egypt. This questionnaire actually grew out of a conversation with the project's irrigation engineer. Wanting to know the extent and severity of such problems, I decided to employ the Minia team to provide the answer quickly. This work should give us some idea how rapidly we can provide information to people in the project or in the Ministry about a particular issue.

b) Moving into other governorates I have hired a professor to be supervisor of the Qaliubia team, Dr. Abdel Basset El Sayed from the Department of Rural Sociology and Agricultural Extension at Al Azhar University. His dissertation research focused on the emigration of youth from rural areas to urban centers and is therefore related to the project's concern with a diminishing labor market in the villages. We have also recruited graduates of Al Azhar to work in Qaliubia. Dr. Abdel Basset and the graduates are natives of that governorate. For the Beheira team, Dr. El Ahd and I have been meeting with representatives of the University of Alexandria who are very cooperative. Dr. Dabashi is contacting professors at the Colleges of Agriculture at the Universities of Zagazig and Kafr El Sheikh.

c) In a continuing effort to link our efforts with those of other projects and institutions I have met with Dr. Kamal El Hindi of the MSU-California (Davis) Project which is conducting a number of agricultural economic studies. We discussed sharing data as well as using each other's research structures for work on specific problems.

Follow-up for November: I expect to spend most of this coming month recruiting people for the remaining slots in the program. This will involve a number of trips out of Cairo to Alexandria, Benha, Zagazig, and Kafr El Sheikh.

With Dr. Dabashi I plan to work on a study of individual tractor efficiency and use to be directed as owner, driver, user, and mechanic in order to obtain very detailed information about a limited number of machines. It is an example of how sociology and economics can be integrated. The data collection will be done by the team members in the villages. Although the methodology is not yet final it will likely involve their following particular machines for a month and then for a shorter period during the following months.

3. Training

a) It is expected that training in the Evaluation Unit will take various forms. I am now planning to hold a training program for all people involved in the Village Studies Program at the Maryut Center. The starting date is February 1, 1982 if the funds can be released in time. At the Center all village monitors, professors, governorate counterparts and part time liaison people will assemble for a four week program. Dr. El Ahd and Dr. Dabashi will also attend. The training will involve instruction on various kinds of data collection, coding, and analysis; discussions on machinery and agriculture. Lessons will be taught by the Center's staff, project staff, the professors, Drs. Dabashi and El Ahd, and Mr. Training of the Minia team was done by Dr. Bahgat and Mr. but this has been very time consuming. It would be far too inefficient to do it separately in four more governorates. Therefore, the entire team will be assembled and trained at the same time. Funds for participant training for Planning and Evaluation as set forth in the Project Paper will be used to cover the expenses.

b) In addition, workshops for program review and training will be held quarterly drawing together the entire Program staff on a quarterly basis. A quarterly technical report will be produced based on these meetings, edited by Drs. El Ahd, Dabashi, and Reiss.

c) During the later years of the project I would also like to send the five cooperating professors in the Village Studies Program for one year postdoctoral study to the United States. Their training would concentrate on the link between their individual disciplines (agricultural economics, rural sociology, and agricultural extension) and agricultural mechanization.

d) A final training program has been requested by Mr. Ali Saada, General Director of Agriculture for Minia governorate. I have had many meetings with him concerning our work in the villages. During our last meeting he asked if we can establish a training program for data collectors in the agricultural office, in order to upgrade their level of work. It was a welcome request since it relates directly to an objective of this Project: the improvement of data collection and analysis at the governorate level, and ties between the governorates and the Ministry center. Likely, this training will not be done for many months, certainly not until after the training program in Maryut. However, I have sketched the outline: a two week program would be devised for district level research supervisors, these being nine individuals in Minia. Depending upon the success of this workshop we can expand it to include the agricultural officers who conduct the surveys. Initially, we might focus on only those who work in Matai and Abu Qurqas, the two districts where the project is working. Should these workshops appear useful we might expand them into the four remaining governorates in the Delta.

4. Conference Participation

One way that I have been able to attract high caliber professors from the universities is through the promise of research data for analysis and eventual publication. To that end, Dr. Rahgat of the Minia team and I shall be presenting papers at two conferences to be held in Egypt. The first is on soil degradation and will be at Minia University in early February. Our paper concerns the perceptions and reactions of farmers to changing soil and water conditions. The second conference, with the theme of computer and statistical analysis, has a sociology section. We expect to present some findings on agricultural mechanization, though the exact subject is yet to be determined. Attached is a copy of the abstract for the Minia soil conference, which has been accepted.

5. Soil Improvement Center/Delta Division

Finally, I am working on an evaluation of the Delta Soil Improvement Center with the cooperation of Ercoli Coles and Zakaria El Medhad, project soil and water experts. They would like a determination of the Center's extent and success of its activities. We expect to compile a core list of questions to be asked of Center employees and cooperating farmers. I have been thinking of having the Delta team members undertake this as their initial effort.

A.1.3 Evaluation Subunit

ACTIVITY REPORT, NOVEMBER 1981

1. Mechanized Farming Survey

During the period:

a) Final pretest versions of the four questionnaires for the Mechanized Farming Survey have been completed, reviewed, and accepted. At Dr. Nabil Mabashi's request we have added a set of questions about machine costs and returns to be asked of machine owners. These questions specifically ask owners about oil consumption, expenditures for maintenance, repairs, and spare parts. These points were not included initially because it was thought that machine owners would be unwilling to give such detailed information or would be unable to give accurate answers. However, at Dr. Mabashi's urging, we decided to try these questions on the pretest and eliminate them if necessary at a later point. While such information is undoubtedly important, the question remains whether the survey is the proper research vehicle; at this point, I would argue that the Village Studies Program would be more appropriate. To that end, I have already started working with Dr. Mabashi on the design of a research project where such information is elicited. We have also begun to look ahead to the period of analysis of research data, considering which points require special attention and which will be significant variables for such operations as cross-tabulation and correlations.

b) Follow-up for November: The pretest will be conducted during the coming month in two villages in Gharbia governorate. I have selected Gharbia because of its central location in the Delta and range of agricultural practices. Following the data collection period the answers will be reviewed and the questions changed or dropped if required.

2. Village Studies Program

During the period:

a) I accompanied Dr. Nashat and Dr. Geiser in Minia governorate where we met the Governor and Undersecretary of Agriculture. The Governor was interested in the Project's activities and raised several points: what could be done to encourage farmers to consolidate their landholdings in order to facilitate mechanization; to what extent would the Project make use of the services of faculty members of the University of Minia in its implementation; and how would he coordinate the work of his Technical Office with the activities of the local government offices, including the mudariya. We later visited the five project villages in Minia where we met with local officials as well as with numerous farmers. In one village the entire population had turned out to meet us and learn about the Project.

b) In a meeting that Dr. Bahgat and I had with Mr. Ali Saada, General Director of the Mudiriya, he expressed his interest in the work of the Village Studies team and was interested in integrating the work and training in the Mudiriya with our own. He suggested that we hold training courses for Mudiriya staff, particularly research directors in the nine markaz of the governorate and eventually, for their staff. He would like to initiate governorate-wide investigations of particular problems and issues, such as labor shortages and surpluses. He also suggested establishing regular meetings with local officials to discuss village problems in agriculture and possible solutions. Such future activities for the Village Studies Program would directly meet Project Paper mandates to improve research capabilities and improve communication between the governorate officer and the Ministry in Cairo. We told Mr. Saada of our interest in his proposals and that we would be ready to begin training programs for his staff by early summer 1982.

c) The monitoring and evaluation teams for Sharkia and Qaliubia have been established and organization meetings have been held. The Mudiriya in Qaliubia has been kind enough to give us a permanent team office in their new building in Benha where we can have weekly team meetings and where we can keep literature, coding sheets and data forms.

Followup for December: The remaining teams in Gharbia and Beheira must be established. The Qaliubia team will be trained and begin collecting information from village leaders. The Minia team will continue coding previous efforts and begin work on a study of soil and water degradation in project villages.

3. Meetings

During the period:

a) With Dr. Mahashi I visited the Department of Agricultural Economics at the University of Zagazig, Sharkia governorate. We wished to recruit a professor to supervise the Sharkia team and were introduced to Dr. Shahat who was suggested by Dr. Ahmed Gueli, Chairman of the Department. Dr. Gueli is also a technical director of the California project which conducts research on economic issues. Part of the conversation with Dr. Gueli concerned a recent award from UNESCO to the University to establish a research center. Several universities had submitted proposals for funding, but only Zagazig and Suez Canal Universities were successful. The funding is to be used for the training and development of the staff. Each research center to be established must have a unique theme or research interest. Suez Canal will be concerned with the development of the Sinai Peninsula, Zagazig is to specialize in agriculture and food security. The funding will allow the Zagazig center to develop a research capability to undertake contract research. The development of this center ought to be watched since it may be able to conduct survey research for the Mechanization Project in the future. While the first

Project survey is being conducted by staff largely from Cairo, it is my hope that we might have researchers in the project governorates work with us on later efforts. The Tagheig Center for agriculture may be a possibility.

b) With Drexel Coles and Zakaria El Wadad I visited the Central Delta Soil Improvement Center in Kafr El Sheikh. The objective was to familiarize me with the operations of the center for a survey which the Soil Improvement Subproject would like me to conduct on the activities of the center in drainage, subsoiling, and gypsum application. The center has been working in Kafr El Sheikh, Sharkia, Menufia, Qalubia, Dumyat, and Dakhalia. An important point to come out of the discussions with the Director was that farmers do not have to pay for subsoiling until two years after it is done, and then have ten years to pay. However, the benefits of subsoiling have largely ended after the first two years which means that farmers are paying for the work after the advantages have been lost. Subsoiling ought to be done every three years roughly, but the center does not have the equipment to undertake such an operation.

Followup: A questionnaire should be designed which will be [illegible] to interview farmers in areas where the center has worked which explores the benefits of its work. This evaluation will begin in Qalubia using the team members. The center did subsoiling two years ago in Benha market.

[illegible] Evaluation Reports

MONTHLY REPORT, [illegible]

1. Mechanized Farming Survey

During the period

a) A project of the four predominantly Tallinge villages (Ambro, Kamara, Mathew [illegible], and [illegible]) which comprise the survey was held during the period of two villages in Sherbro governorate. Sherbro was chosen because of the central location in the Delta. The project followed a training session for the research assistants conducted by Robert Behanna. These assistants will supervise the survey enumerators in the field when the full scale survey is undertaken. It was necessary that by acting as enumerators for the project they would become familiar with the questionnaire and be in a better position to supervise the work of the local officers.

b) The two villages for the project were selected with the help of the Reference in Sierra. They are in little market, outside the survey areas in order to avoid contamination. The project was conducted during one week in mid December. The remainder of the period was spent coding and recording the responses for possible changes to be made in the research instruments.

c) It ought to be noted that Dr. Kirkham Hughes has agreed to serve as Project Director and has been hired under the short term consultancy provisions of the contract.

Followup. Based on the results of the project, final questions will be made in the survey instruments. The survey is to be conducted in two villages in Kenema, Sherbro, and Bonthe, and Kenema ought to begin in mid January.

2. Village Studies Program

During the period

a) A considerable amount of time has been spent developing and implementing programs to pick the research teams. Field supervisors are to prepare to supervise the five teams: Dr. Bangali Abdulkadri, Agricultural Economics and Rural Sociology at Fourah Bay University (Kenema); Dr. Abdul Karim of Fourah Agricultural Economics and Rural Sociology at [illegible] University (Bonthe); Dr. Abdul Tarawalli of Fourah Agricultural Economics and Rural Sociology at Njala University (Bo); Dr. Abdul Karim of Agricultural Economics at Njala University (Kenema); Dr. Abdul Kamara, Agricultural Economics at Njala University (Kenema); and Dr. Abdul Bakarr Jalloh, Agricultural Economics and Agricultural Extension at Njala University (Kenema). The five governorate coordinators from the Agricultural Officers of the Ministry of Agriculture and Agricultural Economics and Statistics have been delegated for part time assignment. We are now during the final training of graduates and personnel from the rural agricultural officers.

[illegible]

[illegible]

[illegible]

[illegible]

Among the points coming out of the conference:

a) Little accurate information exists concerning [illegible] conditions in Egypt despite the large amount of money already spent. For example, although a number of Egyptian and American experts were present, no one could give even a rough estimate of the number of emigrants, where they emigrated from or emigrated to, what they did for employment, the rate of their remittances, or what they did with their money in Egypt.

b) Projections based on 1970 figures for emigration suggest that by the mid-1980's Egypt's labor equivalent will be imported by neighboring states as they continuously are turning to the Far East for their labor needs. Care must be given to whether certain efforts should the total labor market in Egypt be increased in the future.

c) While some participants called for selected mechanisms [illegible] i.e., mechanisms of participants without actual [illegible] where the workers are available in others wages are [illegible] high, others argued that selected mechanisms is difficult to avoid. Technology may be easily transferred to other activities.

d) We need to look at cooperative labor efforts, across family boundaries. Although many people, e.g. government officials and farmers, categorically state that households are independent labor units, there is evidence that families have spread their labor and activities and that cooperative labor and exchanges of labor are to be frequently found.

[illegible] RESEARCH AND DEVELOPMENT SUBPROJECT

Mohamed A. El Hoggar

Carl A. Reeves

ACTIVITY REPORT, OCTOBER 1991

1. Major activities during the period:

a) Five trips were made to Nevi Hubaria to visit the Mechanized Cotton Farm to assist in initiating mechanical cotton picking. They have many obvious problems this first year. The most critical problem is that pre-cleaners for the gin have not been obtained, and this in itself essentially precludes mechanical harvest. A second important problem is that as much as eight weeks after the last irrigation, cotton was still growing and blooming significantly. This makes defoliation difficult and it requires excessive chemicals. The many green leaves that remained on cotton stalks after normal defoliation spraying and an abundance of hardwide grass that was allowed to grow in certain areas caused excessive lint stains. In some fields plant limbs were too near the soil surface, and it is not clear if this is due to irrigation or cultivation practices. It would be wise to engage an agronomist for the next year's crop to keep close watch on fertilization, irrigation, and plant growth. Another factor was that the final cultivation left too many clods on the soil surface and the surface contour was not correct for control of the picker, but this will be easily corrected.

b) A lot of time was spent in Cairo soliciting bids for machine shop equipment, visiting bidders to determine if bidded equipment met specifications, discussing prices, etc. Finally, acceptable bids were received for approximately one half of the requested equipment and MSA will issue purchase orders for this early in November, 1991.

c) We spent time with Drs. Hachet and Calvet discussing progress to date and objectives with completion dates for 1991. The meetings of the MSA Executive Committee were held. A full meeting of the Committee will be held around the middle of November and several proposed projects for the Applied Research Fund will be reviewed.

d) Applications for the position of secretary were received and applicants interviewed, but it is difficult to locate qualified people for the available salary level. Between the MSA and service subgroups we have quite a backlog of work to be done. Most of the employees at the Tractor Test Station took the English Placement Test at the American Cultural Center, but it seems that it will be at least January 1991 before funds are available to take courses.

e) Specifications were written for three different sizes of tractors for MSA.

[illegible] Continue cooperating with the [illegible], hopefully, install the machine shop equipment, try to employ an experienced machinist, select a secretary, continue working towards obtaining unbiased machine shop equipment, and continue assisting with the completion of the Tractor Test Station facilities.

A.2 Research and Development Subproject

ACTIVITY REPORT, NOVEMBER 1981

1. Major activities in November:

a) The R&D Executive Committee held three meetings during the month. For the Applied Research Fund, four proposed projects had been submitted, two from Mansoura University and two from Alexandria University. These four were reviewed but returned to be revised to include more specific details. Since the number of proposals submitted was so small, the committee discussed the need to develop a sample proposal to be used as a guide by others. The second R&D guidance committee meeting was held on November 19, 1981, at the Tractor Test Station. Mr. Arnold Raef of USAID was in attendance to outline the requirements and procedures that we will have to fulfill before the money is made available for research. Four research proposals were submitted and discussed.

b) Specifications were written for three agricultural tractors, approximately 80, 100 and 120 hp. These specifications were distributed to at least six tractor dealers. It was very difficult and time consuming to get responses to these bids, but a deadline was set to make a selection by the end of November and to issue purchase orders.

c) With Bob Barker, we designed a gooseneck trailer to be used with Dodge Pickups as they are not available in Egypt or Israel. We made one trip to Tanta to discuss the design and construction of this trailer with Tanta Motors Co. They agreed to construct this trailer if we would get them a license to produce it from the Ministry of Industry, and we agreed. They suggested that we may have the trailer "just designed" and we agreed. Another design has been made, the detailed drawings completed, and the drawings have been reproduced, so we are ready for a final discussion with Tanta Motors in early December.

d) Bids on approximately half of the original list of machine shop equipment were accepted and purchase orders for these items were written by MSC. The machinery bought included most of the large items and a considerable portion has been delivered. Construction of a proper concrete base for the heavier items was initiated by a contractor. Obtaining bids on remaining items of the original list was initiated in Alexandria. It is expected that all these items will have been purchased by January 1, 1982, and a complete machine shop will be basically equipped.

e) Several people who were potential secretaries for the Tractor Test Station were interviewed and one person was selected and has been submitted to be employed. This position was advertised in the local newspapers and eight applications were submitted, but only one appeared for the interview.

f) Training for employees at the Tractor Test Station was discussed with Fred Schmitz. It was agreed that some twenty people would enroll in English courses with the American Cultural

Center through USAID, and that approximately three of these could prepare for advanced studies in foreign countries. Tests were taken by 25 employees to determine their present level of proficiency in English. Forms were filled out by these 25 employees to start taking courses in January 1982.

g) The Project Staff Meeting in Cairo was attended on November 30. Dr. Mashat and I traveled to Israel on November 30 to observe the packing and shipping of prototype equipment for research on tillage, planting, cultivating and spraying.

For December: Getting the prototype equipment shipped from Israel and take vacation time in the US.

[illegible] MECHANISM EXTENSION SUBPROJECT

Eng. Ahmed El Behery

Mr. Edward Cowdrick

ACTIVITY REPORT, OCTOBER 19[illegible]:

1. The committee approved the general approach of the proposed extension workplan and approved the Extension Mechanization Specialist program proposed by Dr. Tayel. It was suggested that the committee devote one future meeting to the Mechanization Project's water management plan. Chairman Afify suggested that Extension officers from the other four governorates in which the Project will work be invited to future major field days and other similar activities in the mechanization development area at Sheikh Ahmad.

2. A letter was written to the Director General of Beheira governorate, directing him to nominate six persons for mechanization training.

3. Mr. Fred Schaetz, Technical Director of the Training Subproject, and Mr. Ernest [illegible], Technical Director of the Soil Improvement Subproject and Extension Materializing Specialist spent one day in the mechanization development area at Sheikh Ahmad with members of the Extension Subproject.

4. Mr. Jack Corbett of Chemi Co. spent several days with the Chemi members of the Mechanization Project including the Extension Subproject Technical Director.

5. The wheat mechanization plan for the 1981-82 cropping season was completed. Approximately 75 feddans have been selected in the Sheikh Ahmad cooperative area and 25 feddans in bordering areas. Project equipment will be used for tillage, leveling, irrigation, and seeding of the fields in the project area. Other operations such as harvesting and pest control will also be mechanized if equipment becomes available.

6. Cooperators have agreed to follow Ministry of Agriculture recommendations for growing wheat, to make their fields available for demonstrations, field meetings and other types of extension activities. Field and production practices data will also be available on a collective basis for the project for educational purposes.

7. The plan was developed with the advice and assistance of farmer advisors in the area. Fields selected are representative of the area and are made up of land from small land holdings. It was also agreed that the equipment will be made available on a selective basis for trial and demonstration to other farmers in the area when it is not being used for project purposes.

7. On selected fields and to the extent that time is available, precision landleveling (land leveled to ± 2 cm) will be carried out in the area.

8. Farmer advisors have recommended that demonstration, meetings and other extension activities be held on Sunday, market day in nearby Itay El Barud. To the extent it is possible to do so, future activities will be held on Sundays. They have requested that some kind of activity be held on each Sunday. Lack of trained, experienced personnel at the present makes this impossible, but efforts will be made to honor this request after Extension Mechanization Specialist becomes involved in the project.

9. Two meetings were held in October. One was on machinery introduction, with about 35 farmers attending. The second was on landleveling, with about 65 farmers attending. At each meeting a film (2 on landleveling) was shown, followed by discussion of the subject.

10. Harvesting of the 1981 cotton crop is nearing completion. A check of yields in the cotton tillage demonstration fields indicates yields of approximately 10 kantars (1574 kg unginned or roughly the equivalent of 2.55 bales per acre [illegible]) per feddan. These yields will be compared with average yields for the area after all yield data are available.

11. A tillage planting demonstration for the 1981-82 wheat crop has been started. Three different levels of seedbed preparation are included in the demonstration:

a) Field 1. Plowing with the MP 25 chisel plow (one pass) followed by disk harrowing with an offset disk (one or two passes as needed) and leveling with the hydraulic blade. The field will be seeded with a grain drill.

b) Field 2. Plowing with a locally manufactured chisel plow with secondary tillage and planting the same as Field 1.

c) Field 3. Seedbed preparation with an offset disk harrow (3 or 4 passes as needed to form an adequate seedbed) followed by leveling and planting with a seed drill.

The three fields were tilled to 8-10 cm on October 26, immediately following removal of the cotton stalks from the preceding crop. No water had been applied after irrigation at the cotton had ended. The fields will be seeded at the same rate, fertilized at the same rate, leveled to ± 2 cm, irrigated at the same rate and receive the same [illegible] measures. The scheduled date for seeding and end a tillage planting field demonstration is November 28.

12. Approximately 65 feddans were leveled during October in the Wheat Wheat comparative area plus a small number of feddans in bordering areas. Following demonstrations and a meeting on landleveling, the leveling blade has been made available to farmers making trucks, custom operators and the comparative [illegible] [illegible].

13. Plans are to use the blade on all fields that are in the wheat program. Selected fields in the area will be leveled to ± 3 cm. These fields will then be used in field meetings on landleveling and for collecting data on mechanization practices.

14. Training meetings on land leveling will continue to be held and the leveling blade will be made available to farmers when it is not being used in project activities.

15. Following operator training conducted by the equipment supplier, the Sheikh Ahmad cooperative is using the project backhoe to clean farm drainage ditches in the area. About 3 km of field ditches have been cleaned and field demonstrations have been held. Farmers are enthusiastic about the machine and acceptance appears to be one hundred percent. Demonstrations oriented toward encouraging the purchase and use of the machine are scheduled for November and the following months. Training sessions for backhoe operators are planned to ensure that trained operators will be available to operate the machines.

Problems:

1. The Extension Advisory Committee executive group met, but various circumstances have delayed further meetings or a meeting of the full committee.

2. Visual aids aimed directly at farmers in Egypt are badly needed. Materials from developed countries is valuable when limited to specific machines or components, but visuals showing large machines in large fields are not applicable to conditions in Egypt and can have negative effects on a meeting.

Activities for November:

a) Village planting demonstration and meeting;

b) Water management meeting scheduled for the latter part of the month;

c) Landleveling demonstrations;

d) Complete seedbed preparation and begin planting of the wheat in the demonstration area;

e) Assist Tractor Testing Center personnel with combine trials for rice harvest and hold a harvest demonstration.

A.3 Machinery Extension Subproject

ACTIVITY REPORT, NOVEMBER 1991

1. Summary of Activities

a) Much of the month was spent in further developing the extension program at Sheikh Ahmad. Plans were completed for the field day held on December 1, 1991 and demonstrations were conducted on landleveling, tillage and ditch cleaning. Discussions were held with farmers in the area on training programs and on demonstration plans for the coming crop year.

b) A number of fields in the area were ploughed with the project chisel plough, levelled and planted to wheat with one of the three types of grain drills brought into the area for the tillage-planting field day and demonstration. These fields will be used as demonstration fields in extension activities scheduled later.

c) Farmers in the area responded positively to the mechanized wheat planting activities, approximately 200 feddans of wheat were planted with one of the three drills.

d) The project's backhoe and leveling blade were used extensively during the month in ditch cleaning demonstrations, landleveling demonstrations, and trial use by farmers and the Sheikh Ahmad cooperative.

e) The extension team members met with Dr. Zamzam, Governor of Beheira, to discuss the program at Sheikh Ahmad. Dr. Zamzam expressed his continued support of the project's activities, requested that we continue to keep his control on activities in the area, to check the training center at Damanhur, and expressed strong support for a service center at Itay El Barud.

e) Conferences were held with Mr. Mostafa Abou Naia, Director of Extension in Sharkia governorate; Mr. Gaber Abou El Yazed, Director of Extension in Beheira governorate; Mr. Mohamed El Sharaay, Director of the Agriculture Department in Sharkia (Minia el Khan marker), and Mr. Shairy Nafez, Director of Mechanization Department, Extension Department, Cairo. The mechanization development plan for extension, the Extension Mechanization Specialist training program, and the December 1st field day were discussed.

f) The Extension Department has selected the persons from Beheira and Sharkia governorates to receive training in the mechanization specialist program. After completion of an orientation program, these people will attend a three month training course at Sakha.

2. Problems

a) The wheat drill scheduled to be delivered before the wheat planting season was delayed in customs. Wheat drills were borrowed to complete the wheat planting demonstrations and the field day.

b) We have not purchased a planter for cotton and maize. Delinted cotton seed is not available in Egypt and we have been unable to find a planter designed to plant non-delinted seed.

c) We have not found a suitable solution to the wheat and rice harvest problem. Small combines could be suitable except that they are generally not designed to [illegible] the large amounts of material that results from cutting the crop very close to the ground. Also, for wheat, farmers need chopped straw for animal feed. Combines normally do not chop the straw sufficiently for animal feed. Two combines were observed harvesting rice. One did not do an acceptable job, the other did an acceptable job but the capacity was low due primarily to the extreme lodging of the crop. This was a combine modified to fit Egyptian conditions. It will be available for further observation during the oncoming wheat harvest season and next year's rice harvest season.

d) A full or half time person from the Extension Department working with the Extension team would increase the effectiveness of the program.

e) The program at Sheikh Ahmad would be more effective if we had more in-depth programs on irrigation, farm management, and mechanized agronomic practices.

3. Activities for December

a) Conduct a field day and demonstration on tillage and planting of wheat;

b) Submit the Extension plan to the Extension-Training Advisory Committee for review and approval;

c) If approval of the Extension plan is obtained from the advisory committee, submit the plan to USAID for review and approval;

d) Support and provide assistance to the training activities in the Sheikh Ahmad area;

e) Follow up on the wheat planting activities to assure that these fields can be used for demonstrations later.

A.5 Machinery Extension Subproject

ACTIVITY REPORT, DECEMBER 1981

1. Summary of Activities

a) A field day on tillage, mechanized wheat sowing, irrigation and landlevelling was held in the Sheikh Ahmad area. Approximately 100 persons including agriculture officials from Behaira and surrounding governorates attended.

b) The site of the field day was the wheat tillage planting demonstration field. Three kinds of tillage plus land levelling and planting wheat with three different types of drills are included in the demonstration. This demonstration will be included in extension educational programs later in the season.

c) At the monthly meeting of the Extension Training Advisory Committee, the extension and training plans were reviewed and approved.

d) Mr. Shairy Safar, Director of Mechanization in the Extension Department, was named to spend half time working with the Mechanization Project in Extension.

e) The Extension plan has been submitted to Shaib for review and approval.

f) The Extension Departments in Qalioubia and Sharkia governorates have selected people to receive training as Extension Mechanization Specialists. These people are scheduled to be part of the second group of trainees for mechanization specialist positions.

g) Tentative plans were developed for the six week orientation session scheduled to begin February 1st for the first group of trainees. Discussions were held with the farmers in Sheikh Ahmad area regarding plans for the 1982 cotton demonstrations.

h) The wheat demonstration fields were checked for plant population and uniformity of stand. Checks on yield will be at harvest. The wheat planted with a grain drill has a uniform stand compared with hand broadcasting. Farmers in the area appear to have a very positive response to the results of the demonstrations.

i) The training sessions being conducted by the training subproject in the Sheikh Ahmad area appear to be highly successful. Farmer reaction to the training sessions has been good.

2. Activities for January 1982:

a) Complete plans for the six week orientation session for mechanization specialist trainees.

b) Assist the training team to develop the program for the three month training session at Sabha.

c) Begin development of the cotton demonstration program.

d) Continue development of the program at Sheikh Ahmad.

[illegible]

[illegible]

Mr. [illegible]

Mr. [illegible]

[illegible]

1. [illegible]

2. [illegible]

3. [illegible]

4. [illegible]

5. [illegible]

6. [illegible]

7. [illegible]

8. [illegible]

[illegible]

2. [illegible]

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4. [illegible]

5. [illegible]

[illegible]

[illegible]

1. [illegible]

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3. [illegible]

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[illegible]

[illegible]

1. [illegible]

2. [illegible]

3. [illegible]

4. [illegible]

5. [illegible]

A.4 [illegible] Development Subproject

[illegible], [illegible] [illegible], [illegible] I

1. At the beginning of this period things were very quiet. We had at that time not received any indication that we were likely to receive any response. In fact, we had already begun research on a different approach.

2. My impression is it stayed that this period was the same before the storm. Now, we have received from proponents of subprojects, in writing, four new serious market studies, and another four which are at present written. We are discussing the first four with the various interested parties and one of these proponents fit perfectly with the requests of various markets studied, thereby obtaining strong support in the farming community.

3. At long last, after many months, the final terms and conditions of the National Credit Council fund have been approved by both Ottawa and the Provincial Bank for Marketing (the Agricultural Credit Corporation).

4. During the latter part of this quarter, contact has been renewed with village workshops in Kinshasa which are working and experiment improvements as well as their training needs for expansion and development.

5. The conversation this particular workshop of the subproject has been changed for a while now that we discovered early on that the machine tools which we had bought, it was not possible to obtain through. This was not possible then, when the issues of understanding had not been finalized and approved. Now, a machine tools which will be produced so to plan the lower fund money would be approved and become available.

6. We are optimistic that the first new farming farmer would be opened by the end of August 1985. Estimated monthly attendance with the service, both of those targeted to the maintenance of machinery. But, we are also aware of the many variables that are involved in this scheme. Nevertheless, we are very hopeful.

7. We have had two successful meetings with the Minist., one at which time office in Kinshasa and the other at the general monthly branch in Lubumbashi. We were pleased that during the time between these meetings that two proposals and discussions had an announcement of the aims and goals of the National Cereal Development Project to Chief Mission Headquarters in the market, the village and the chief cooperatives. The word is being spread.

8. It is expected that the development of the village and local workshops will be the first to expand and develop, as their demands are not so complicated as those of a completely new, comprehensive, service center.

9. With regard to training, we have received a surprisingly high interest in this part of our program and have been able to submit a training schedule to the training officer. The response to date has come mainly from the small, local workshops in the villages which rather than the new-premises contemplating the service center. This responds well, some of a local base, when technicians are considered to be the final aim of the service center, the type of machinery to be supplied, and the number of people employed. Many of the larger are not generally employed by the prospective companies, and the companies are not in a position to indicate the extent to which they can absorb themselves. Though that have estimated the program and have expressed their desire to participate in the training program.

[illegible] SERVICE CENTER DEVELOPMENT SUBPROJECT

[illegible] MACHINERY REPAIR ADVISOR

Dr. Robert [illegible]

ACTIVITY REPORT, OCTOBER 19[illegible]

1. Graham Sparrow, Youssef Stefanos and I made several visits to importers' offices and had meetings with our advisory committee. Some of the importers are still interested in development Service Centers providing the terms are favorable. They keep saying what we can do for them. The fact is that we do not know for certain. We cannot approach the subject with them in an intelligent manner until we know what the bottom line is in the letter of Understanding as relates to the interest rate, the amount of down payment, length of payback period, and when funds will actually be available in the bank.

2. I keep hearing about a prototype Service Center financed by the Ministry and operated by the Project for the purpose of collecting data and proving that service is a viable business. My personal opinion is that by the time we are able to get such an operation functioning efficiently, we will have run out of time and still will not have used the USAID funds for the purpose intended. I am in favor of determining what USAID will agree to, then start several facilities simultaneously. If the private sector business community will not involve themselves in USAID's last offer, as obviously do not have a project, and it should be terminated.

3. There were no contacts or any progress made this month on Village Shop Improvements because I still do not have a counterpart. At one point, I thought I had acquired the right man. However, at the last minute his employer offered him a substantial salary increase to be decided to stay on.

4. We have collected some information and costs on various types of building construction. For our purpose, it has been determined that pre-engineered metal buildings would be preferable but more expensive.

5. Since Fred Schantz has been appointed Training Officer we have given him a rough outline describing our future training needs and the scope of each skill we hope to attain. He is then in investigating training facilities and making a schedule for implementation in the near future.

6. It has been brought to our attention that importers pay as much as [illegible] customs duty on spare parts. If this is correct, I do not expect them to import more spare than they have to, and this is an incentive for others to continue or expand the bias-marketing of spare parts. If the customs duties on spare parts were reduced or waived, they would become more available, lower priced, and bias marketing would eventually die out.

4.4.1 Machinery Repair Advisor

ACTIVITY REPORT, NOVEMBER 1991

1. There was very little activity this month on Village Shop Improvement. Not having a counterpart, it is not possible for me to go to the villages to make the necessary contacts. It was suggested by Dr. Nis Hansen and Dr. Abu Sabir that I let Dr. Hagger assign a temporary counterpart, although I am reluctant to do so, it seems that this is what I will have to settle for. Graham Sparrow and Yousef Stefanou have been gathering names and locations of shops in Chaffia governorate with which I will begin to make contacts this month, as well as some of those in Bahaira that should be revisited.

2. Most of November was spent assisting Dr. Carl Beeson. We were able to complete a front plan for his new machine shop and designed the necessary foundations for the heavier machine tools such as lathe, radial drill and universal mill. We are still working on the design and blueprints of a pneumatic type agricultural station. We hopes to have it manufactured locally, due to the extremely long delay in procuring it in the U.S. We will need the Ministry's assistance in getting a permit/licence to locally manufacture this unit. I am told this can be a very difficult and time consuming task.

3. The new radios installed in our Cairo and Alexandria offices have improved communication considerably. The receiver in Alexandria however is often garbled and picks up interference from other stations. It needs repairing as soon as possible.

4. Mr. Hagger assigned me an office this month and this has alleviated the crowded conditions in Mr. Sparrow's office. There has been considerable work done on our office building, but it seems we have come to a most standstill on the finishing touches. The most obvious things that would improve the comfort and appearance of the building are as follows:

a) install heater/AC units.
b) repair broken windows and door locks.
c) install new toilets and repair plumbing.
d) complete the drainage and grading around the building.
e) complete repairs to access road outside our fence (approx. 1 km).
f) scrape splattered paint from windows, doors, floors, furniture, etc.

Annex 3
Page 1

[illegible]

[illegible]

1. Most of the meeting was spent on the article. We began [illegible] the issue of have meetings with the Mauritian Delegation [illegible], Mr. Sweet Agnelo, and Miss Lo, the [illegible] director.

a) Mr. Sweet Agnelo is concerned at development [illegible] particular sanctions, and when the Mauritian [illegible] Seychelles. [illegible] of course. He also, on behalf [illegible] working on the issue of a free prosecutor.

b) Miss Lo, has proposed short exchanges that are sent to a prosecutor to participate in such programme. [illegible] would discuss in which their [illegible] would be [illegible] and Seychelles.

2. The next meeting [illegible] on January 8, we arranged [illegible] the government officers [illegible] the chairs [illegible] a technical committee [illegible] a change of [illegible] government [illegible] a [illegible] authority.

3. Mr. Maggot has [illegible] the [illegible] Mr. Maggot [illegible] Mauritius, [illegible] the [illegible] Mr. Maggot [illegible] a [illegible] the principle [illegible] and how we get about [illegible] the [illegible].

4. We have [illegible] the [illegible] [illegible] a [illegible] [illegible] a [illegible] [illegible] a [illegible] [illegible] the [illegible] [illegible] the [illegible] [illegible] the

[illegible]

[illegible]

[illegible]

this work has been properly prepared for application to models to establish the statistical significance. If not, the work will only provide a useful demonstration.

5. Furthermore, in the absence of models, it would appear to be a fairly demonstrating calculation methods rather than the kind and size of price movement required for the various cost-benefitting activities. It would be fairly to attempt to relate direct and indirect expenditure to long trends. The variables involved would be numerous and the size of the effects considerable.

Rural Roll Improvement Program Survey

1. In order to obtain a qualitative estimate of the extent of the various roll improvement activities in this general activity and in the other three areas, a survey summary is required.

2. In the first instance, a general questionnaire will be sent to each of the farmers requesting discussion on each of the 4 measures. The questionnaire will contain details of inter-action, namely:

a) areas requiring land levelling and approximate depths (cm., up to 15 cm., 15-30 cm., 30-45 cm., 45 cm.);

b) areas devoted to planned drainage completed;

c) increases in productivity of patches in the farmer's key or a range of 1-10 (the 10 are probably from the full survey results for each of the farmers a and this information can be given on these maps which will be included with the letter).

3. Second, samples given qualitatively herein will be selected for a more-detailed questionnaire survey and possible questionnaire. The questionnaire will be filled, submitting farmers providing to their probability to returns of drainage. The probability of doing a level levelling will be in the improvement patches in having experienced. This field work can be done by the government extend experienced at a week, without to concentrate on on a daily basis. This support will be the method during a visit to these districts. The media work can be done by the Rural Roll Survey Section.

a) At this stage we are concentrating the costs involved, so, the farmer considers that it can be paid out of his funds.

b) This second survey should establish the extent of the land levelling area required in the government to a fairly accurate degree. The subsidising and more plan-ing requirements may be more difficult to estimate, though the survey will enable a better approach than can be made from existing work maps. Expense expense items are based on soil characteristics, the level of

[illegible] (pH level), and the amount of absorbed sodium (SAR, sodium absorption ratio). However, methods of incorporating gypsum using a heavy disk harrow may be tried, and this disk harrow may be used for cultivation as well.

c) The topographic survey data will be analyzed using the Spectral Physics microcomputer program (hopefully for the HP 85) to obtain the optimum leveling [illegible] volume of earth moved for both level and sloping situations.

d) Statistical analysis of this situation ought to provide some reasonable estimates.

Central Delta Survey

1. Some basic information is needed to ascertain the efficacy of the soil improvement practices in the Delta region.

a) First, some detailed information is needed on the management organization of the sector and operational experts, in order to offer some advice on implements and management.

b) Second, farmer response and the extent of the soil improvement work must be detailed.

c) Dr. Peter Reiss has agreed to principle to conduct this survey some time during December, once the survey is agreed to, details can be worked out.

2. The Delta Sugar land leveling operations were examined

a) The operation consists of 7 Renault 1981 (80 hp), single rear wheeled tractors drawing a Rebelle [illegible] 8 meter scraper fitted with a laser control unit. One right Renault 651 (60 hp) tractors drawing a chisel plow are used to loosen up the soil. The 681's without laser units are used to rough level parts of fields. The fields are [illegible] meters by [illegible] meters wide, or about half a hectare. The tractor unit capacity is about [illegible] hectares per 10-hour day, or [illegible] hours per hectare.

b) The above figures need some clarification. It seems that the setting up of the equipment/laser and some field leveling is included in this time estimate. The actual capacity of the machines is not given in terms of earth moved or cut volume.

c) Because of the importance of this work a further visit to the head office at Delta will be needed to ascertain a number of factors not available from the field staff. However, a few random field measurements will be needed to obtain the capacity of the tractor units. As the field work will end shortly because of rains, these measurements may be delayed until next year.

The Water Use and Management Project at Sabha

1. Further discussion with the field staff again confirmed the importance of land leveling in improving water use and thereby increasing crop yields. There has not been any differentiation in the cultivation practices used, i.e., a standard procedure is followed for all the trial areas: chisel flooding, disking, leveling and smoothing. Neither are other inputs varied.

2. Some of the data from these trials include the following:

   a) Land preparation, including leveling, and surveying costs:

      1st season, LE [illegible]

      2nd season, LE [illegible]

      3rd season, LE [illegible]

   b) Production figures for various crops:

      WHEAT

      Irrigation Efficiency

Project trials	[illegible]
Farmers	[illegible]
Water use	[illegible] mm, or [illegible] m^3/[illegible]

      Yields

Project	[illegible]
Farmer	[illegible]
Increase	[illegible]

      COTTON

      Irrigation Efficiency

Project trials	[illegible]
Farmer	[illegible]
Water use	[illegible] mm, or [illegible] m^3/[illegible]

      (Yields not given)

      MAIZE

      (Irrigation Efficiency not given)

      Water use

Project trials	[illegible] mm
Farmer	[illegible] mm

      Yields

Project trials	[illegible]
Farmer	[illegible]

      (The following trials were introduction since some project trial activities were incomplete due to equipment breakdowns):

[illegible]

Water use

Farmers' fields	[illegible]
Farmers	[illegible]

Yields

Farmers' fields	[illegible] t/ha
Farmers	[illegible] t/ha

Water use was 20-25% less, attributed to land levelling; small increases in yield are indicated.

c) Minor trials: In these trials a number of factors were tested. 7 rice varieties, Radha 8, and a traditional variety, Kiso, were compared and other irrigation efficiencies measured.

Yields

Mechanical puddled rice:

Radha 8	[illegible] t/ha
Kiso	[illegible] t/ha
Farmers	[illegible] t/ha
Radha 8	[illegible] t/ha

Hand puddled puddled rice:

Radha 8	[illegible] t/ha
Farmers	
Radha 8	[illegible] t/ha
Kiso	[illegible] t/ha

Water efficiency

In farm	[illegible]
Water application	[illegible]
Total irrigation efficiency	[illegible]
Water used	[illegible] mm, or [illegible] m^3/ha

The farmers' income from the use of a new variety and improved irrigation is increased from [illegible] to [illegible]

d) The detailed descriptions of these trials are given in various Radha staff reports, numbers [illegible] and [illegible], and others should be obtained, but are not available for "public consumption." I am sure we can get these for analysis, and they should be very important in formulating decisions about land levelling. It would appear from note on economic aspect increases in yield and from the water use aspect, that this is something that cannot be ignored in future water planning.

[illegible]

1. [illegible]

2. [illegible]

3. [illegible]

   a) [illegible]

   b) [illegible]

   c) [illegible]

   d) [illegible]

   e) [illegible]

   f) [illegible]

   [illegible]

4. [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

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[illegible]

[illegible]

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[illegible]

[illegible]

[illegible]

are now being replaced and a new vehicle has been permanently assigned to an which involves this position for use.

Please for Next Month:

1. Finalize and submit the Project Tracking File for 2000-2001 to the Project manager.
2. Participate in technical short harmonizing training demonstration process in Kiev in April with the Ukrainian staff.
3. Complete detailed income information sheets for all pensioned training contract.

[illegible]

[illegible]

Summary:

[illegible]

The project training plan has been [illegible] and submitted to [illegible] for approval on December 13, [illegible]. Copies of the plan were distributed to the six cooperating managers in order for them to begin implementing their training programs.

Progress:

1. Most of the month was used to complete the final details of the Training Plan. Although each cooperating [illegible] a training program through [illegible], training activities will be limited to conducting [illegible] course information sheets, locating suitable and being necessary arrangements to conduct their programs [illegible].

2. Supplied course information sheets were distributed to all cooperating managers for finalizing which is required before training sessions can begin.

3. Planned operating department/agency meetings were conducted at [illegible] in Port Au Prince. The project is [illegible] a French manager [illegible] but by a [illegible] manager, but the [illegible] participation of a [illegible] [illegible] problems.

4. Additional activities included attending a French [illegible] [illegible] Port Au Prince and a Japanese [illegible] [illegible] in Haiti.

5. A preliminary [illegible] training planned by the Ministry of Industry, Mr. [illegible], was attended because it [illegible] the [illegible] management personnel [illegible] and the [illegible]'s training [illegible]. The [illegible] [illegible] and [illegible] the use of the [illegible] training [illegible] in Haiti. These facilities were visited by the training [illegible] staff in November 75 and were found to [illegible] for technical training, [illegible] training. The director of the facility and [illegible] agreed to [illegible] personnel [illegible] project. The [illegible] information sheets on the [illegible] we are in the process of formulating [illegible].

a) As the Government was primarily interested in the [illegible] of a training center in the area which will require [illegible], we agreed to working the [illegible] the training center first. The responsibility for

developing these courses has been given to Mr. Salah El Din who is working on the field training sessions for the Machinery Management Extension subproject. These courses are very similar to the ones which will be used by the Extension subproject, which he is also completing.

b) The set of [illegible] training books, slides and instructor kits for tractor operation, preventive maintenance and machinery management which are received on loan from the Joint Forests Project on Mrs. [illegible] will be of great use in development these and other planned courses.

Problems:

1. Training Counterpart: Although a training counterpart has not yet been assigned to assist in implementing the project's training plan, the use of Mr. Salah El Din who has been working in the field training sessions for the Machinery Management Extension subproject has helped to start field training activities.

2. Training Plan approval: The Training Plan for 1981-1982 needs to be approved in order for the funds to be released to implement the various subproject training programs. Tentative plans will be made to start the courses as scheduled and on-the-job sessions will be carried out as possible.

Plans for Next Month:

1. Complete detailed course information sheets for all planned training courses.

2. Continue planned on-the-job (locational) training sessions in Wadi El Farah as budget limitations allow.

3. Develop on-the-job preventive maintenance, tractor and irrigation pump operation courses.

4. Establish contacts with and develop trainee lists of farmers and other target training personnel.

5. Initiate a computer training course in the Dairy Office for project personnel.

[illegible]

[illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

4. With regard to the office computer, we have only received parts of it and hope to get it in the next month. The supplier guarantees that the remaining components will be here later this [illegible]. Also, the Data Management Group have not yet moved to their new office and the dedicated for the computer have not yet arrived. There has always been to be settled before the computer can be installed and training undertaken.

Problems

The following problems are currently affecting the training subproject's ability to accomplish its goals:

1. Inappropriate [illegible] is consistently needed to train. Dates, file and personnel [illegible] and subproject. Although the personnel office staff are willing and capable, they are overloaded by the great effort a report takes. Several days to produce [illegible] the training plan takes for a [illegible] who can type, an inquiry system on disk or even an [illegible].

2. Inappropriate [illegible] is becoming a serious problem. Few staff [illegible] given to other personnel. Low salaries to hire [illegible]. It takes to train and use [illegible] training, training [illegible] monitoring, [illegible] [illegible], etc., [illegible] [illegible] to [illegible]. Our present [illegible] [illegible] to [illegible], [illegible] [illegible] to [illegible] to [illegible]. [illegible] [illegible] given up, without a training [illegible] to use [illegible] [illegible], [illegible] [illegible] [illegible] [illegible] [illegible].

Plans for Next Month

1. Continue [illegible] training activities.

2. Complete the remaining [illegible] [illegible] [illegible] required for [illegible] training activities.

3. Get at the office computer training [illegible] and train office staff to use [illegible].

4. [illegible] and [illegible] training [illegible] to [illegible] [illegible] [illegible] to begin in [illegible].