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EGYPTIAN AGRICULTURAL MECHANIZATION PROJECT

Contract Number 263-0031-HHC-01

ACTIVITY REPORT NUMBER 10

1 July 1983 - 30 September 1983

Submitted by

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1.0 Summary

Project expenditures are on schedule as compared to the budgetary projections for this year (figure 1): (1) the overall outgoing-expended category reached 58 percent, as compared to a projected 45 percent; (2) the physically expended category reached 23 percent, slightly less than projected 27 percent; (3) however, when the legally committed funds (i.e. funds committed through bid awards or contractual obligations) are added to the expended funds, then 39 percent of the Project funds fall into this category.

The status of the three credit funds are reviewed in figure 2:

1. Service Center/Village Workshop Funds:
 - a. All funds are into the pipeline.
 - b. 18 percent have been committed and/or expended.
 - c. 55 percent are waiting bank action.
 - d. 27 percent are under Project review.
2. Waterlifting fund
 - a. 83 percent have been expended.
 - b. 17 percent are under bank review.
3. Machinery Introduction Fund
 - a. 48 percent are in-process at the banks.
 - b. 39 percent are under Project review.
 - c. 8 percent are expended.
 - d. 5 percent are as yet uncommitted.

Briefly, activity highlights (section 2.0) are as follows:

1. Extension: In support of the Project village machinery extension program, extension activities concentrated upon preparation of equipment for rice harvesting and threshing, cotton stalk cutting, and seeding wheat during the next quarter. In addition, procurement of 413 units of demonstration/training equipment was approved for stateside advertisement: estimated value, \$3.6 million.

2. **Training:** In-country training programs in support of Project village activities involved 119 participants in eight programs at MOA training centers while programs at field sites involved 161 participants in 10 programs; there were 22 participants in participant overseas programs.
3. **Planning and evaluation:** Submitted Working Paper Number 10, "Partial Economic Analysis of Mechanization of Wheat in Selected Project Villages". Activities of the evaluation unit involved the following: (1) the project's use of grain drills, mover-binders, and combines; and (2) the Project's land improvement program, i.e., landleveling.
4. **Research and Development:** Final report of Drs. Albert C. Trowse and Ahmed El Araby completed: " A Survey of the Suit ability of Egyptian Soils for Mechanized Agriculture". In part they concluded: tilladle depths should be restricted to us shallow a depth as is needed to:
 - a. Fracture any surface compacted horizon;
 - b. Prepare a seedbed (rootbed);
 - c. Prepare ridges for irrigation.
5. **Land Improvement:** Landleveling demonstration program in Minia continues: on average, 70 m³ of earth/feddan is moved. Experience to date indicates (1) long furrow irrigation time is reduced 20-30 percent through landleveling, and (2) traditional basin irrigation time on leveled land is reduced 30-40 percent.
6. **Local Manufacturing:** Field testing of the all-crop thresher continues and drawings are being updated with new layouts for a manufacturing prototype.

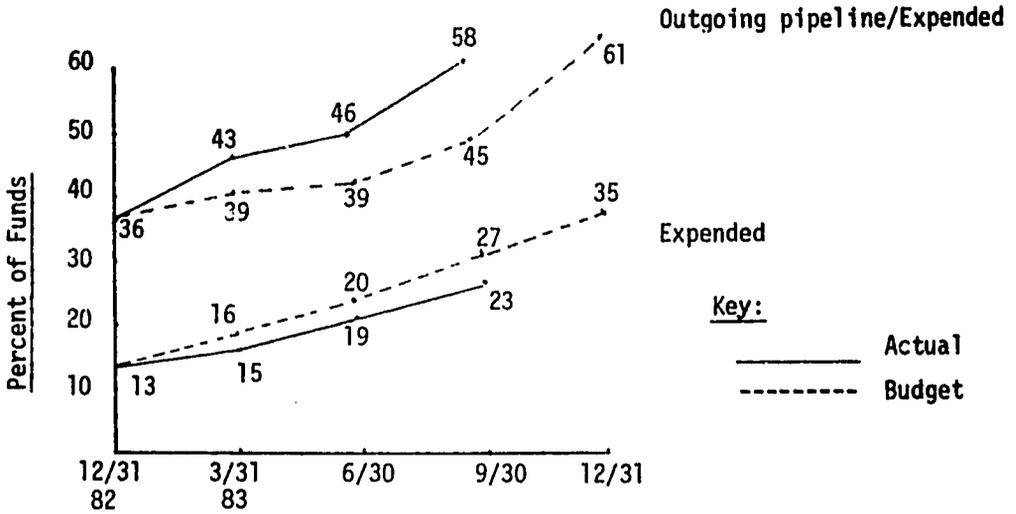


Figure 1. Comparison of Project Budgeted and Actual Expenditures

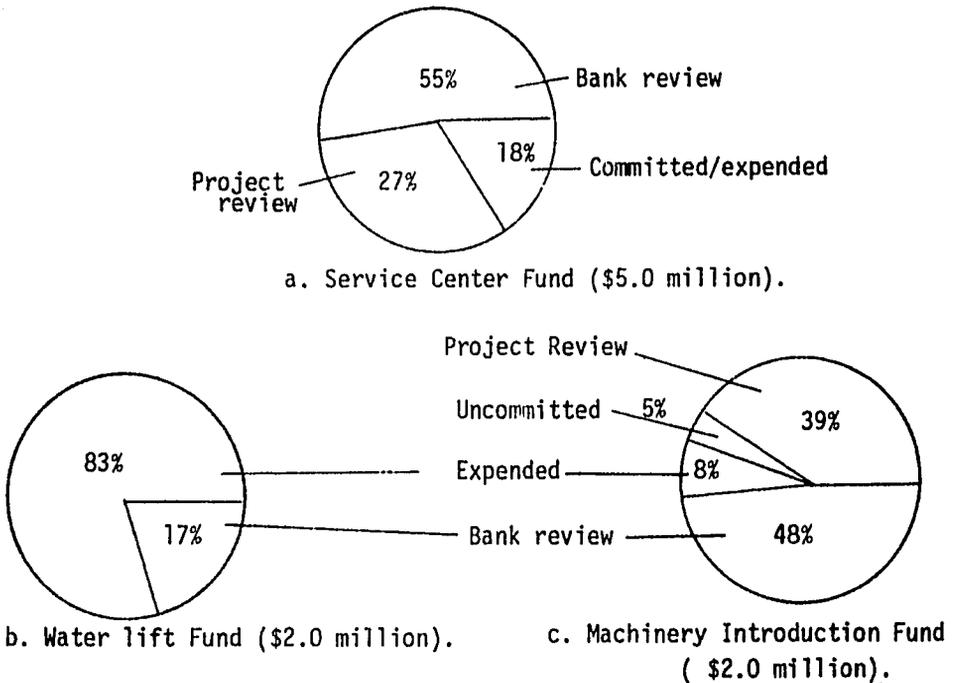


Figure 2. Credit funds

2.0 PROJECT ACCOMPLISHMENTS

2.1 Overall Accomplishments

1. Extension IFB 83-02 approved by MOA and USAID: estimated value is \$ 3.6 million.
2. Extension IFB 83-03 in preparation at the Project level: estimated value is \$ 4.4 million.
3. Prepared Project expenditure reports and cash needs statement for the period of 1 August through 31 October.

2.2 Planning and Evaluation Subproject

During this reporting period, this group concentrated upon crop enterprise budgets with mechanization recommendations and the evaluation of Project activities as feedback to Project management.

2.2.1 Planning and Financial Unit

1. Fiscal administration: preparation of Project cash needs, as stated above.
2. Submitted with this report is Working Paper Number 10, "Partial Economic Analysis of Mechanization Wheat Production in Selected Project Villages". In summary, this report concluded that the financial and societal benefits were:

<u>Operation</u>	<u>On-farm (LE)</u>	<u>Societal (LE)</u>
1- Grain drill	83.19	188.33
2- Mechanical Waterlifting	6.26	7.39
3- Harvesting with mower-binder	16.26	19.27
4- Combine	35.26	37.38

3. This unit has been evaluating existing research that can be used for identifying mechanization benefits, but to date little has been found.
4. The final draft of the long-term berseem crop enterprise budget has been completed and will be presented during this next reporting period.

2.2.2 Evaluation Unit

The evaluation unit of activities has been involved in the following areas: wheat mechanization, landleveling, tractor cost and time-use study, rice transplanter use, and adoption rates. All of these activities are in

the investigation phase, and highlights are as follows:

1. Mechanized wheat cultivation involved the Project's use of grain drills, mower-binders, and combines. Preliminary analysis indicate:
 - a. Grain drills: where used as recommended, wheat stands and yields were superior to hand broadcasting with less seed wheat being used. However, often farmers were not sure that the stand would be adequate so they used more wheat with the grain drill, or hand broadcasted, after the grain drill; this led to severe lodging problems.
 - b. Mower-binders: lodged wheat was not effectively handled with the mower-binders; the binding mechanism frequently failed because of the twine quality; twine was too costly at an estimated L.E. 17 per feddan (one and one-quarter rolls); farmers used these units mainly as harvester-bunchers without twine.
 - c. Combines: Combine use was sporadic because of small plots and straw losses. The latter can be alleviated with balers, which the Project has ordered.
2. Initial conversations with farmers in Minia revealed certain patterns:
 - a. Farmers recognize irrigation difficulties because of uneven field topography and thus identify with the need for landleveling.
 - b. Project landleveling has reduced irrigation time and water use with the traditional basin system.
 - c. The movement of topsoil across farm boundaries was not seen as a problem: farmers perceiving a loss used more animal manure.
3. Plans are in progress to assist in evaluating the use of Japanese rice transplanters.
4. The tractor cost and use study continues; results are not expected for some time yet.
5. Assigned activities continue:
 - a. Dr. Mahmoud Mosbah: labor in Project villages, initial draft is expected.

b. Dr. Bahgat Abdel Maksoud and Mohmoud Mesbah: farmer adoption rates.

2.3 Research and Development Subproject

1. Final report completed by Drs. Albert C. Touse and Ahmed El Araby entitled: " A Survey of the Suitability of Egyptian Soils for Mechanized Agriculture ". Some of their observations were:
 - a. High water tables limited the root development in about 90 percent of the trenches examined.
 - b. Tillable depths should be restricted to as shallow a depth as is needed to:
 1. fracture any surface compacted horizon;
 2. prepare a seedbed; and
 3. prepare ridges for furrow irrigation
 - c. Initiate studies involving the beneficial effects of controlled traffic; most of the soils examined do not need deep tillage.
 - d. Deep subsoiling cannot improve the condition of soils already in good condition but deep tillage can destroy the good physical properties of most of these subsoils.
2. Monitoring of peanut, maize, and cotton experiments continues; harvesting and evaluation of research will be done during the next quarter.
3. Drafting a proposed five-year research plan.

2.4 Extension/Training Subproject

2.4.1 Overall

1. Extension activities during this quarter mainly involved monitoring activities and preparation of equipment for rice harvesting and threshing, cotton stalk cutting, and seeding wheat during this coming quarter (October through December).
2. Extension IFB 83-02, estimated value \$ 3.6 million, approved by MOA and USAID for stateside advertisement. This IFB will provide equipment for each Project village to augment their demonstration/training programs: 413 pieces of equipment are involved.

3. A second extension IFB, IFB 83-02, is in preparation at the Project level: with an estimated value of \$ 4.4 million, this will support maintenance and specialty crops -- sugarbeets, peanuts, and orchards.
4. Cooperating with the Small Scale Production Project to augment their extension needs, e.g., extension training and equipment procurement.
5. Machinery Introduction Fund in August reached an 18 percent expended level of the first tranche (\$ 1.0 million).
6. The Waterlifting Fund has nearly expended the third tranche leaving only the last \$ 500,000 in the Fund to be requested next quarter from USAID.

2.4.2 Extension Unit

1. From April to August, 129 field demonstrations have been held and 2,570 feddans covered.
2. In comparing rice areas seeded with a grain drill and rice traditionally transplanted, seed germination with grain drill planting has been good but weed infestation has been high in many places: this suggests the need for a herbicide program when using the grain drill.
3. Considerable extension technical assistance time was spent repairing the Project's selfpropelled combines and converting them to rice.
4. Field demonstrations concentrated on siphon tube irrigation and demonstrating a Siemen digger blade for cutting and lifting cotton stalks and peanuts, as well as cutting bermuda grass in orchards: field results looked encouraging.
5. The extension unit is training additional machinery extension staff so that they will integrate with the Land Improvement program.

2.4.3 Gabel Asphar Demonstration/Training Unit

1. In August, the JD 4250 and JD 3040 tractors arrived along with much of the needed equipment.
2. Field activities:
 - a. Tree and brush removal with bulldozer.
 - b. Canal cleaning with poclain backhoe.
 - c. Disking started prior to leveling.

3. Two training programs started:

- a. Bulldozer operator
- b. Machinery assembly

2.4.4 Extension Information Unit

- 1. Prepared two newspaper articles on irrigation pumps and threshing machines.
- 2. Preparing machinery extension pamphlets for wheat, maize, and cotton.
- 3. Preparing two additional technical pamphlets: Operation and Maintenance of Water Pumps and Leveledland Means Higher Income.
- 4. Preparing national TV program on Project activities.

2.4.5 Training Unit

- 1. The training effort for this quarter is as follows:
 - a. In-country training at training centers involved 119 participants in eight programs.
 - b. Training program at Project Villages, and other field sites, involved 161 participants in 10 programs.
- 2. Participant overseas training involved 22 participants in five courses:
 - a. Observational study -- 19 in 2 courses
 - b. Technical -- 2 in 2 courses
 - c. Academic -- 1 in 1 course

2.5 Service Center/Village Workshop Subproject

- 1. Table 2.1 summarizes the status of the Service Center Fund:
 - a. Fifty-eight percent of the first tranche (LE 1,247,520) is in the committed/expended category.
 - b. Fifty-five percent of the total Fund (\$ 5.0 million) is under review at the Banks.
 - c. Loans in-process at the Project level total nearly 33 percent; if all commitments and funds in-process were approved, the Fund would be overdrawn by \$ 265,000.

Table 2.1 Service Center/Village Workshop loans in-process at Governate banks and at the Project level as of 30 September 1983.

<u>Participant/Category</u>	<u>Loan Value</u>	<u>Expended</u>	<u>Balance</u>	<u>LE Loan Value</u>
A. <u>Bank Committed/Expended</u>				
1. Service Centers				
a. Moshen Azmy	250,000	95,000	155,000	
2. Village Workshop(13)	480,297	623,897	153,400	
	<u>370,297</u>	<u>421,897</u>	<u>308,000</u>	730,297 (\$ 878,009)
B. <u>Loans in Process at Bank</u>				
1. Service Centers(10)		2,136,600		
2. Village Workshops(8)		153,400		2,290,000
		<u>2,290,000</u>		
C. <u>Loans in Process at the Project</u>				(\$2,753,463)
1. Service Centers(4)		875,000		
2. Village Workshop(20)		483,500		1,358,500
		<u>1,358,500</u>		(\$1,633,441)
D. <u>Total Activity</u>				
1. Service Centers(15)	3,261,600			
2. Village Workshop(14)	<u>1,117,197</u>			LE 4,378,797
				(US \$ 5,295,002)

2. This overall activity represents 15 service centers and 41 village workshops.
3. The principal constraints in the service center program are land registration and nonuniform application of the Letter of Understanding among the different governate banks.

2.6 Land Improvement Subproject

1. Demonstration program:
 - a. A total of 465 feddans have been landplaned since April.
 - b. Mean tractor time has been 3h/fed.
 - c. This has involved moving 70 m³ of earth/feddan.
2. Experience to date indicates the following:
 - a. Using long furrows on leveled fields, irrigation time has been reduced 20-30 percent.
 - b. Using the traditional basin method on leveled fields, irrigation time has been reduced 30-40 percent.
 - c. The reason that the traditional basin method shows a greater reduction in irrigation time appears to be because there is an inadequate head of water from the meska to support the long furrow system.
3. The training program to support equipment operation involves the following:
 - a. 20 drivers from Minia
 - b. 10 drivers from Beni Suef
 - c. 12 mechanics in level I and II courses at Mamoura
4. Extension coordination has been activated through landleveling, siphon tube and long-furrow irrigation demonstrations.
5. IFB 83-01 procurement status:
 - a. Ford tractors -- in-route at sea
 - b. Laser equipment -- in-country, but awaiting tractor delivery for equipment assembly.
 - c. Implements -- in-country, awaiting assembly.

2.7 Local Manufacturing

1. Started updating drawings and bill of materials with new layouts for a manufacturing prototype of the all-crop thresher.
2. Field testing continued with the all-crop thresher:
 - a. Latest recutter produces tbin 2-3 cm in length.
 - b. Machine capacity with this recutter reached 1300 kg/h with losses less than two percent.
3. Emphasis continues on low-cost manufacturing, e.g., adoption of lighter gauge steel and elimination of the flywheel can reduce thresher weight 900 kg and reduce material costs onethird.
4. Initiated activity at Glnaclis training center to establish a manufacturing training/development center.
5. Developed a hoist system for loading and transporting machinery.

3.0 Financial and Technical Level of Effort

3.1 Financial Level of Effort

Table 3.1 summarizes the Project's expenditure position as of 30 September, 1983. The definition of the money flows are as follows:

1. Grant Agreement (Column 1) : Grant Agreement Line Item funding, as may periodically amended.
2. Line Item balance (Column 2): The remaining Grant Agreement Line item that has not been committed; this consists of the Grant Agreement (Column 1) minus the pipeline and expended funds (column 8) and minus the available and in-coming funds (column 3).
3. Funds In-process (columns 3 and 4): these funds are of two types: (a) funds available in a bank account and funds in-coming from USAID, and (b) funds in the process of being expended either through USAID, MOA, or PBDAC.
4. Funds committed balance (column 5): funds committed by contract and/or bid awards.
5. Pipeline funds (column 6): funds on the outgoing-side of the pipeline: outgoing funds in-process (column 4) and funds committed (column 5).
6. Funds expended (column 7): funds physically expended.
7. Pipeline/expended funds (column 8): the summation of outgoing pipeline funds (column 6) and funds expended (column 7).

Fifty-eight percent of the Grant is in the outgoing-side of the pipeline and expended categories. This represents an increase of 12 percent of the Grant funds from the previous reporting period (June 30). Funds physically expended reached 23 percent while outgoing pipeline funds were at 35 percent of the Grant. There remains 33 percent of Grant yet to be brought into the pipeline.

3.2 Technical Assistance

Table 3.2 compares the actual and anticipated level of effort. The Project is reasonably close to the anticipated technical effort having contributed 378 man-months where 386 had been anticipated. Except for the Senior Accounting Advisor, all shortfalls are recoverable during the life of the Project.

Table 3.1 Financial Level of Effort: Foreign and Local Currencies form 15 September 1980 Through 30 September 1983.

Line Items	(1) Grant Agreement	(2) Line Item Balance (1-3-8)	(3) Funds In-Process In-coming/ Available	(4) Outgoing (AID,MOA, PBDAC)	(5) Funds Committed Balance	(6) Funds in Pipeline (4+5)	(7) Funds Expended	(8) Pipeline/ Expended Funds(6+7)
<u>Foreign Currency</u>								
1. Technical Assistance	6,424,000	468,382	-	100,739	2,929,260	3,029,999	2,925,619 ⁽¹⁾	5,955,618
2. Commodities	9,133,000	3,940,334	-	3,663,600	1,135,630	4,799,230	393,436	5,192,666
3. Training	2,023,000	1,044,335	-	801,208	-	801,208	177,457	978,665
4. Research Support	1,005,000	812,541	-	-	-	-	192,459	192,459
5. Special studies/Evaluation	215,000	202,548	-	-	-	-	12,452	12,452
6. Subtotal	18,800,000	6,468,140	-	4,565,547	4,064,890	8,630,437	3,701,423	12,331,860
<u>Local Currency</u>								
1. Technical Assistance	2,302,000	575,353	-	42,481	743,718	786,199	940,448 ⁽²⁾	1,726,647
2. Commodities	4,000,000	773,081	620,820	-	728,068	728,068	1,878,031 ⁽³⁾	2,606,099
3. Training	1,000,000	331,302	337,899	-	-	-	330,799 ⁽³⁾	330,799
4. Vehicle Operating Expense	100,000	66,065	13,597	-	-	-	20,338 ⁽³⁾	20,338
5. Facilities	70,000	70,000	-	-	-	-	-	-
6. Credit Funds								
a. Service Center	5,000,000	746,537	992,717	2,382,647	370,816	2,753,463	507,283	3,260,746
b. Waterlift	2,000,000	-	340,411	-	-	-	1,659,589	1,659,589
c. Machine Introduction	2,000,000	40,637	840,761	959,363	-	959,363	159,239 ⁽¹⁾	1,118,602
d. Uncommitted	2,000,000	2,000,000	-	-	-	-	-	-
7. Research Support	2,000,000	1,420,341	100,057	-	327,600	327,600	152,002 ⁽³⁾	479,602
8. Special Studies/Evaluation	728,000	705,907	11,274	-	-	-	10,819	10,819
9. Subtotal	21,200,000	6,729,223	3,257,536	3,384,491	2,170,202	5,554,693	5,658,548	11,213,241
<u>Total</u>	40,000,000	13,197,363	3,257,536		6,235,092	14,185,130	9,359,971	23,545,101
Percent		33%			16%	35%	23%	58%

Notes: (1) Through August 31
(2) Through July 31
(3) Through October 31.

Table 3.2 Level of Effort: Technical Staff From 15 September 1980 Through 30 September 1983 In Man-Months

<u>Position</u>	<u>Starting Date Day/Mo/Yr</u>	<u>Actual Effort</u>	<u>Anticipated Effort (1)</u>
1. Team Leader	4/10/80	35.9	36.0
2. Planning/Evaluation Advisor	15/ 9/80	26.5	36.0
3. Research Director	3/11/80	35.0	35.0
4. Evaluation Advisor	7/12/80	34.0	34.0
5. Extension Advisor	4/ 2/82	26.0	30.0
6. Farm Management Advisor	15/ 4/81	27.0	27.0
7. Service Center Director	9/ 4/81	29.7	26.0
8. Equipment Repair Advisor	3/ 6/81	28.8	29.0
9. Soil Improvement Director	13/ 7/81	26.6	27.0
10. Training Advisor	9/ 9/81	24.7	26.0
11. Machinery Development Advisor	5/ 1/82	12.0	21.0
12. Local Manufacturing Advisor	3/ 2/82	20.0	21.0
13. Soil Improvement Irrigation Eng.	1/ 4/82	18.0	25.0
14. Senior Accounting Advisor	1/11/82	7.0	11.0
15. Short Term Technical Assistance		17.0	17.0
		378.2	386.0

NOTES:

(1) As reflected in the Inception Report, p.52, and as amended

4.0 IMPLEMENTATION

Implementation during this period has proceeded in accordance with the broader schedule of the various workplans. Planning and evaluation is proceeding with its data collection and evaluation. Extension is continuing to carryout machinery extension activities in Project villages and integrate the delivery of demonstration/training equipment with the village activities. Research and development is lagging in applied research contract applicants but is maintaining its in-house research experiments. Training is moving forward with the observational study tours but lagging in the academic program because of the lack of candidates with an adequate level of English capability. The local manufacturing program's progress is dependent upon proper thresher prototype design drawings that manufacturers can use, which have been slow in developing partly because changes in design features are being incorporated^{as} the drawings proceed. The land improvement program has been active in Minia concentrating upon training personnel and gaining farmer acceptance. The service center/village workshop program is proceeding well at the Project level, but land registration and other governmental red tape has been a negative factor.

Although the Project is moving forward, it is not without its share of difficulties, which are to be expected, and these are being resolved. Some of the more critical problems are as follows:

1. Slow or incomplete deliveries from equipment dealers is impeding the planned development of the Project village demonstration program.
2. Maintenance support of Project village equipment will become an issue: to meet this problem, the MOA is providing small tool sheds at Project village locations, small tools are being procured, and additional maintenance items will be procured stateside.
3. The requirement of ALIGOU testing is hampering U.S. technical short-term programs; the language barrier could be overcome with interpreter assistance from the Project.
4. The unfilled Senior Accounting position is slowing the Project's fiscal administration, but this should be filled soon.

5. The scarcity of existing mechanization research is inhibiting the financial and societal evaluation of mechanization practises; it is hoped that Applied Research contracts and Project in-house research will fill this void.
6. During the extension demonstration programs, scheduling of equipment has been a problem: Scheduling procedures are now being reviewed.

5.0 NEXT QUARTER OBJECTIVES

5.1 Overall Objectives

1. Extension IFB 83-02: advertise and bid for stateside procurement.
2. Extension IFB 83-03: submit to MOA and USAID for approval.
3. An additional \$1.0 million committed to the waterlift fund.
4. Reach the 61 percent level in the expended/outgoing pipeline category.

5.2 Planning and Evaluation

1. Finalize report number 2 in the Machinery Demonstration Evaluation Series: Wheat Cultivation -- grain drills, mower - binders, and combines.
2. Prepare a preliminary report on landleveling activities in Minia governate.
3. Complete statistical processing for the following crops: (1) long-term berseem, (2) wheat, (3) maize, and (4) rice.
4. Preliminary working paper preparation: Improving Rice Grain Yields and Income through Cropping Calendar Optimization and Mechanized Harvesting Methods -- Simulation Models and Economic Analysis.

5.3 Research and Development

This period will be devoted to collecting the experimental data preparing the following research reports:

1. Tillage tests with cotton on heavy clay soils in Sakha Experiment Station -- 1983.
2. Tillage experiment with peanuts in West Nubaria -- 1983.
3. Tillage tests with maize on calcareous soil at N.T.C. in Gianaclis 1983.
4. Evaluation of three different methods of planting and cultivating maize -- Gianaclis, 1983.
5. Effects of maize row-spacing in desert soil at N.T.C. in Gianaclis 1983.
6. Tests on the Aloha Farm with the Kuxman potato digger -- February, 1983.

5.4 Extension/Training Subproject

1. Procurement: complete procurement order IFB 83/03 and order Group 10 demonstration/training equipment.
2. Extension activities in Project villages:
 - a. Cotton stalk cutting
 - b. Grain drill seeding
 - c. Combine harvesting
 - d. Landleveling
 - e. Backhoe operation
3. Conduct an extension seminar/workshop to develop the 1984 extension program.
4. Start the third group of extension machinery specialists at Sakha Training Center.
5. Develop T.V. program on grain drill use.
6. Prepare extension pamphlets: water pumps, landleveling, and wheat harvesting.

5.5 Service Center/Village Workshop Subproject

The overall objective is to continue moving funds into the bank for processing. In this regard, the objective is to add another LE 500,000 for bank processing to bring the total to LE 3,700,000 in the expended/outgoing pipeline category.

5.6 Land Improvement Subproject

1. Field operations: extend the demonstration program to 400 feddans in the Project area in Minia.
2. Initiate basin design for the next season's development plan.
3. Equipment procurement
 - a. Scraper procurement
 - b. Ford tractor delivery
 - c. Assemble chisel plows, deliver, and install laser equipment on Ford tractors.

5.7 Local Manufacturing Program

This program will concentrate entirely upon development of the final drawings needed for manufacturing.

ANNEX A

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A.1 PLANNING/EVALUATION SUBPROJECT**A.1.1 Planning and Finance Unit**

**Activity Report
July and August, 1983**

**Submitted by: Zaki Helmy Zaki Wisca
Steven C. Shepley
Mohammed Shoukry**

SUMMARY:

Sub-unit activities concentrated on continuing fiscal management and accounting for Project local currency funds and, as time permitted, made further progress in the macro/micro economic effects of mechanization in selected areas. The following is a listing of these activities and accomplishments during the reporting period:

- Prepared complete expenditure reports related to project local currency funds for the period May 1, 1983 to July 31, 1983.
- Prepared cash need statements required for release of operating funds during the period August 1 to October 31, 1983.
- Provided further training and guidance to Project accounting staff in the interest of upgrading the quality and completeness of required accounting records.
- Furnished monitoring and follow-up support with respect to Project credit funds.
- Prepared and published a paper reporting on the analysis and findings of sub-unit investigations into the economic and financial impact of mechanized wheat production.
- Conducted an analysis of prior mechanization research to identify critical gaps in required experimental data.
- Developed comprehensive crop enterprise budgets showing all fixed and variable input quantities, costs and returns for berseem production in the Farm Management Survey area.
- Made further progress in the statistical processing of the Farm Management data.
- Prepared an appraisal report for the Ministry of Agriculture and the German Technical Assistance Agency to justify continuation of further German assistance to the Mamoura Training Center after May 1984.

Fiscal Administration:

As previously noted, the departure of the Senior Accounting Advisor has necessitated that sub-unit analytical personnel devote increasingly greater time and attention to day-to-day supervision of Project financial matters. The overall situation was somewhat ameliorated during the reporting period by the appointment of a second junior accountant to the Financial Section. During the reporting period, the sub-unit provided further training to the accounting staff and this effort appears to have facilitated a more orderly approach to record keeping and expenditure reporting.

One area in the expenditure planning and documentation process which is still in need of improvement is the development of reliable estimates of cash need. The sub-unit memorandum of July 25, 1981, sent to all sub-project managers, provided a detailed outline of procedures required by USAID in expenditure documentation and planning. To-date, the only sub-project which is complying consistently and methodically with the recommended system is Training and Extension. The others have been remiss. This remission has created some confusion in expenditure planning activities. Frequently, the Planning and Finance Sub-unit, in the absence of reliable expenditure projections from the sub-projects, must make uninformed assumptions concerning projected cash needs in the absence of more complete information which only activity managers can provide. To improve the expenditure planning process, it is recommended that a one day seminar be scheduled to reacquaint sub-project managers with the required system and to provide individual guidance and clarification as required.

Another area requiring management attention is the need for more senior day to day management of project local currency funds. This function was previously performed by the Senior Accounting Advisor. With his departure, this vital function is not being performed in a consistent manner. The management gap has been partially filled on an ad hoc basis by sub-unit economists and data analysts. While this arrangement is satisfactory as a temporary measure, it is not viable as a long term solution. What is needed is either incumbency of the Senior Accounting Advisory position or appointment of a senior accountant as financial counterpart to the sub-unit. This person would be responsible for day-to-day supervision of the Project local currency accounting system and for maintaining regular follow-up with the PBDAC and Governorate Agricultural Development Banks in the fiscal administration of the three Project credit funds under the advisory guidance of sub-unit senior staff. This arrangement would improve the quality of Project fiscal management by giving it the daily attention that it merits and would free up analytical personnel for more concentrated efforts in the economic analysis for mechanization.

Wheat Mechanization Paper:

The paper attached as an annex to this report provides a partial micro (farm level) and macro (societal level) analysis of the income effects of mechanization within selected areas of

Project intervention. The benefits addressed include productivity increases from adoption of certain mechanized practices and cost saving effects resulting from technological change. As wheat production is predominantly labor intensive with existing levels of mechanization restricted to seedbed preparation, water lifting and threshing, the first part of the analysis tested the hypothesis that existing modes of mechanization of these operations increase yields. The methodology used was to evaluate the statistical significance of regression coefficients from a multi-variate production function where yields are the dependent variable with seed, fertilizer, labor and land inputs and seedbed, irrigation technologies and planting and harvest dates as independent variables. It was found that there is no statistical significance of seedbed and irrigation technologies and operational dates when traditional hand broadcast planting methods are used, as found in the Farm Management Survey area. From the analysis, it was concluded that further research under controlled experimental conditions is required to test the interaction effects of alternative seedbed preparation and planting methods before a definitive conclusion concerning this aspect of mechanization could be drawn.

The second section of the report evaluated the income effects of mechanized planting and harvesting methods demonstrated by the Agricultural Mechanization Project in selected areas of the targeted Project villages. The technologies evaluated include planting by grain drill, mechanical water lifting and harvesting with mower-binder and combine.

The benefits from these technological adoptions fall into three discrete categories: (1) cost savings and (2) production increases (3) loss recovery. Grain drilling of wheat was found to increase production, lower the seeding rate and substantially reduce the planting labor input. The major benefits from the mechanization of irrigation water lifting uncovered in the investigation were recovery of animal product losses through substitution of animal power by mechanized water lifting devices. In wheat harvesting operations, use of the mower-binder was found to reduce harvesting labor input costs while the combine use resulted in significant labor cost savings and recovery of harvest losses which amount to 10% of the field crop when traditional harvesting methods are used.

The table below summarizes the findings presented in the attached report:

Benefits of Selected Mechanized Operations Used in Wheat Production (LE/Feddan)		
<u>Operation</u>	<u>On-Farm</u>	<u>Societal</u>
-Grain Drilling	82.19	188.33
-Mechanical Water Lifting	6.26	7.39
-Harvesting with Mower-binder	16.29	- 19.27
-Combine	35.26	37.38

All of the above mechanization benefits in wheat production were found to be significantly positive except for the social or economic benefits of the mower-binder where there appears to be a net societal loss from adoption of this technology.

Analysis of Mechanization Research:

With the assistance of the Coordinator of Mechanization Projects, research data from a number of universities throughout Egypt pertaining to agricultural mechanization were collected and analysed. Most of the data collected concerned yield response of various crops (cotton, maize, broadbeans, sorghum and rice) as a function of planting and sometimes harvesting dates. These data were entered into a regression modelling routine to evaluate the statistical significance of the various parameters. Major deficiencies of most of the data examined thus far include insufficient number of observations, obsolescence, and questionable statistical design.

Of the 30 or so research abstracts examined, only two were found to have merit for the mechanization project. The first of these was an effort entitled "Differential Yield Response of Corn Varieties and Hybrids to Different Sowing Dates" by Mahmoud, Kamel and El-Kadi of Cairo University, published in February 1979, which provided useful data in the development of a maize yield-planting date regression model used in an earlier paper to evaluate the productivity effects of timely maize planting which could be realized through mechanization of the Seedbed preparation and planting operations.^{1/}

The other research work which appears to show promise is an effort prepared by Abdel Malak for Assiut University on "The Effect of Planting Date and Seeding Rate on Yield and Quality of Cotton", 1980. Data from this research were fitted to a polynomial regression with yields as the dependent variable and planting dates as the independent variable. Results of this statistical work are summarized below:

Cotton Yield as a Function of Planting Dates				
<u>Variable</u>	<u>F-Value</u>	<u>Coefficient</u>	<u>t-Value</u>	<u>R²</u>
Constant	28.16*	-3.25	-0.69	0.50
X ¹	44.62*	7.92	2.87*	
X ²	11.69*	-1.33	-3.42*	

* significant at the 95% level or better

While there appears to be a high level of significance between cotton planting dates and yields of cotton, the model constructed from these data is inadequate for predictive purposes

^{1/} "Reducing Maize Losses Through Optimizing the Date of Planting: A Simulation Model and Economic Analysis", Shepley et al, Agricultural Mechanization Project, April, 1983.

because of the low value of the coefficient of determination. Additional research is required to substantiate this hypothesis.

Pertinent and reliable research data on mechanization productivity effects remain a serious impediment to the analytical effort of the sub-unit. The Project is now approaching its third year of implementation with only two more years to completion and we are lacking the fundamental research with which to make accurate assessments of mechanization benefit effects for most of the key operations being introduced through the Extension and Training activities. We have been compensating for these deficiencies by conducting ad hoc field studies such as the wheat yield survey described in the attached wheat mechanization report. These studies, however, cannot substitute for good research data as the data collected therein were not generated through experimental conditions and offer, at best, a rough approximation of the economic and entrepreneurial effects of mechanization.

Since the project is concentrating most of its extension efforts on activities related to seedbed preparation, planting and harvesting it is strongly recommended that the research effort be targeted on developing a data base related to the key operations. Specifically it is proposed to conduct research into the yield effects resulting from alternative seedbed preparation for all of the major crops. These seedbed technologies should also be evaluated for interaction with planting dates and planting methods. The second major area of emphasis should concentrate on identifying harvest losses associated with traditional harvesting methods as compared with losses from harvesting methods introduced and tested under Project auspices.

The Planning and Financial sub-unit will continue its search for research data from other sources within Egypt but is not optimistic that the search will yield many dividends, given the quality of what has been uncovered so far.

Crop Enterprise Budgets: (Long Berseem)

From the sample statistics developed from the Farm Management Data, comprehensive crop enterprise budgets were prepared. These budgets list quantities and values for all production inputs, show yields and farm gate prices, distinguish between output consumed on the farm and marketed off-farm and provide a complete cost accounting of all fixed and variable and net costs and returns of the production process. Since the survey was stratified into five farm size classifications and encountered two land tenure conditions (owned and rented land) and four seedbed preparation technologies (mechanical, animal powered, labor intensive, and no preparation), 38 separate budgets were prepared to show the income effects of these variable conditions. An example of one of the budgets is attached to this report. The berseem budgets, together with an analysis of the crop production process shall be published in a separate report which is now under preparation. The same cost and return formulation shall be used to prepare crop budgets for all of the major crops studied in the farm management survey.

Farm Management Survey:

Processing of the survey data is proceeding slowly. In spite of the power interruptions and frequent diversion of technical staff to other activities, processing of data for long berseem and wheat has been completed and we have finished about 50% of the processing for rice.

Appraisal Report of the German Technical Assistance Program for the Mamouria Training Center:

The Mamoura Training Center has been designated as the major staff development facility to support the Egypt Five Year Mechanization Plan. Curricula developed at the center is to be replicated on a nation-wide basis and center staff will be used to train the staff of other centers to be built. In view of the success of the German technical assistance effort in developing the Center's capabilities for training all categories of agricultural mechanization personnel, the Ministry of Agriculture would like to extend this assistance for another two years from May 1984 to May 1986. The Sub-unit prepared an appraisal report reviewing accomplishment to date, relating the Center activities to the broader mechanization plan and providing a budget estimate for required infrastructural and technical assistance support.

Long Berseem Crop Enterprise Budget
 For Farms using Mechanical
 Seedbed Preparation
 (Farm Size >1 Fed.)
 -Owned-

Item	Date	Unit	No. of Off-Farm Units	No. of On-Farm Units	Total	Unit Cost or Value	Cash Income or Cost	Opportunity Income or Cost	Total Farm Income or Cost
							(EE1982)	(EE1982)	(EE1982)
Income									
Green Cuts		Kerat/F.	47.31	87.75	135.06	4.43	201.15	397.44	598.59
Hay		Kerat/F.	14.28	-	14.28	3.34	47.75	-	47.75
Seeds		Kerat/F.	16.13	-	16.13	2.24	36.12	-	36.12
Total			77.72	87.75	165.47		285.02	397.44	682.46
Variable Costs									
Land Preparation									
Plow (tractor)	Oct 18	Hrs/fed.	2.0019	-	2.0019	2.1008	4.2055	-	4.2055
Subsoil (tractor)	Oct 18	Hrs/fed.	2.0019	-	2.0019	2.1008	4.2055	-	4.2055
Rolling (tractor)	Oct 25	Hrs/fed.	1.9277	-	1.9277	2.2299	4.2986	-	4.2986
Irrigation									
Water (labor)	Oct 24	m-hrs/fd.	0.7101	7.1299	7.8900	0.3587	0.2547	2.5753	2.8300
Water (labor)	Nov. 10	m-hrs/fd.	0.5049	5.1051	5.6100	0.3684	0.1861	1.8813	2.0674
Water (labor)	Dec. 8	m-hrs/fd.	0.5048	5.1142	5.6200	0.3670	0.1856	1.8767	2.0623
Water (labor)	Jan. 3	m-hrs/fd.	0.5048	5.1142	5.6200	0.3670	0.1856	1.8767	2.0623
Water (labor)	Feb. 11	m-hrs/fd.	0.8010	5.8700	6.6710	0.3154	0.2525	1.8516	2.1041
Water (labor)	Mar. 7	m-hrs/fd.	0.8792	5.8841	6.7633	0.3352	0.2947	1.9726	2.2673
Water (labor)	Mar. 29	m-hrs/fd.	0.8909	5.4727	6.3636	0.3434	0.3059	1.8791	2.1850
Water (labor)	Apr. 15	m-hrs/fd.	1.1839	5.7803	6.9642	0.3329	0.3941	1.9243	2.3184
Water (labor)	Apr. 25	m-hrs/fd.	1.1478	4.8931	6.0409	0.4072	0.4673	1.9923	2.4596
Water (labor)	Apr. 28	m-hrs/fd.	2.2834	6.4989	8.7823	0.4264	0.9736	2.7709	3.7445
Electricity (all irrigations)		hrs/fed.	-	41.1000	41.1000	0.3260	-	13.4000	13.4000
Fuel (all irrigations)		hrs/fed.	11.2700	-	11.2700	0.8200	9.2400	-	9.2400
Planting									
Seeds		kg/fed.	31.8500	-	31.8500	0.4879	15.5400	-	15.5400
Labor	Oct. 26	m-hrs/fd.	0.3000	1.5800	1.8800	0.5798	0.1700	0.9200	1.0900
Fertilization									
Nitrogen		kg/fed.	45.4620	-	45.4620	0.2885	13.1140	-	13.1140
Phosphorus		kg/fed.	29.5970	-	29.5970	0.3510	10.3880	-	10.3880
Labor	Dec 9	m-hrs/fd.	1.0310	1.7560	2.7870	0.4046	0.4172	0.7105	1.1277
Pest Control									
Insecticide		kg/fed.	0.8550	-	0.8550	11.7942	10.0840	-	10.0840
Labor	Nov. 2	m-hrs/fd.	1.9642	3.3440	5.3086	2.7479	0.7148	1.2171	1.9319
Cutting									
Water Cut (labor)	Dec 23	m-hrs/fd.	20.0900	40.7880	60.8780	0.2271	4.6530	9.2650	13.8280
Water Cut (labor)	Feb 13	m-hrs/fd.	20.7230	42.0750	62.7980	0.2284	4.7340	9.6100	14.3440
Water Cut (labor)	Mar. 25	m-hrs/fd.	19.8970	40.3980	60.2950	0.2315	4.6060	9.3520	13.9580
Water Cut (labor)	Apr. 20	m-hrs/fd.	20.3390	41.2960	61.6350	0.2197	4.4690	9.0740	13.5430
Water Cut (labor)	May 19	m-hrs/fd.	19.7550	40.1090	59.8640	0.2297	4.4780	9.0930	13.5710
Hauling									
Labor	June 4	m-hrs/fd.	12.5948	8.3865	20.9913	0.3029	3.8156	2.5437	6.3593
Truck		hrs/fd.	-	13.9636	13.9636	0.3394	-	4.7388	4.7388
Threshing									
Labor	Jul. 6	m-hrs/fd.	5.0627	2.1697	7.2324	0.5551	2.8102	1.2044	4.0146
Equipment		hrs/fed.	2.4063	-	2.4063	0.3453	6.9684	-	6.9684
Winnowing									
Labor	Jul. 10	m-hrs/fd.	10.3243	1.1472	11.4715	0.4454	4.5980	0.5109	5.1089
Equipment		hrs/fed.	4.8482	-	4.8482	1.1626	5.6366	-	5.6366
Total Variable Costs							122.5521	92.1958	214.7479
Return Above Variable Costs							162.4679	305.2442	467.7121
Fixed Costs									
Land								44.5493	44.5493
Seed							8.5440	-	8.5440
Total Fixed Costs							8.5440	44.5493	53.0933
Return Above Variable and Fixed Costs							153.9239	260.6949	414.6188

Water Requirement
 (mm-hrs/fed.)

Month	1982	1983	1984
October	11.00	0.00	0.00
November	1.00	0.00	0.00
December	0.00	0.00	0.00
January	0.00	0.00	0.00
February	0.00	0.00	0.00
March	0.00	0.00	0.00
April	0.00	0.00	0.00

A.1 PLANNING/EVALUATION SUBPROJECT

A.1.2 Evaluation Unit

Activity Report
July, 1983

Submitted by: Peter Reiss
Aiman El Tunsi
Nour El Din Nasr
Raafat Lutfi

Mechanized Wheat Cultivation Study:

The anticipated evaluation of Project demonstrations of machinery for planting and harvesting wheat has been delayed because of transportation problems. During the period, no vehicle was available for use by the Evaluation Unit. Since the traveling is expected to be extensive, both in and outside Project villages, the use of a Project vehicle is imperative. Since several members of the Project will be on observation tours during the coming month, the Unit has been told that it will have the use of a vehicle during August in order to do the work. However, the full-time use of a vehicle by the Evaluation Unit would appreciably enhance our activities.

Tractor Survey:

Work is proceeding on schedule with the survey. Data are being collected by village monitors and transferred to team supervisors for submission to the Cairo office. Raafat Lutfi has devised a matrix for the computer which enables the data to be recorded directly from the sheets completed by the monitors, obviating the additional step of translating the data onto coding sheets. Both Raafat and Aiman El Tunsi have been using the computer to record the survey data.

Farm Adoption Rates:

At a Planning and Evaluation Advisory Committee meeting held during the period (see minutes of the meeting), Drs. Bahgat Abdel Maksoud and Mahmoud Mesbah presented a questionnaire which focuses on how farmers acquire information about agricultural machinery and farmers' responses to machinery. Questions were raised about its degree of overlap with the study done in 1982 with the Social Research Center and whether it can effectively assess farmers' responses to new machinery given the limited number of pieces demonstrated thus far. However, Dr. Abdel Tawab El Yamani urged that the study go ahead as is.

Literature Review on Agricultural Mechanization:

In an attempt to make the review as comprehensive as possible, a number of sources have been explored. Now that the Agricultural Development Systems Project will be ending shortly, a large number of reports is being issued in close succession. Since many of these touch upon the subject of agricultural mechanization, they will have to be included in the review.

Follow-up:

It is hoped that the evaluation of mechanized wheat cultivation can be started during August, providing that the necessary transportation can be found for use by the Unit.

The Planning and Evaluation Advisory Committee will meet again at the beginning of the period to discuss the survey of farmer adoption rates and finalize plans for sample size and areas in which it will be conducted. It was decided at the last meeting that the study would be conducted in Project and in non-Project areas, in order to see if there have been any improvements in the flow of information about machinery.

A questionnaire will be designed based on the evaluation of the water-lift loan fund which was conducted in March. The object is to obtain information from a larger group of loan fund participants than was previously interviewed and to see if there have been improvements in the implementation of the fund as a result of the recommendations made by the original report.

MINUTES OF THE PLANNING AND EVALUATION
ADVISORY COMMITTEE MEETING

25 JULY 1983

Present: Dr. Abdel Tawab El Yamani, Dr. Bahgat Abdel Maksoud,
Dr. Mahmoud Mesbah, Mr. Steven Shepley, Dr. David
Gaiser, Dr. Peter Reiss

A questionnaire written by Drs. Bahgat Abdel Maksoud and Mahmoud Mesbah was presented to the committee for its approval. Unfortunately, the copy presented was written in Arabic which did not allow for some members of the committee to comment adequately. Although Dr. Bahgat was asked, and agreed, to provide a translation, this was never done.

The study concerns farmer adoption rates of new technologies with particular focus on their views of various information sources and channels of communication with regard to agricultural machinery and with farmer responses to newly introduced machinery.

As originally conceived by the authors, the study was to be done in the Project villages. However, other members of the committee raised objections. Dr. Reiss noted that much of the material being sought in this study was already at the disposal of the Project through the area wide survey completed with the assistance of the Social Research Center. Mr. Shepley said that it was actually too early in the life of the Project to investigate farmers' responses to new equipment on such a large scale since so few pieces had been demonstrated.

Dr. Bahgat and Dr. Mahmoud answered that the questionnaire included new material and that the methodology was different. Indices would be established to assess rates of adoption and that lines of communication would be explored in greater depth.

Dr. Gaiser stated that the survey might be done in Project and non-Project areas to see if there has been a change as a result of the Project's activities. Dr. Reiss suggested that the study be conducted in areas adjacent to Project villages and in distant areas to see the process of diffusion of information and understanding.

Dr. Abdel Tawab asked that one thousand copies of the questionnaire be made by the Project so that the study could be undertaken immediately. Comments that might come from other members of the committee following a translation might be inserted at a later point.

The state of the tractor survey was discussed by Mr. Shepley who said that it was going well now that Raafat had set up a complex matrix of the questionnaire. It is on schedule.

The next meeting of the committee is set for 8 August.

A.1 PLANNING/EVALUATION SUBPROJECT

A.1.2 Evaluation Unit

Activity Report
August, 1983

Submitted by: Peter Reiss
Aiman El Tunsi
Nour El Din Nasr
Raafat Lutfi

Mechanized Wheat Cultivation Study:

Four field trips were made by the Evaluation Advisor with various members of the Unit during the period. Mohamed Ghazi, Field Manager for Gharbia and Beheira in the Village Studies Program, went on all of the visits. He has a good rapport with the farmers and is a perceptive questioner. Visits were made to project and neighboring villages in Beheira, Gharbia, Sharqia, and Qalubia. Farmers interviewed had used grain drills, mower-binders, and combines demonstrated by the Extension Component on their land. A full report is being prepared at present, and some tentative conclusions are mentioned below.

Reactions of the farmers to the grain drill were generally very encouraging. On those farms where the grain drill was used according to the directions of the village extension agent, a smaller amount of wheat was drilled giving an increased production. However, the performance in several of the villages reveals that the extension effort will have to be intense and may require a number of seasons before the farmers feel comfortable with the new equipment. In some areas, farmers drilled many more gela of wheat than had been recommended. In other cases, farmers followed the drill broadcasting wheat by hand. They feared that not enough seed was being drilled, since it was far less than they ordinarily used. As a result, the wheat lodged and could not be harvested by the project mowers. Where the drill was used properly, the wheat had an excellent stand with even and level growth.

The demonstration of mower-binders appears to have been less regular and systematic. In a number of villages the areas that had been drilled by the project could not be harvested with the mower because the wheat fell over. The binding mechanism was a problem. Twine for binding was estimated to cost more than 17 L.E. per feddan (an estimated one and a quarter rolls) which may make its use prohibitive. Egyptian-made twine was far cheaper and much less adequate; it is said to have jammed in the binder. In most cases, therefore, the mower-binder was used simply as a binder.

The use of the combines was even more sporadic. It was worked on small plots. Farmers complained that there was no bailer, so that the straw was left on the ground and teams of youths had to be hired to collect it. In all cases, most of the straw was left on the fields and the amount claimed was terribly

low. The condition of the grain, however, was excellent with no loss or breakage. Both the combine and the mower cut the wheat at an acceptable height off the ground, in many cases no more than a few centimeters.

A widespread problem in the demonstrations offered was scheduling. In many of the villages visited, the machinery arrived as long as six weeks late, so planting and harvesting were drastically delayed. Significant production decreases were observed.

Transportation was provided by the Project to undertake the staff for four weeks. The Unit had been requested by Dr. Gaiser to include an evaluation of the Project's thresher-winnower in the report and Dr. Zakaria asked that mowers used by the Small Farmer Production Project be reviewed. However, the amount of time given for vehicle use precluded this work. It may be undertaken at any later point when transportation is again provided.

Soil Improvement Activities in Minia Basins:

The Evaluation Unit has once again been requested to evaluate the impact of the soil improvement activities on the agriculture in Minia. An initial design for the work was made by the Unit in December 1982 but was postponed by Project Management on several occasions. The Unit is now being asked to make a two-phased study by Errol Coles and James McClung. One study will examine the affect of the component's work in two basins which have been levelled in the villages of El Birba El Kubra and El Atlas. Questions to be asked of farmers will be concerned with the changes in irrigation time and water-use, the use of long and short furrows, problems with reestablishing plot boundaries and the movement of topsoil across plots, their opinion of the levelling job and their understanding of the need for the work, and their participation with the work and interactions with the project's personnel. The other study will focus on the basins before they have been levelled to determine the pattern of land ownership and use, farming techniques, irrigation techniques, harvesting methods. It is anticipated that the work will begin in early September with the involvement of the village researchers in Minia.

Rice Transplanters in Kafr El Sheikh:

Dr. Zakaria El Haddad has requested that the Evaluation Advisor interview farmers in areas in Kafr El Sheikh supported by the Japanese Rice Mechanization Project. In those areas rice transplanters were used for the first time. The Evaluation Advisor has arranged to accompany Dr. Toyoo Tomita on a trip to the Japanese project's field site in Kallin, Kafr El Sheikh to discuss the work with the project's outreach specialist.

State of Agricultural Mechanization Literature Review:

Work on the literature review is proceeding. The Unit has now acquired several dozen of the reports by the California Project which have just been distributed. Their findings will be incorporated into the report.

Farmer Adoption Rates Survey:

The survey has been held up for more than a month because of unfortunate questions included by the authors. During the period, the questionnaire was copied and they have been distributed to the two teams. Villages neighboring project areas are expected to be selected at a later meeting.

Tractor Time Survey:

Aiman El Tunki has been familiarizing himself with the use of the office's personal computer and is entering data. Researchers in the nine evaluation villages have been collecting data as warranted.

Cotton Planting Dates and Yields:

Nour El Din Nasr has been working with Steven Shepley on analyzing the relationship between planting dates and cotton yields.

A Context for the Farm Management Survey:

At the request of Dr. Zakaria, Raafat Lutfi is entering data concerning agriculture in a number of governorates to compare them with the findings of the Farm Management Survey.

Follow-up:

Visit to Minia to begin evaluation of soil improvement activities.

Visit to Kafr El Sheikh to review rice mechanization work.

Selection of areas and final review of survey on farmer attitudes.

Submission of mechanized wheat cultivation study.

A.1 PLANNING/EVALUATION SUBPROJECT

A.1.2 Evaluation Unit

Activity Report
September, 1983

Submitted by: Peter Reiss
Aiman El Tunsi
Raafat Lutfi

Evaluation of Landlevelling in Minia Basins.

At the request of the Project Management and the Soil Improvement Component, the Unit began an evaluation of landlevelling in two basins in Minia. The work was done in El Bik basin in El Atlat and in Abu Askar basin in Birba El Kubra in June and July. After several meetings with members of the Soil Improvement Component, it was decided that the following were among the most critical points to investigate: the understanding of farmers in the need for the work on their land, their involvement in implementation, the changes in the amount of time needed to irrigate and in the amount of water used (although these points are to be assessed more technically by the Component itself), problems resulting from the movement of topsoil across land boundaries or from redefining those boundaries, evidence of shifts by farmers in planting with longer furrows, and changes in production.

An extended field trip was made to Minia during the period. The Evaluation Advisor visited El Bik basin with Mahmoud Ridi, Minia Field Manager, Ragab Marei, El Atlat village monitor, and El Hussein, Beni Abeid village monitor. This was the first of many visits to evaluate the work and took place before the maize harvest so questions about yield changes could not yet be asked.

Although an initial visit, certain patterns have emerged which may be confirmed on later excursions:

- a. Farmers recognize difficulties with irrigation because of levelling problems. They believe that the Project's efforts ought to alleviate those problems. The farmers we interviewed had not attended the Project presentations and had not met with Project staff. Information was fed from the village cooperative. They appear to be misinformed about the duration of the effects of levelling, believing it to correct the problem permanently when members of the Component concede that it will have to be redone at regular intervals.
- b. Farmers report that the levelling has halved their irrigation time using the same method of water-lift. They also indicated a corresponding decrease in the amount of water used.
- c. Members of Soil Improvement feared that farmers might not be able to redraw the boundaries of their plot after the levelling since they worked across fields. In

fact, farmers define their boundaries by using steel piles sunk into the ground to a level below plowing depth. The movement of topsoil across plots was not a serious problem. Farmers fearing a loss have brought in or plan to bring in animal dung to make up for any deficiency. One farmer estimated that he would need 25 m³ (or 200 ghabit) of natural fertilizer at a cost of between 40 and 60 LE (1 unit = .20 - .30 L.E.) for one feddan. He wondered if the Project would assist him.

- d. All of the farmers interviewed have increased the length of their furrows after landlevelling. The range appears to be from 40 to 50 gasab (using the traditional measurement: 1 gasaba = 3 m 55 cm) or 142 to 177.5 meters. Whereas in the past, farmers broke the length of their long and thin fields in several places, most farmers were breaking it in two or three places. Farmers intended to keep the furrows for growing fuul and later cotton, then levelling them for growing wheat during the following winter season.
- e. The most serious complaints came from farmers whose land was done among the last in the basin. They said that the work was not properly done because the Project staff was in a rush to finish.

Evaluation of Rice Mechanization Project's Japanese Rice Transplanter Used in Kafr El Sheikh Governorate:

At the request of Dr. Zakaria El Haddad, the Unit has begun an evaluation of the Japanese-sponsored Rice Project's transplanter. At present, the Project has limited its efforts to its farm in Kallin. However, the Project's Training and Outreach expert, Mr. Shinawra, has assisted cooperatives which are using 105 rice transplanters in the governorate. During the past season, 4500 feddans in 55 basins (of 80 to 100 feddans) were planted with the Giza 172 rice using the transplanter. Traditionally, Egyptian farmers plant 25 seedlings on average in one spot (in a 30 cm² area) while the Japanese experts find that an average of 6 in one spot results in the highest production. Using the traditional method, the rice lodges at full growth and mechanized harvesting is problematic.

An initial visit was made to the Project's Kallin farm during the period to meet and discuss the evaluation with the team's members. Later trips to Kafr El Sheikh are anticipated to review the operation of the transplanters and assess farmers' opinions.

Tractor Cost and Time-Use Study:

Work is proceeding well with the data-gathering for the tractor costs and time-use study under the management of Dr. Bahgat Abdel Maksoud, Minia team leader, and Dr. Mahmoud Mesbah, Delta team leader. The data will be collected through March. Aiman El Tunsil and Raafat Lutfi are responsible for checking the data and feeding them into the office mini-computer.

Labor in Project Villages:

Dr. Mahmoud Mesbah, who accepted responsibility for producing a first draft on a report on agricultural labor in the Project villages, has not yet submitted it although there was an agreed-upon deadline of 25 September.

Follow-up:

- a. Continuation of planned evaluations and data-collection.
- b. The Evaluation Advisor anticipates being on leave for most of October.

A.2 RESEARCH AND DEVELOPMENT SUBPROJECT

Activity Report
July, 1983

Submitted by: Carl A. Reaves
Samir M. Younis

Progress:

Continued with cultivation of peanuts. It was noted that they need spraying for insects and also that rats are destroying nuts so rat poison will be used. Cultivation of cotton has been completed and it is relatively free of weeds. Leaf insects are plentiful but the Experiment Station personnel are continuing to spray by air. The maize has some worm infestation so it will be cultivated and sprayed during early August. A tool bar was adapted to use components from the 4-row spring tine cultivator to assemble a 2-row unit for cultivating maize and sent the 2-row unit to Ganaclis on July 31.

Wrote a detailed plan for experiments with potato planters and diggers. The intended site for these experiments was located on a Ministry farm near the Tractor Test Station. Preliminary samples were taken to determine the level of existing salt content. Salt content is excessively high in this area and the drainage system is inadequate for proper leaching, so it was decided to abandon this site and locate another one. Availability of a satisfactory sight on the N.T.C. in Ganaclis will be determined.

Started writing proposed experiments on minimum tillage. Based on Trowse's findings, complete tillage of most Egyptian soils is not needed, so an attempt will be made to more specifically determine how much tillage is needed. I brought information from manufacturers on some minimum tillage implements back from the U.S., but it seems that excessive length of time would be required to import this. Hence, investigations are being made on the feasibility of fabricating required equipment in the Tractor Station Machine Shop.

Attended two meetings of the Executive Committee. As of August 1 the money for two different contract research projects is in the Alexandria University system, but it has not been made available to the principal investigators. Started the middle of June to buy on the prior purchase order a second Ford 4600 tractor but it has not been delivered to date. Dr. Sahrigi approved this for immediate delivery on July 28. Samir Younis and I went to Ganaclis on July 25 to participate in a planning meeting on irrigation for N.T.C., but the other committee members did not attend. I'm not sure when another meeting will be scheduled. Dr. Gaiser spent the July 26 in Alexandria discussing R&D activities. No progress has been made on fabrication of the 3-point hitch hynamometer adapter nor the spinning disk cotton stalk cutter. Wrote a 3-month proposed training plant at the Univ. of Nebraska for Mr. Mohamed El Nagger.

Major Activities for August:

Continue needed activities during growth of the peanuts, cotton, and maize. It is likely that the peanuts will be ready for harvesting near the end of August. Locate the land, level, and finalize detailed plans for the potato experiment. Serve on the N.T.C. irrigation planning committee. Start developing proposed activities for R&D during the remainder of the project.

A.2 RESEARCH AND DEVELOPMENT SUBPROJECT

Activity Report
August, 1983

Submitted by: Carl A. Reaves
Samir M. Younis

Progress:

Made two trips to W. Nubarria with Anwar and Shoukry to observe the peanut experiment. It was noted that rats were destroying a significant quantity of nuts which was also damaging the plants to some extent. Poison in small plastic bags was distributed about the second week. A visit was made on the 21st and it was noted that almost all plastic bags of poison had been entered by rats. Additional poison was distributed because a few dead rats were found. Several hills of peanuts were removed for close examination. A considerable quantity of the grub stage of some insect had destroyed a number of nuts on each plant. Further it was noted that in several areas within the experiment that peanut plants were very stunted and yellow. We brought samples of each of these conditions to Alex., and Shoukry was going to contact some A.U. professor of agronomy or entomology to identify the problems, but this did not materialize. The peanuts have received the last mechanical cultivation because of the plant size. The four-tine rolling cultivator only was used for these operations. There is a 2-row Russian made potato digger at N.T.C. and Mr. Essam Khalil says that it does a good job of digging peanuts, so it will be used in the digging experiment.

Went to Sakha with Anwar and Wagdy on August 3 to observe the cotton experiment. The crop was planted approximately one month later than generally recommended because of late season rains. In general the cotton looks like it is producing as well as any within the surrounding areas. The last of four mechanical cultivations had been completed and crop was relatively free of weeds. Row spacings were alternate 40- and 80- cm and mechanical cultivation was done only within the 80 cm spacing. Hand weeding was done once within the 40 cm spacing. Drainage in this field is very poor, especially in certain isolated areas, and this has caused spotty plant development. Hence, it was impossible to visually determine if there is or is not differences due to depth or type of tillage. Enough measurements of plant height have been taken to determine if there are significant differences, but the real evaluation of different tillage systems will be based on crop yield. It was noted that few plants are dying, apparently from some wild disease, but the present rate of dying should not significantly affect test results. Insect damage to plant leaves is rather high but the Experiment Station personnel are still spraying chemicals by air to control the number. It is estimated that cotton harvest will begin during the first part of October. Plant size for the entire Sakha area seems to be smaller this year than it was during 1981 and 1982.

Made five trips to Ganaclis to observe the three maize experiments and for other reasons. In general, the plant population is satisfactory for all three experiments, although plant size is very spotty due to varying salt concentration and/or very poor distribution of irrigation water. One replication of the tillage plots for some reason was irrigated 10 days before the other two replications. On August 24 the one replication was almost twice as large as the other two and in it the spotty condition had disappeared to a large extent. On all three experimental areas the test plots were planted continuously and then the irrigation ditches were installed apparently at random without considering the four row width of planting and cultivating implements. This made it very difficult and at times impossible to match the cultivator with planter passes, hence the irrigation procedures in the future must always be adapted to the mechanical equipment. A two row unit was assembled with components from the 4-row spring tine cultivator. Because of the inexperienced tractor operator the two inter tines had to be spaced too far from the crop row to adequately cover all weeds. N.T.C. personnel insisted that the spring tine cultivator did not leave enough furrow for irrigation, so we agreed that they could use a small ridger only as deep as necessary for irrigation. The ridger was operated too deep which made the second cultivation very difficult. In fact, ridgers had to be operated excessively deep during the second cultivation to get enough soil in the crop row to cover weeds and grasses. This required more energy plus extra energy will be required to destroy the ridges when preparing for the succeeding crop. The late date of planting required chemical fertilizer application by hand with the first cultivation, but all future operations will include mechanical application at the time of planting. In the 'method of planting' experiment ridgers were inadvertently used in the 'plant level - cultivate level' plots, so this treatment was eliminated from the data analyses. In general, the team of engineers is improving the procedures with installation of each experiment. One area that must receive more careful attention is the timeliness of planting, cultivating, and spraying.

On August 2 we made a tentative agreement with Dr. Shakshouk to conduct an experiment with potato planters and diggers at N.T.C. Detailed experiment plans were developed that included a planting date by September 1, but we failed to appropriate the required monies in time. The test area was levelled, hard areas were sub-soiled, the entire area chiseled three times to a final depth of 25 cm, and the required fine levelling was accomplished. Potatoes will be planted as soon as possible.

Dr. Garrett was in Alexandria for 10 days and I spent considerable time helping him become familiar with existing facilities and equipment in this area. We visited the Mamoura Training Center, Behera Co., Alexandria University, N.T.C. in Ganaclis, and the Tractor Testing Station. We held several discussions on possible needs of the Mechanization Institute. Spent one day studying Trowse's report very carefully. It is also my opinion that most Egyptian soils now have good structure and should not require complete tillage. Hence, I wrote some detailed proposed research on 'minimum tillage' which I hope can be incorporated as an Applied Research Project. This work will required designing and

fabricating locally a specialized multiple purpose implement so it may develop as an in-house project. Went with Samir Younis to Ganaclis and participated in the development of a proposal for research with different types of irrigation systems.

Discussed the possibility of an applied research project on drainage and reclamation of land that has excessive levels of salt. Mr. Naggar brought in two employees of the Soil Salinity Laboratory who are interested in conducting this research. My suggestion was to develop a proposal on open ditch drainage systems for the salty marine soils along the Mediterranean coast. This should make a good companion project for Dr. Araby's project on mole and subsoiler drainage systems. Went to the Alexandria University farm to observe a demonstration of the prototype version of the Menoufia developed semi-automatic potato planter, but the soil was not properly prepared at the time and the demonstration was not effective.

Nazek and Adel left August 8 for the U.S. training on instrumentation and methods of research, the first foreign trainees from the Tractor Test Station. Wrote a proposal for four engineers to take six months training at Michigan State plus one engineer to take six months training at the University of Illinois. Started developing a one-month proposed tour of U.S. universities, manufacturers, and research for several engineers. Attended three R&S Executive Committee meetings, one of which was held in Ganaclis to observe the in-house maize experiments.

There was no progress made on fabrication of the dynamometer 3-point hitch attachment. This is badly needed and dimensions were given to the shop in February. The Tractor Test Station has no dependable force dynamometer so we have had to install all field tests with inadequate or no force measurements. There was no progress made on completing the spinning disk cotton stalk cutter that was given to the shop in June 1982. For several months now the radio has been almost completely unsatisfactory; we reach the Cairo office less than 5% of the times tried. When we are able to get the Cairo office either the static is so bad or other parties enter the network and render communication very difficult if not impossible. Our work has often been delayed because of lack of communication with the Cairo office.

Major Activities for September:

Continue with the peanut, cotton, and maize experiments, install the potato experiment at N.T.C., refine the minimum tillage plans, start the design of a flexible minimum tillage implement, hopefully visit the Kom-Ombo sugar cane applied research project, and design a simple peanut digger.

A.2 RESEARCH AND DEVELOPMENT SUBPROJECT

Activity Report
September, 1983

Submitted by: Carl A. Reaves
Samir M. Younis

Progress:

No progress was made on fabrication of the 3-point hitch hynamometer adaptor nor the spinning disk cotton stalk cutter. The Kom-Ombo visit to discuss the contract research project on sugar cane was delayed until the second week of October. Mr. Gad El Karim spent a day in Alexandria discussing details of the project and the possibility of using some R&D equipment for one month. The potato project in Ganaclis was cancelled because of insufficient irrigation water and the possibility of excessive salt in irrigation water.

The peanuts will be ready for harvesting about the middle of October. Detailed procedures for harvesting and collecting data were written, and Noba Seed Co. was contacted to supply one digger and one stationary thresher. Plans are to also evaluate a two-row Russian made potato digger on these peanuts. The cotton harvesting will begin approximately October 10 and details for collecting data were written. Detailed procedures were written for making plant counts and soil measurements on the maize.

Spent considerable time on writing research needs for the next five years and assembling a list of equipment for a soil laboratory. Had two discussions with personnel of the Soil Salinity Laboratory on the possibilities for proposing a project for contract research fund. They are interested in reclaiming land along the Mediterranean sea with an optimum design of a drain tile system.

Attended four meetings of the R&D Executive Committee. One of these meetings included a trip to Sakha to observe the tillage project on cotton. We visited with the Station Engineer and he informed us that this cotton is as good or better than any of his 2,000 feddans. Yield is expected to be on the low side because of late planting and the fact that the cotton received only three irrigations of the usual 5 or 6.

Made several visits to the American Cultural Center to develop a special training course in english to prepare engineers for the ALIGU test. These engineers will be going to foreign countries during 1984 to take 3-6 months of technical training at different institutions.

The N.T.C. at Ganaclis is located in soil that has calcareous deposits which extend from 10-15 below the surface to a depth of 60-80 cm. When these deposits are dry they tend to cement and become very hard. Dr. Shakshouk wanted to subsoil

to a depth of 60 cm but we suggested that if subsoil at all, these hard layers should be penetrated completely. R&D conducted some preliminary subsoiling to determine the horsepower required and the nature of soil rupture when it is in a very dry state. Ninety horsepower per subsoiler shank was required to operate 70-80 cm deep. The width of soil rupture was 25-30 cm but the nature of failure was such that excessive vibrations were transmitted to the tractor and implement. This was considered to be an excessive energy requirement and the recommendation to irrigate before subsoiling was made. A recommended procedure for preparing this soil for cultivation of crops was written. Have been trying the entire month to make arrangements for the company from which we bought the laser to come to Alex. to help us get the equipment installed on one of our tractors and how to use it most effectively.

Major Activities for October:

Design a flexible minimum tillage implement and start collecting fabrication materials, harvest peanuts and cotton, install laser equipment on the TW 10 or TW 30 and train engineers in its proper use, spend one week in Kom-Ombo on the sugar cane project, try to get the 3-point hitch dynamometer adapter fabricated, get a purchase request with bids in for electronics instruments to be used in field tests, and locate an area in heavy clay to plant some fool bean plus write detailed production plans.

A.3 EXTENSION/TRAINING SUBPROJECT

Activity Report
July and August, 1983

Submitted by:	Fred Schantz	Hussein Heiza
	Roger Engstrom	Salah Bakar
	Gordon Stringer	Salah Ismail
	Maher Iskander	Ahmed El Beheri
	Dr. Mamdouh El Baz	Moh. A. Aziz
	Youseef A. Maugod	A. Hamid Soiden
	Fouad Metri	Hassan
	Ibrahim El Gatas	Moh. Yasser
	Zaghloul S. El Sayed	Essam Wasif
	Samir Shawky	

Summary:

The months of July and August have been combined in this monthly report due to the holidays and vacation schedules.

Major events are summarized below and detailed reports of each unit are found in Appendix A through H. Appendix H₁ and H₂ list the expenditures for the two months.

Extension Activities:

1. Most extension field activities were slow during this period due to the season when crops are in the fields. Crop cultivation of cotton and fertilization/spraying of rice is taking place primarily by hand until project demonstration/training equipment will arrive, probably by next season.
2. Group 2 and 3 demonstration/training equipment began reaching the field and, as shown in Appendix A-1a - Figure 2, should be in place by the spring season. This equipment will provide the equipment, tooling and critical transportation needs in order for the field extension staff to fully initiate their area mechanization programs. These programs which have been developed for the projects 23 villages are now available in both Arabic and English and are being up-dated for the 1983-1984 seasons. Concerning the delivery of the equipment by equipment dealers, their performance has been extremely poor. For example, four planters delivered to Shieh Ahmed village were incomplete and, after four months, are still not properly assembled. Also the spare parts purchased for the combine harvester still have not arrived even through we are beginning a second season with these machines. If this kind of performance - together with poor or non-existent after sales services continues, it will be impossible to effectively demonstrate - and therefore establish - an effective mechanization farming system in the field. All dealers must be made clearly aware of this fact of which only a few seem concerned.

3. A status report on equipment demonstrations is presented in Appendix A- 1b. It shows that some 2570 feddans were covered during 129 demonstrations from April until August, 1983 with five pieces of equipment now in the field. As the remaining demonstration/training equipment reaches the field (as mentioned above) this numbers will increase geometrically.
4. The IFB 83-02 tender for some 413 additional pieces of demonstration/training equipment was completed and approved by the MOA and USAID (Summarized in Appendix G).
5. Plans were discussed and drafted during this period, especially for the combining of rice, as shown in Appendix A-1a and A-2a. The most serious problem which is being dealt with is the absence of trained operators for the rice combines now in (as well as outside of) Project areas. The group of 24 operators and a few engineers remain. Therefore another course has been scheduled for the end of September, 1983 to provide all equipment with proper staffing.
6. A workshop was held at Alexandria with the Project's mechanization extension specialists to review their programs and discuss outstanding problems. As emphasized in their request outlined in Appendix E-3, the critical need for mobile workshops is now being fully realized. This equipment is now being included in a large IFB (3) order to help solve the field equipment maintenance problem. The more serious problem of finding, training and then keeping low-paid, highly qualified maintenance personnel has yet to be solved.
7. Additional duties have been put on the extension unit with the inclusion of the land (Soil) improvement units as well as the Small Farmer Production Project (SFPP)'s in the extension program. Extension staff is being trained for these units, needed equipment orders are being combined with the Project's demonstration/training equipment orders, and field operations planning sessions are being held on a regular basis. The addition of Beni Suef and Fayum from the land improvement group and some 167 village areas from the SFPP makes an overall coordination effort very difficult due to the size of the situation and absence of qualified staff and secretarial/administrative support. This hopefully will be dealt with the addition of short-term technical advisors and the trained staff mentioned above (No. 6).
8. The Extension Information Unit continued to prepare technical information to issue extension pamphlets on water pumps and land leveling as well as audit articles about siphon tube irrigation and local manufacturing of agricultural equipment. Additional duties included attending the mechanization extension staff workshop and accompanying the Minister of Agriculture to the Sinai to examine farm mechanization activities in that area.

9. The Demonstration/Training System Unit at Gabel Asphar continues to clear land and attempt to secure land leveling equipment (Appendix C). Their equipment began arriving and is now being assembled. Training activities began with the training of nine bulldozer operators and with the finalization of five additional courses due to begin next month.

The unit's request for the extension advisor to spend several days a week was refused due to the large workload in the Project villages. If Mr. Engstrom begins working at Gabel Asphar there will be serious problems and a slow-down of the progressing field effort. An additional farm advisor position should be considered to fulfill the Gabel Asphar needs.

10. The Machinery Introduction Fund: committee met during this period and received an up-to-date financial report (Appendix D-2b) from the committee coordinator. As shown the total amount thus far disbursed by the banks has reached 18 or 3% above the last report. This shows that the funds are beginning to move as the committee's system begins to function.

In-Country Training Activities:

1. During these months 158 trainees attended 16 new and courses/sessions (Appendix E-2). As shown also (and in detail in Appendix F-2) are an additional 63 participant trainees who attended 11 offshore courses.
2. The quarterly cash need statement funds were received for May/June/July 83 and the cash need statement for August/Sept/Oct. 83 was prepared and submitted to the Project Management. The funding has returned to normal this period resulting in an increase in all training activities.
3. In July 1983 a letter was submitted to Project management recommending additional funds be shifted in In-Country training activities. This is due to the increasing field needs, especially due to the expended training needs of the land improvement subproject and Gabal Asphar unit.

Participant Training Activities:

1. During this period several of the participant training activities were finally initiated. Appendix F-2 shows that some 11 short-term technical and 1 long term academic training programs which were completed for 63 participants. The remaining 5 academic and 8 observation/study tours remain in the hands of USAID-Washington waiting for final clearance.

During the Month:

With the expanding efforts and large increase in all activities, particular note has been made of the ever increasing demands on Project resources by non-Project units and areas. As this has been slowly happening as Project activities have been noticed, and adopted by other areas, needs have been accommodated as much as possible within existing resources, especially within staffing and funding limitations. It was apparent, however, that during the past two months that the resources have been severely over-tapped. Without the critical support of at least two, if not four, short term equipment technicians to assist in settling in and training personnel on the large amount of equipment arriving in the field, the possibility of a graveyard of mistreated, poorly - maintained machines left in Project and non-Project areas seems certain. The request for this technical assistance submitted in June 1983 has now become a critical necessity.

Meeting/Field Trips:

1. Several meetings were held with Project management to finalize IFB-83/02 for additional demonstration/training equipment procurement.
2. Meetings were held with USAID training staff concerning participant training programs. Some of the observation/study tours were delayed due to Ministerial-level concern of the effectiveness of the tours.
3. Meetings were held with the staff of the Small Farmer Production Project to discuss/plan joint field extension and equipment procurement activities.
4. Meetings were held with the combine harvester representatives and other companies to discuss their poor performances.

Problems:

1. Still the need for adequate field transportation.
2. Secretarial/administrative support is still very poor although their numbers have increased.
3. The noise level and number of people in the extension/training office has reached a breaking point. The secretarial/administrative staff should be moved in lump to another location.

Plans for Next Month:

1. Continue extension and training activities.
2. Continue to press for dealer deliveries of Project demonstration/training equipment.

3. Prepare additional equipment procurement tenders including IFB - 83/03 and needed groups of local procurement equipment.
4. Develop outlines for two working papers on agricultural training and machinery management in Egyptian agriculture.
5. Finalize the mechanization extension plan for the Small Farmer Production Project.
6. Initiate the revision of the Projects Mechanization Extension Program for the 23 villages.
7. Begin work on the 1984 Training Plan.
8. Finalize the listing of all Project demonstration/training equipment procurements.
9. Outline a Agricultural Machinery Management System Program to be used in Project areas for demonstration/training equipment.

Monthly Report
Extension Advisor

Submitted by: R. Engstrom

Summary:

Very little progress during Ramadan - monitoring visits only. After Ramadan visits to Rice Direct seeded plots. As I was not present during seeding, I don't know the seedbed quality at seeding time. Weeds were a big problem with farmers concerned about spending more money for weed control than they had saved by direct seeding versus transplanting by hand. Upon pursuing the weed control problem I have concluded that (1) the weeds must be properly identified, (2) proper herbicide selected, (3) proper herbicide rate applied, (4) herbicide applied by the proper methods, (5) time of applications to be determined by calendar and weed seedling size, (6) evaluation of effectiveness, and, if necessary, followup application (7) size and trying evaluation of rice seedlings.

In this particular case the herbicide selected is effective only at 3 leaf stage of weed seedling. Must be applied only mornings or late evenings. (70°F or less). Had some during effect on rice.

Upon relating these points the extension staff feel they are not prepared to supervise such complicated operations and desire the help of a subject matter specialist.

The seeding operation/germination of the rice itself was very satisfactory; only problems are weed control and in one case unlevelled land which was also a problem in the preceding crop of wheat. Hopefully we can level that field soon.

Although not involved with subsurface drainage, I have noted a problem before: i.e. bringing the end of the tile up to the surface about 10 meters from the edge of the field. In most cases a cement block is placed at the surface.

Row irrigation with siphon tubes has progressed very well with leveled land. Some problem with demonstration of priming siphons - so a larger ditch was made and the complete siphon submerged a slow unnecessary step. Proper sizing also has been done trail and error method and some times given up before good results is obtained: i.e. correct number of siphons in relation to pump delivery. In one instance two or three siphons per row were used to speed the water flow to reach the end in less time. I tried to explain that the same amount of water would be used over more time and in more rows at the same time, thus decreasing the primers work. The same number of siphons could do two or three times as many rows simultaneously spreading the primers work load over more rows during the same

One field had near perfect level with no use of instruments; leveling accomplished only by the farmers eye. Some fertilizer needs are uniform, it works well, I also note that in even fields farmers do not vary the fertilizer applications perhaps we are ready for an evaluation/training workshop for those who have some experience now. Mower/Binder - mower conditions are in need of repairs/maintenance. Most units are as they were when used last, but still O.K. If broken, still broken, most not greased or cleaned. Same problem: people are waiting for tools and/or spare parts. I would like to see a status report so spare parts/tools needed are known. The same for seed drills, ridgers, planters, etc.

Ridger bodies will be replaced with an improved design by Tanta Motors. We must first remove the existing units and take them to Tanta where they will be exchanged. This has not been done yet. John Deere planters were delivered and assembly attempted by J.D. Several trips to S.A. to meet J.D. people were fruitless because they came at other than the appointed times. Finally they spent two days assembling the four units and worrying about seed plates. As of 22 September 1983 the units are still not assembled completely and ICON is still worrying about seed plates. I want ICON to complete assembly so we can try the units with various plates which we do have. I will show ICON how to install seed tubes. ICON still must tighten bolts, install clips, install plate drive retainer springs, install depth shoes (four are still missing).

Combine conversion to rice, I worked with Salah Baker on three combines. He and I learned a lot, but no one else.

Some damage to combines - requiring local repairs - welding, etc. Sickel section damaged, guards, hold down clips, belts, chains, oiling pad & tube, fuel filter, battery dividing fingers, auger (unloading) leveling auger, straw walkers, brake-line, electrical switch.

Some items missing - horns, lights.

Observed Chinese rice wind rower and transplanter both worked well. Saw factory making heavy tractor loaders - very good design - he also makes and tests very hydraulic cylinder very good work and good understanding of needs. Demonstrated simon digger for cutting cotton stalks and peanuts, does not invert peanuts. Also used it for weeding (Bermuda grass) in orchards. Works well but requires good operator adjustments - heavy tractor or water/weights needed on smaller tractors.

- Transport needed for extension field staff.
- Transport needed for mechanics (and soon tools).
- Fuel limitation unrealistic.

Tools necessary for combine operators/conversion/maintenance

	<u>Quantity</u>	<u>Items</u>
1)	8	Lug wrench (24 mm on one side)
2)	7	10 ton hydraulic jacks
3)	11	Air compressor without tank to be mounted on combine-belt drive - 10 meter airhose w/ends.
4)	30	Set ½" drive metri sockets (5 mm - 32 mm).
5)	30	Set combination spanners - 55 mm - 32 mm).
6)	30	Adjustable wrenches 12 (25 mm (12"))
7)	30	Allen key sets metric 0.5 to 10 mm.
8)		Screw driver sets (9 pc each)
9)	1	Air compressor w/tank and HMse & nozzle for cleaning and tire inflation.
10)	1	Electric portable angle grinder 4" or 5" for welding preparation/sickle sharpening.
11)	1	Rivet sets for crimping rivets on sickels.
12)	1	Set punches, chisel for chain repair, sickel repair
13)	1	Generator set 2000 watt.

NOTE: Drive chain comes loose and breaks due to inadequate tightening of sprocket - tool furnished with combine fails when extra force is used.

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

AGRICULTURAL MECHANIZATION PROJECT

A. I. D. Proj. NO. 263 - 0031

EGYPTIAN MOA/USAID

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صندوق بريد ٢٥٦ - الدقي - جيزة ج ٢٠
٧٠٤٦٠ - ٧٠٤٧٢
٧٠٤٣٦٤ - ٧٠٧٢٤٧

DATE 24 July 1983 التاريخ

To : Dr. Sahrigi / Dr. Gaiser / Salah Bakar
F. Schantz

From : R. Engstrom

Combine conditions - management:

1. It has come to my attention that some repairs must be made on some combines after the wheat harvest. Replacement parts for these parts lost or damaged must be procured. Operational parts, i.e. fuel, filters, oil filters, belts, airfilter, oil and grease are needed.
2. The machines need to be transferred to rice areas. Also the rice cylinders and concaves must be kept with the combines. They are now at Sheik Ahmed.
3. Engineers need to be identified and trained in converting the machine to rice harvest and after rice to be ready for (maize in the case of two with corn heads) wheat again.
4. Locally available tools need to be purchased in order to convert the machines, and to be a part of the training program. Must include spanners, jacks, blocks, grease guns with flexible hose, air compressors. These items should accompany the combines.
5. Note the tools ordered for the project will not be available for at least two months.

بسم الله الرحمن الرحيم

AGRICULTURAL MECHANIZATION PROJECT

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صندوق بريد ٢٥٦ - الدقي - جيزة ج ٢٠ ع

٧٠٤٦٦٠ - ٧٠٤٧٢٠

٧٠٤٣٦٤ - ٧٠٧٢٤٧



DATE _____ التاريخ

To : Dr. David Gaiser - Team Leader
Dr. Zakaria El Haddad - Project Coordinator

From : Fred Schantz, Extension and Training Coordinator
Roger Engstrom, Extension Advisor
Ahmed El Beheri Project Extension Officer

Subject : Extension Plans for July through December 1983

In line with our policy to develop six month plans in advance in order to maintain continuity in the field effort, we present the attached six month plan for July through December 1983. It includes a monthly bar graph (figure 1) of the primary activities/events expected during this time and a equipment delivery sites chart (figure 2) which designates the locations of the now arriving group 2 and 3 demonstration/training equipment to project village locations. In December a plan will be drawn up for the spring/summer seasons including January through June.

cc: Dr. Ahmed El Sahrighi
Extension Staff
file

PROJECT AREAS	Equipment (on site/order ed)																					
	1. Silage Mower (1)	2. Grain Drill (11/1)	3. Land Scraper (2)	4. Rider (11/1)	5. Seed Planter (1)	6. Mower/Blower (15/1)	7. Combine Harvester (1)	8. Potatoc Planter (1/1)	9. Tractor (1/1)	10. Disc Harrow (3/1)	11. Disc Plow (1)	12. Mothboard plow (1)	13. Bedder (1/1)	14. Ag. Backhoe (1/1)	15. Hand tool Set (1)	16. Cl. Plow (1)	17. Cultivator (1)	18. Motorcycle (1)	19. Peanut Planter (1)	20. Peanut Digger (1)	21. Pump (1)	
GOVERNORATE																						
(Shick Ahmed)																						
EL MAHMOUDIA DISTRICT																						
1- Deaya	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
2- Ezah Besenwa	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
AHOU HOMOS DISTRICT																						
3- El Gorn	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
4- El Darawah	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
5- Nassoune	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
QALUBIA GOVERNORATE																						
Tanta District																						
6- Shabshir El Hessa	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
7- Keniset Damshit	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
BASSYOUN DISTRICT																						
8- Kon El Naar	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
KAFR EL ZAIAT DISTRICT																						
9- Kafr Dima	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
10- Qelyb Abiar	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
Shaykh Kaif	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
MARKIA GOVERNORATE																						
Minia El Kamh District																						
11- El Saadyine	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
12- El Telling	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
MELIASSI DISTRICT																						
13- El Gosk	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
DIARB NIGH																						
ALUBIA GOVERNORATE																						
Banha District																						
14- El Shamout	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
15- Magoul	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
Toukh District																						
16- Kafr El Hossafa	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
17- Beltan	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
18- El Hessa	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
MINIA GOVERNORATE																						
Matay District																						
19- El Atalat	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
20- Seila El Gharbia	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
Ahou Korkas District																						
21- Beni Iheid	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
22- Beni Houtsa	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
23- El Birba El Kubra	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/

Agricultural Mechanization Project
Demonstration/Training Equipment Operations
Summary for April-Aug 83

31 Aug 1983

Month	Operation	Area of operation	No. of demonstrations	Feddans Covered	Comments
April/ May / June.	Moving(bersim)	Project villages	7	90	
	Grain drilling		3	155	Soy beans
		Outside project villages	70	710	rice
	Land leveling	↓	19	660	
	Mower/binding (wheat)		23	750	
	Combine harvesting (wheat)		5	155	4 units were used
	Outside project villages		?	?	6 units were used
July/ Aug.	Land leveling	Project villages	2	50	

TOTALS:

129 (+ ?) for 2570 (+ ?)

SEPT - DEC COMBINE HARVESTER PLANS (FOR RICE):					
SEPT- DEC.	Combine Harvester (for rice)	Project villages	12	795	
		Outside Project villages	?	?	
		TOTALS:		795(+?)	

Status of Group 2,3 Demonstration
Equipment Deliveries(as of 31 Sug 83)

3 unites from Icon
unit price: L.E. 5400
Discount - 2%

+ 10% (Site Delivery)
5821.2

Spare Parts 10%

4 unites from Egypt Tractors

2 unites MF. unit price: L.E. 4025
2 unites Athientis: unit price: L.E. 600
(Site delivery)

Spare Parts 10%

2 unites from Midland

unit price: L.E. 3050 x.s (4 ridging badies)
L.E. 3390 x.s (4 ridging badies)

Discount 6% - Spare Parts 10%

Mower / Binder

15 unites from Tanta Motors

unit price: L.E. 3600 (Site delivery)

Discount : 5% - Spare Parts 10%

Silage Mower

14 unites from Tanta Motors

Unit Price : L.E. 1200 (Site delivery)

Discount : 5% - Spare Parts 10%

Agricultural Back hoe:

23 unites from Tanta Motors

unit Price : L.E. 6680 (Site delivery)

Discount : 4% - Spare Parts 10%

Seed Planter

8 unites from Egypt Tractors

unit Price : L.E. 2740 (Site Delivery)

Discount : 5% - Spare Parts 10%

Tractor: 5 unites

Disc Harrow

11 unites from Construction Equipment

unit Price: L.E. 4097 (Site Delivery)

Discount : 5% - Spare Parts 10%

Hand Tool Set:

23 unites from Snop on

unit Price : L.E. 1881.60 (Site Delivery)

Discount: 5%

Chisel Plow:

5 unites from E.C.T.R.A

unit Price: L.E. 1540 (Site Delivery)

Spare Parts : 10%

Land Scraper

15 unites from Tanta Motors

Unit Price: L.E. 890 (Site Delivery)

Discount : 5%

Grain Drill:

14 units from Midland

unit price: L.E. 3000 (Site Delivery)

Discount : 6% - Spare Parts 10%

Mold Board Plow

1 unit from Midland

unit price: L.E. 3800

Model T.S.R. 107 instead of Model T.S.R. 102.

Spare Parts 10%

Disc Plow

2 units from Tanta Motors

unit Price: L.E. 1250 (Site delivery)

Discount : 5% - Spare Parts 10%

Motor - cycles

Peanut Equipment

August 31, 1983

D/F COMBINE RESPONSIBILITIES (SEPT 83) *

NO.	SERIAL NO.	LOCATION		OPERATOR/MECHANIC	ENG. IN CHARGE	PROJECT SUPERVISOR
		Village	Governorate			
1.		Saadin	SHARKIA	Abdel Halim	Sherif El Hak	Ahmed El Beheri Abdel Hamid Saidan
2.		Gosak		Hassan		
3.		Kafr Dima	GHARBYA	Shaaban	Said Farid	Ahmed El Beheri Mohamed A. El Aziz
4.		Sheikh Ahmad	BEHERA	Samr	Mohamed Zidan	
5.		South Tahrir		?		
6.		Abo Korkas	MINYA	?	Ibrahim Nour	Ahmed Beheri Ibrahim Nour
7.		Dekernes	DAKAHLIA	?	Handi Nur	Salah Bakar ↓
8.		Gizeza	KAFR EL	?	Steven Nohyer	
9.		(now in Menofia)	SHEIKH	?	?	
10.		?	↓	?	Ahmed Sharabi	
11.		?	↓	?	Handi Nur Hassan Maonla	

* 6 combines in Project areas under Ahmed Beheri, 5 combines in other areas under Salah Bakar. Mr Harold of Deutz/Fahr will visit Sharkia combines on Sept 8, Behera combines Sept 15 and Dakahlia combine on Sept 22. Also Mr Harold will hold a training course at Kafr El Sheikh for new operators from Sept 24 until October 5, 1983.

APPENDIX A-2a

Monthly Activities
Sharkia/Qalubia Extension Office
July/August 1983

Submitted by: Abd El Hamied Soidan

Summary:

- Follow up for rice fields which we planted.
- We supplied the extension village with new machines.
- Meeting for all the officers at Alexandria to discuss the problems and summer plans.
- Follow up for service work.
- Observational tour in Phillipines and Thailand.
- Follow up for Agricultural Machinery Funds.
- Training course for water pumps at Alexandria.
- Preparation for observational tour in Phillipines and Thailand.
- Follow up for Agricultural Machinery Funds.
- Extension meeting at Kafr El Hossafa in Qalubia.
- Preparation for the combines with rice attachments at Sharkia.

Problems:

- There is no suitable place to store the machines in many villages.

Plans for Next Month:

- Preparation for the combines to harvest rice.
- Harvesting rice at Sharkia.

Monthly Activities
Extension Officer
July/August 1983

Submitted by: A. El Behery

Summary:

- We travelled several times to Behera Governorate to meet Icon Engineer for fixing John Deere planter.
- We attended a farmer meeting at Kafr El-Hosafa in Qalubia Governorate.
- Following the distribution of machinery to extension villages according to the plan.
- Two trips to Alexandria to check the machine at training center to be used in a pilot farm in Abes District.
- Three meetings in Sharkia Governorate for discussing combine plans.
- Participant in a technical committee in Qalubia governorate, for motor cultivator.
- Transplanting and harvesting rice by chines machines in Behera governorate.

Problems:

- Shortage of hand tools in our villages.
- A lack of transportation for our specialist.

Plans for Next Month:

- Following combine preparation.
- Following combine operation in Sharkia.
- Following machines distribution.
- Selecting extension specialist in Farme & Bane Suife

Monthly Activities
Sharkia/Qalubia Extension Officer
July/August 1983

Submitted by: Abd El Hamied Soidan

Summary:

- Follow up for rice fields which we planted.
- We supplied the extension villages with new machines.
- Meeting for all the officers at Alexandria, to discuss the problems and summer plans.
- Follow up for service work.
- Observational tour in Phillipines and Thailand.
- Follow up for Agricultural Machinery Funds.
- Training course for water pumps in Alexandria.
- Preparation for observational tour in Phillipines and Thailand.
- Follow up for Agricultural Machinery Funds.
- Extension meeting at Kafr El Hossafa in Qalubia.
- Preparation for the combines with rice attachments at Sharkia.

Problems:

- There is no suitable place to store the machines in many villages.

Plans for Next Month:

- Preparation for the combines to harvest rice.
- Harvesting rice at Sharkia.

Monthly Activities
Rural Extension Information Direct
July/August 1983

Submitted by: Dr. M. El Baz

Summary:

- Till 17th of the month, work was not at full tempo (end of Fasting month and minor-fast holidays).
- Attending three-day seminar at Maamoura training center with our extension staff in governorates. During this period we were able to recognize problems and difficulties that exist at project working areas, and discussing the extension plan for next fall and winter crops.
- Preparing technical information to issue an extension fruited bulletin about operating and maintaining of water pumps.
- Providing two extension bulletins with drawings and hand-writings.
- Collecting bids to fruit 20,000 and 10,000 copy.
 - A. Operating and maintaining of water pumps.
 - B. Levelling soils means higher income.
- Preparing and televising one program about activities of mechanization program.
- Editing and issuing two articles in two different monthly agricultural magazines concerning:
 - A. Irrigation with Siphon tube.
 - B. Local manufacturing of agricultural machines.
- Accompanying H.E. Minister of Agriculture for six days in North and South Sinai to introduce and recognize mechanization activities in these two remote governorates.

Plans for Next Month:

- Bids and procurement order to fruit two extension bulletins.
- Following up, at M.O.A. workshop, manufacturing of extension sign for soil improvement unit.
- Supposed to be in the U.S.A. in an observational tour.

Monthly Activities
Gabel Asphar
August, 1983

Submitted by: Gordon B. Stringer

Equipment Rental:

Bulldozer operated 74 hours during the month. Most of these hours were in a training/work program. Incentives were paid. The work being done is filling in ditches and drains and pushing out some remaining windbreak trees. These trees have not been sold thus will have to be taken out of the area so that other work can proceed. It is hoped that they will be sold to the merchant soon.

Poclain backhoe was used to clean Canal No. 8 and will now start to make a by-pass canal so that Canal No. 9 can be repaired and the necessary structures built in it. These structure will be drops and field turnouts. The Poclain worked 26 hours during the month.

Fiat 130 Tractor was used to fuel the Poclain and Bulldozer and to remove trees from the work area. We now will need a trailer to work with this tractor to clear the fields of stone and other rubbish prior to using our equipment in these fields. The Fiat worked 14 hours during the month.

Elevator Scraper - letters have been written to hire such units to do leveling work. We are now waiting for the replies.

Equipment Delivery:

E.G.C.T. - purchase order was delivered on 12 January, 1983. The first delivery from the local market was on 20 June, 1983 with an approximate value of L.E. 18,000. On 24 July the operational tests were carried out. Local market deliveries are not yet completed. Upon the completion of the delivery all administrative procedures will be taken. E.G.C.T. has refunded approximately L.E. 10,000 to the project. Upon release of this money we will complete the purchase of those items. Since the E.G.C.T. equipment has not been completely received we do not have free use of it. On 11 August, 1983 two containers arrived and were unloaded. The third container arrived on Friday, 12 August and was unloaded that day. Equipment assembly by E.G.C.T. began on 4 August, 1983 and is now nearly completed.

Snap-On tool delivery has been delayed. We understand that they have been cleared thru customs but that there was some damage and some losses. These are being replaced.

ICON - purchase order was delivered on 12 January, 1983. On 4 August the 4250 tractor was delivered. On 16 August two boxes of equipment were delivered. On 21 August two truck and trailer loads of boxes of equipment were received. On 29 August the 3040 tractor was delivered. On 31 August ICON started assembly of the equipment.

Training Programs:

Six programs were drawn up involving development in the fields and in the workshop. Nine bulldozer drivers have been trained.

Field Work:

Work done during the month has consisted of canal cleaning, tree removal and brush removal.

In order to plant the four fields, which we have been working on, to winter crops we must complete the following tasks during the next two months:

1. Clean, clear and disc four fields.
2. Complete tree removal on three fields.
3. Complete survey of one field and stake four fields.
4. Level four fields.
5. Rip and disc four fields.
6. Ridge, irrigate, disc and landplane where needed.
7. Dig temporary canal and repair canal to be used and install drops and field turnouts and road crossing culverts.
8. Furrow/check and preirrigate.
9. Purchase seed, split middles and plant.

Due to the urgency of the field work it is requested that Mr. Roger Engstrom be assigned for several days each week to oversee the ICON equipment assembly so that there will be no problems and so that the proper equipment will be ready at the proper time for use in the planting. This assistance is necessary in order that I can devote full time to the field work as is required between now and 1 November.

July/August Monthly Report
of Fouad Metri Machinery Introduction Fund
Committee Coordinator

SUMMARY

During the previous July & August, Two meetings had been held by the committee to examine request of loans for the purchasing Agri.Mach. For various Governorates and approved the following:

Governorate	Equipment	Number
Behera	Silage Mower	2
	Combine Harvester	1
	Baler	1
Gharbya	Rotatiller	9
	Loader	1
	Trailer	1
Sharkia	Rotatiller	1
	Loader	1
	Backhoe	1
	Scraper	1

- Financial status had been reviewed for Behera Gover. Credit loan for the request to increase the amount allocated. The committee approved in the amount of L.E. 1000,000 of the total amount L.E. 200.000.
- The General status for the Five Governorates includes the approved amount by the committee, amount inprocess and the disbersment is attached. To date 18.1% of the loan funds have been spent.
- Being in Charge of Training Dep. during the preivous month "63" participants have been accepted and travelled for the Training to Thailand & Phili and U.S.A. as following:

Thailand & Phili	47	for observation
U.S.A.	15	for observation Tours
U.S.A.	1	for academic

63 Participants

AGRICULTURAL MECHANIZATION PROJECT
MACHINERY INTRODUCTION CREDIT FUND STATUS
AS OF 10 9 1983

AREA	AMOUNT ALLOWED	% OF TOTAL	AMOUNT APPROVED		AMOUNT APPROVED AND IN PROCESS WITH BANK	AMOUNT SPENT	% OF TOTAL	COMMENTS
			BEFORE THE COMMITTEE	BY COMMITTEE				
BEHEKA	182556 100000	28.9	523067	321930	341956	54420	19.2%	
CHARBIA	114334	18.1	14424	158407	158407	22421	19.6	
QUALUBIA	42954	6.8	-	16925	16925	15000	34.9	
SHANKIA	179397	28.4	105200	146494	240000	-	-	
MINIA	112439	17.8	51800	11700	5450	5450	4.8	
UTTIKHS	-	-	44800	-	35145	35145		
TOTAL	731680	100	739291	655456	797883	132436		

89.5% 109% 18.1%
TYPE/NUMBER OF EQUIPMENT PURCHASED

AREA	CHISEL PLOW	DISC HARROW (H/T)	ROTO-TILL-GR M/SP	Fl. & Tractor	LAND SCR-APER	RIDGER	SEED PLANTER	GRAIN DRILL	SILAGE MOWER	MOWER/BINDER	Tractor	Tractor	AG. BAC-KHOE	Lo. chn	Pest. knifes	Ball	Spr. knifes	Comments	
																			3
BEHEKA	2	14	5	-	25		21	1	45	54	-	-	36	-	-	1	1		
CHARBIA	2	3	12	1	9	2	5	-	10	10	6	7	1	-	-	-			
QUALUBIA	-	-	-	1	-	-	-	-	-	-	3	-	-	-	-	-			
SHANKIA	-	19	1	-	1	-	-	9	32	-	-	20	1	-	-	-			
MINIA	3	-	4	-	2	-	1	-	3	4	3	1	1	1	4				
TOTAL	3	4	36	25	1	1	37	2	27	10	92	69	12	1	69	3	1	5	1

Monthly Activities
In-Country Training Unit
July/August 1983

Submitted by: Ibrahim Hassan El Gattas

Summary:

- During the month of July the following courses:
Mechanic Level I through 16/7 to 8/9 at Maamoura for 13 trainees. (Extension Unit).
Tractor Driver 16/7 - 21/7 in Minia for 10 trainees
23/7 - 28/7 in Minia for 10 trainees (Soil Improvement)
Three day symposium at Maamoura for 30 attendants through 26/7 - 28/7 1983 (Extension/Training).
Mechanic Level II through 23/7 - 10/11 1983 at Maamoura for 11 trainees. (Extension Unit).

Problems:

- During the month of August the following courses started:
Tractor operation through 6/8 - 8/9 at Nubaria for 18 trainees (Soil Improvement).
Tractor operators through 13/8 - 15/9 at Maamoura for 15 trainees (Extension Training Unit).
Irrigation through 20/8 - 1/9 1983 at Maamoura for 13 trainees (Extension Unit).

Plans for Next Month:

- Courses under preparation:
Mechanization Extension specialists at Sakha for 15 trainees through 24/9 - 15/12 1983 (Extension).
Combine two weeks at Sokha through 24/9 - 6/10 1983.
Mechanic through 24/9 - 17/11 1983 at Nubaria for 15 trainees.
Tractor Driver 20 trainees at Beni Suef.
Tractor Driver 20 trainees at Fayoum.

July/August 1983 Training Schedule

<u>DATE/TIME</u>	<u>LOCATION</u>	<u>COURSE NO.</u>	<u>COURSE TITLE</u>	<u>COMMENTS</u>
MACHINERY MANAGEMENT EXTENSION UNIT				
July-Sept.	Maamoura T.C.	3 Ex 12.1	Mechanic: Level I	13 Trainees
July 23 - Nov. 11	Maamoura T.C.	3 EX 30	Mechanic: Level II	11 Trainees
July 26-28	Maamoura T.C.	3 Ex 14.1	Workshop: Mech. Ext.	30 Trainees
July-Aug.	Sandin/Shieh Ahmed	3 Ex 37.66- 67	Land Levelling	24 Trainees
July 26 - Aug. 9	Phillipines	3 Ex 3	Obs/Study Tour: Ag. Mech.	7 Participants
Aug. 17-25	Thailand	3 Ex 4	Obs/Study Tour: Ag. Mech.	9 Participants
July 26 - Aug. 22	Phillipines/ Thailand	3 Ex 5	Obs/Study Tour: Ag. Mech.	12 Participants
Aug. 13 - Sept. 15	Maamoura T.C.	3 Ex 20.1	Tractor Operator	15 Trainees
Aug. 20 - Sept. 1	Maamoura T.C.	3 Ex 44.3	Mech. Short Course: Irrigation	13 Trainees
July-Aug.	Gabel Asphar	3 Ex 44.4	Bulldozer Operator	9 Trainees
TRAINING UNIT				
July-Aug.	Cairo Office	3 T 5.78	Computer Operation	1 Trainee
July 7 - Aug. 2	U.S.A.	3 T 9	Obs/Study Tour	10 Participants
RESEARCH HAND DEVELOPMENT				
Aug. 7 - Feb. 6	U.S.A.	3 RD 1	Short-term Technical Training	1 Participant
Aug. 7 - Feb. 6	U.S.A.	3 RD 2	Short-term Technical Training	1 Participant
PLANNING AND EVALUATION				
July 7 - Jan. 6, 1985	U.S.A.	3 PE/a	MSc Degree (Ag. Econ)	1 Participant
LAND (SOIL) IMPROVEMENT UNIT				
July 16-21	Minia	3 Li 4.1	Tractor Driver	10 Trainees
July 23-28	Minia	3 Li 4.2	Tractor Driver	10 Trainees
Aug. 6 - Sept. 9	Nubaria T.C.	3 Li 6.1	Tractor Operator	18 Trainees
July 2 - Aug. 30	U.S.A.	3 Si 10	Obs/Study Tour:	1 Participant
July 31 - Sept. 10	U.S.A.	3 Li 2	Obs/Study Tour: (3 Si 3)	2 Participants
LOCAL MANUFACTURING				
July-Aug.	Behera Co/ Field	3 LM 1.78	Grain Thresher Dev.	2 Trainees
July-Aug.	Behera Co/ Field	3 LM 2.12	Mower Development	2 Trainees

In-Country : 16 courses = 158 Trainees
 Participants: 11 courses = 63 Participants
 Total: 27 courses 221 Trainees

(62 participants in 10 technical and 1 in academic training program)

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

AGRICULTURAL MECHANIZATION PROJECT

A. I. D. Proj. NO. 268 - 0031

EGYPTIAN MOA/USAID

5 th. Floor - Building of the
General Society For Land Reform
P. O. B. 286 Dokki - Giza, A.R.E.

704800 - 704720

704864 - 707847



مشروع المكننة الزراعية
وزارة الزراعة المصرية - وكالة التنمية الأمريكية
العدد الخامس - مبنى الجمعية العامة للإصلاح الزراعي
صندوق بريد ٢٥٦ - الدقي - جيزة ٢٠٠٠
٧٠٤٧٢٠ - ٧٠٤٨٠٠
٧٠٧٨٤٧ - ٧٠٤٨٦٤

DATE SEPT. 4, 1983

التاريخ

TO : Mr. Fred Schantz
Extension/Training Advisor

FROM : Ibrahim El Ghatas-
In-Country Training Officer *Ibrahim El Ghatas*

SUBJECT: Establishment of movable maintenance workshop unit
in each governorate

During the 3-day symposium held in Maamoura for the project extension specialists in the period 26/7 through 28/7/83, the repairing and maintenance processes of machines were raised by the specialists who said that this question forms critical barrier to their on-going activity.

On presenting the report concerning this symposium to Dr. A.El Sahrigi, who recommended that you should study the possibility of the establishment of a movable maintenance workshop unit (one for each governorate) on the in-country training budget finance.

For your information and action please.

AGRICULTURAL MECHANISATION PROJECT

Group 6 Demonstration/Training Equipment (IFB 2)

<u>Item No.</u>	<u>Item</u>	<u>Units</u>
1.	TRACTOR (70-75 HP)	50
2.	TRACTOR (80-90 HP)	15
3.	TRACTOR (110-120 HP)	15
4.	SPIKE TOOTH HARROW	30
5.	MOWER	30
6.	GRAIN DRILL	30
7.	BEDDER	30
8.	SEED PLANTER	30
9.	CULTIVATOR	30
10.	MANURE SPREADER	30
11.	RING ROLLER	15
12.	ROLLER HARROW	15
13.	BULLDOZER	1
14.	ELEVATOR SCRAPER	1
15.	MOTOR GRADER	1
16.	CHEMICAL FERTILIZER SPREADER	15
17.	LIQUID SPRAY UNIT (Trailed)	15
18.	TRACTOR MOUNTED LIQUID SPRAY UNIT	15
19.	REAR MOUNTED BLADE	30
20.	SUBSOILER	15

TOTALS: 413

(Plus 20% spare parts)

FISCAL REPORT
OF THE TRAINING AND EXTENSION SUBPROJECT
for the MONTH of July 19

The following is a summary of the fiscal report No. _____ in Local Currency (L.E.) related to the referenced Training and Extension Subproject.

<u>LINE ITEM</u>	<u>BUDGET</u>	<u>EXPENDITURE</u>	<u>BALANCE</u>	<u>QUARTERLY BALANCE</u>
1. Instructors Fees	_____	<u>198.000</u>	_____	_____
2. Equipmental Rental	_____	<u>51.000</u>	_____	_____
3. Petroleum, Oils, Lubricants	_____	_____	_____	_____
4. Training Aids, Equipment	_____	<u>5.000</u>	_____	_____
5. Machine Operator Fees	_____	_____	_____	_____
6. Room/Board	_____	<u>3125.740</u>	_____	_____
7. Transportation	_____	<u>500.350</u>	_____	_____
8. Expendable Training Materials	_____	<u>2124.640</u>	_____	_____
9. Incidental Living Expenses	_____	<u>1249.500</u>	_____	_____
10. Training Center Fees	_____	<u>524.910</u>	_____	_____
11. Administrative Expenses	_____	<u>613.250</u>	_____	_____
		<u>8453.090</u>		
TOTALS: (Receipts)	_____	<u>6500.000</u>	_____	_____
Outstanding Petty Cash/Checks:	_____		_____	_____
		<u>11953.090</u>		
	<u>GRAND TOTAL:</u>	<u>88356.00</u>		

<u>DEMONSTRATION/TRAINING EQUIPMENT</u> <u>(COMMODITIES)</u>	_____	<u>88356.00</u>	_____	_____

 _____
 (finance) 3/7/73 1973
(date)

Agricultural Mechanization Project

AID GRANT NO. 263-0031
MINISTRY OF AGRICULTURE
ARAB REPUBLIC OF EGYPT

FISCAL REPORT
OF THE TRAINING AND EXTENSION SUBPROJECT
for the MONTH of August 1983

The following is a summary of the fiscal report No. ___ in Local Currency (L.E.) related to the referenced Training and Extension Subproject.

<u>LINE ITEM</u>	<u>BUDGET</u>	<u>EXPENDITURE</u>	<u>BALANCE</u>	<u>QUARTERLY BALANCE</u>
1. Instructors Fees	_____	<u>- 0 -</u>	_____	_____
2. Equipmental Rental	_____	<u>2190.250</u>	_____	_____
3. Petroleum, Oils, Lubricants	_____	<u>- 0 -</u>	_____	_____
4. Training Aids, Equipment	_____	<u>- 0 -</u>	_____	_____
5. Machine Operator Fees	_____	<u>- 0 -</u>	_____	_____
6. Room/Board	_____	<u>5168.300</u>	_____	_____
7. Transportation	_____	<u>639.650</u>	_____	_____
8. Expendable Training Materials	_____	<u>507.430</u>	_____	_____
9. Incidental Living Expenses	_____	<u>366.000</u>	_____	_____
10. Training Center Fees	_____	<u>2291.000</u>	_____	_____
11. Administrative Expenses	_____	<u>370.000</u>	_____	_____
TOTALS: (Receipts)	=====	<u>11,432.630</u>	=====	=====
Outstanding Petty Cash/Checks:		<u>18,000.000</u>		
		<u>GRAND TOTAL: 29,432.630</u>		

<u>DEMONSTRATION/TRAINING EQUIPMENT (COMMODITIES)</u>	=====	<u>88,461.400</u>	=====	=====

Ahmed
(finance) 30/ 8
(date)

A.3 EXTENSION/TRAINING SUBPROJECT

Activity Report
September, 1983

Submitted by:	Fred Schantz	Hussein Heiza
	Roger Engstrom	Salah Bakar
	Gordon Stringer	Salah Ismail
	Maher Iskander	Ahmed El Beheri
	Dr. Mamdouh El Baz	Moh. A. Aziz
	Youssef A. Maugod	A. Hamid Soiden
	Fouad Metri	Hassan
	Ibrahim El Gatas	Moh. Yasser
	Zaghloul S. El Sayed	Essam Wasif
	Samir Shawky	

Summary:

Major events are summarized below and detailed reports of each unit are found in Appendix A.1 through A.9. Appendix A.8 lists the expenditures for the month.

Extension Activities:

1. Extension activities picked up this month as the cotton and some rice harvesting activities began. Approximately 40 of the planned 795 feddans of rice were harvested during the month, primarily in the Sharkia governorate. Equipment demonstrations on other project implements continued and a new type cotton stalk digger (blade) was introduced.
2. Effort was exerted to ready the demonstration/training equipment now in the field which requires hand tools and spare parts for repairs. The ongoing problem of equipment dealers failing to deliver has severely affected progress on this activity. Critical to the field effort are the two additional short-term technical experts who have been requested but who have not yet arrived. Without additional field help to properly demonstrate and train the new specialists on the operation and maintenance of the equipment, minimal results of the field effort will be realized.
3. Group 7 demonstration training equipment was completed with the Small Farmer Production Project Staff (see Appendix A.9) and put out for local procurement. This additional equipment will allow additional field demonstrations and in-field training to take place.

Considerable time was spent on another large equipment order (IFB 83-03) which should be completed in October.

4. An outline was completed for a project working paper entitled "Machinery Management in Egyptian Agriculture" which is being reviewed and expanded.

5. The 23 Mechanization Extension Programs for Project villages were reviewed during the month and several copies made. Appendix A.1.1 is the first of a series of status reports on these programs which will be updated periodically by the field staff with technical supervision from the Project.
6. Two requests were made to Project management for village workshops/tool sheds (Appendix A.2.1 and for equipment for these sheds (Appendix A.2.2). These critical items are needed to supplement the hand tool sets already on order to demonstrate/train the mechanization specialists on equipment support methods. Without this, trained operators and mechanics, and a spare parts supply, the project equipment will soon be in a state of disrepair.
7. The Extension Information Unit produced Project stickers which were placed on equipment belonging to the project. In addition it edited and issued two extension articles in the local newspaper (on irrigation pumps and threshing machines), attended a demonstration on siphon tubes and a contacted a local dealer concerning the delivery of technical training materials for training center and Project use. The assistant director, Mr. Youseef Maugod, resigned during the month to take a job in Saudia Arabia. His position as video camera operator will need to be filled as soon as possible.
8. The Demonstration/Training System Unit at Gabel Asphar developed serious problems during the month as follows:
 - a) The self-loading scraper needed for preparing the plots for planting next month was delayed until probably December. This is too late for this fall season which ends in November.
 - b) The farm management advisor who has been responsible for developing the unit/farm resigned during the month and will be leaving November 30.
 - c) The equipment dealers have not succeeded in completing the equipment deliveries or assemblies critically needed for planting next months crop.

Due to these problems, Project management has instructed both the Extension Advisor and the Extension/Training Coordinator to spend part of each week at the farm to see that the progress to date continues on.

9. The Land (Soil Improvement Extension Unit has recently began to develop selected engineers for mechanization extension training with the Project's mechanization extension specialists who will enter the Sakha III course October 1, 1983 at Kafr El Shiek. Once they have completed the 3 month formal course, the new engineers will return back to the Fayoum and Beni Suef governorates under the supervision of the extension unit while working with the land improvement engineering staff completing

land leveling activities in the south. These two new governorates will be covered in addition to the established program in the Minia.

10. The Machinery Introduction Fund committee met during the month to review several loan requests. The minutes are found in Appendix A.5.

In-Country Training Activities

1. During the month 223 trainees attended 36 new and continuing courses/sessions (Appendix A.6.1).

Participant Training Activities

1. During the month the following students attended new and continuing courses/sessions (Appendix A.7).

a) Observation/Study Tours:	19	(2 courses)
b) Technical Training:	2	(2 courses)
c) Academic:	<u>1</u>	(1 course)
Total	22	
2. A summary of all Participant training activities is found in Appendix A.7.3. This was prepared by the Participant Training officer who resigned during the month (Samir Shawky) and has been replaced by Mr. Hussein Heiza.
3. All participant training programs have been postponed until further review of the programs by the Ministry. The reasons given are (a) apparently some participants who went on or were scheduled to go on tours were not fully cleared for travel by the Ministry, and (b) recently the value/usefulness of observation/study tours has been placed under review by the Ministry. No date has been given as to when this situation will change.

During the Month:

The number of unsettling events mentioned above retarded a number of positive and progressing actions/programs developed to date. The resignations of two key persons - the farm management advisor and the participant training officer - were the most serious since the already over taxed subproject staff will have to fill their gaps until replacements can be found and trained. This combined with a widening of the Projects scope and areas without addition of staff office facilities, sufficient transportation and support, can only lead to a less effective field effort in Project areas. Of even more critical importance considering present conditions (as mentioned before), is the urgent need for field equipment support which appears to now be materializing. Equipment sheds, tool sheds and maintenance equipment, which has begun to receive attention, in the hands of personnel now being trained, will serve to absorb the insufficient and growing absence of technical expertise concentration in specific areas which is necessary if a successful middle-mechanization model is to be developed for Egyptian agriculture.

Meetings/Field Trips

1. Several meetings were held with the Small Farmer Production Project and Mechanization Project staff to discuss/review/finalize large demonstration/training equipment orders.
2. A meeting was held with a member of the "York Team" visiting Egypt to continue development of institutional plans for Egyptian agricultural development. The Project's extension and training plans were discussed.
3. A meeting was held with Dr. Essam Ghais, Director for the general department of training and Mrs. Sumira Khalil, Director of training in the Agrarian Reform of the Ministry of Agriculture to discuss current and upcoming courses at their training centers.
4. Several meetings were held with equipment dealers to discuss their unacceptable performances in delivering Project equipment. Those who wanted to discuss future orders were told they would have to first complete already overdue orders.
5. A meeting was held in Zagazig to discuss a Sharkia equipment order. The staff had altered all project equipment specifications.

Problems:

As before insufficient field transportation and unrealistic fuel limitations.

Plans for Next Month:

1. Continue extension and training activities.
2. Complete procurement orders IFB 83/03 and a new maintenance demonstration equipment order group 10.
3. Revise/settle the Gabal Asphar farm development plan.
4. Begin monthly coordination meetings with the Projects Research Subproject in Alexandria.
5. Procure Project training materials/aids.
6. Draft a machinery management program for project areas.

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Monthly Activities
Extension Advisor
September, 1983

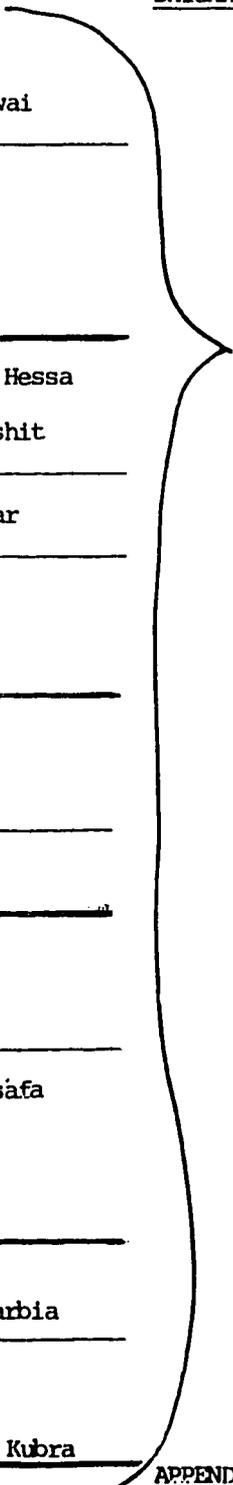
Submitted by: Roger Engstrom

Summary:

Combine conversions went very slow but the training so far is good. Still a problem keeping chains tight, chains are broken because of this.

Still need work on S.A. and K.D.: combines' fuel filter system; long dividers need to be installed for long lodged rice which will be ready soon. Short rice worked well except for first few days when moisture was near 40% but by the time the machinery was repaired/adjusted to the moisture it was down to 28%. After the combine is full some places the combine drove out of the field to unload in other cases farmers had wagons to catch the grain in the field. We need damp or Auger or gravity flow wagons for each combine. They should have bagging chutes to enable bagging directly in the field. The straw from the combine is dry in 2 to 4 days and is ready to bale directly: to make it more efficient a rake is needed to make good windrows for the baler. Tools for each combine are needed. Tools furnished are inadequate. Repairs are needed to get mower ready for cotton stalks also rakes would be useful and also rake wheel for use with the cotton digger/baler system when it comes. The cotton digger works well but will need a push to get purchased before season is over. No progress on planters, machinery delivery is going well; fuel shortages.

AGRICULTURAL MECHANIZATION PROJECT
STATUS REPORT NUMBER 1
of the Mechanization Extension Programs in Project
Villages

<u>Village No</u> <u>Pretest</u>	<u>Village</u> <u>Shiekh Ahmad</u>	<u>Status</u>
1. Desya		
2. Ezab Besentwai		
3. El Gorn		1) All programs translated from Arabic to English
4. El Darawah		
5. Dessounes		2) All programs are under review
6. Shabshir El Hessa		
7. Keniset Damshit		3) Quarterly workshop being scheduled for December 83 for Mechanization Extension Specialists to review, revise and update program for 15 Oct. 83 to 15 Oct 84 season.
8. Kom El Naggar		
9. Kafr Dima		
10. Qelyb Abiar		
11. El Saadine		
12. El Teline		
13. El Hessah		
14. El Shamout		
15. Magoul		
16. Kafr El Hossafa		
17. Beltan		
18. El Hessah		
19. El Atlas		
20. Seila El Gharbia		
21. Beni Ibeid		
22. Beni Moussa		
23. El Birba El Kubra		

Monthly Activities
Extension Officer
September, 1983

Submitted by: A. El Behery

Summary:

- We attended several meeting with the farmers at our villages.
- Demonstrating rice mower at one of our governorates (Behera).
- Supervising combine harvester operation in Sharkia governorate at the same time we accompanies staff to our governorate.
- Demonstrating cotton stalks digger in Fayoum Governorate.
- Selecting extension staff from Fayoum and Beni Suef governorates.
- Two visits to Sakha Training Center for combine course and extension specialist course.
- Following machinery distribution from the dealers to our extension villages.

Problems:

- There is are no hand tools.
- There is no transportation for the extension staff.

Plans for Next Month:

- Following machinery distribution.
- Following the extension staff activities.
- Help our staff to repair the machines for cutting cotton stalks.
- Establish training course at our village to train the farmer for using El-Behery Backhoe, land leveller and grain drill.

مركز الدراسات والبحوث

4. J. N. P.O. No. 256 - 6471
P.O. B. 256 Dokki - Giza, ARE.
704660 - 704720
704964 - 707247



شروع الميناء القنصلية
مركز الدراسات والبحوث
لدراسات الحاس - نبي الجمعية العامة للإصلاح الزراعي
مستوفى برید ٢٥٦ - الدقي - ج ٢٠ ع
٧٠٤٦٦٠ - ٧٠٤٧٢٠
٧٠٤٩٦٤ - ٧٠٧٢٤٧

DATE Sept 29, 1983 التاريخ

TO : Dr. Zakaria El Haddad
Project Coordinator
Dr. David Gaiser
Team Leader

FROM : Fred Schantz
Extension and Training Coordinator

SUBJECT: Workshops for Demonstration/Training Equipment Maintenance

There is now an urgent need for small workshops in Project village areas where large quantities of demonstration/training are being located. Without the availability of these workshops to store tools, complete minor repairs, and house equipment-use records, our primary goal of properly managing machinery will not be achieved.

Therefore, we request that the Project place small workshops in our 23 villages as soon as possible. They need to include two items inside:

1. One workbench along one wall approximately 200cm long by 90cm high by 100cm wide, and
2. A set of shelves for misc spare parts and tools or approximately 200cm high by 200 cm wide by 40 cm deep.

Attached is a sketch of the three items for your review. Since the MOA has already fabricated one unit (workshop only) and placed it at the pretest village of Sheikh Ahmad, we suggest this unit with the attached floor area be considered.

Lastly, the financing for these units will probably need to come from the MOA since structures are difficult if not impossible to purchase under our present Project funding.

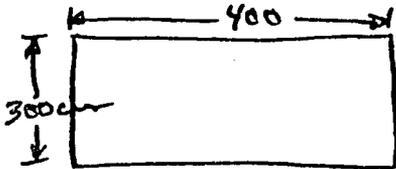
cc: Roger Engstrom
Ahmad Beheiri
Dr. Mamdouh El Baz
file

APPENDIX A.2.1

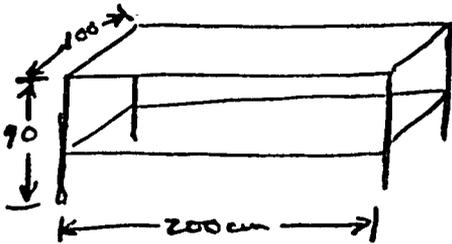
PROPOSED DEMONSTRATION/TRAINING EQUIPMENT
WORKSHOP

WORKSHOP

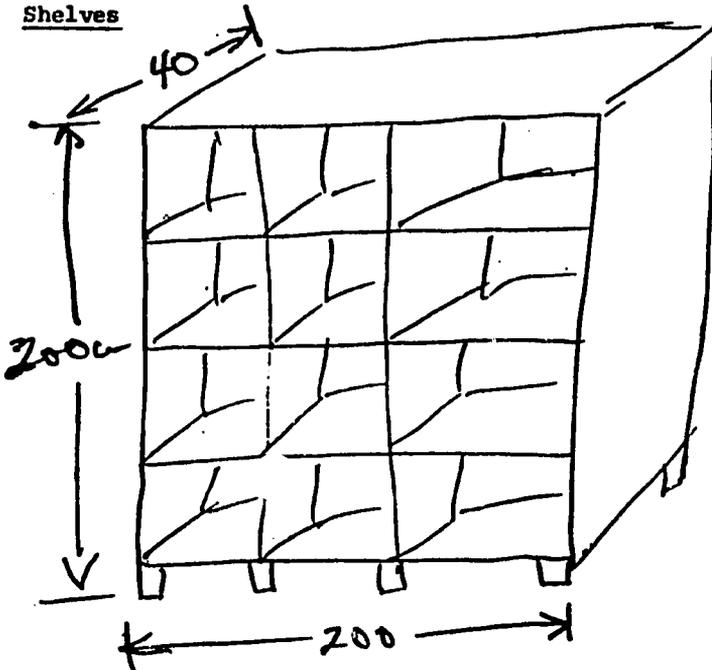
1. Floor area



2. Workbench



3. Shelves



بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

AGRICULTURAL MECHANIZATION PROJECT

A. I. D. Proj. NO. 263 - 0031
EGYPTIAN MOA/USAID
5 th. Floor - Building of the
General Society For Land Reform
P. O. B. 256 Dokki - Giza, ARE.
704660 - 704720
704964 - 707247



مشروع المكننة الزراعية
وزارة الزراعة المصرية - وكالة التنمية الأمريكية
الدور الخامس - مبنى الجمعية العامة للإصلاح الزراعي
صندوق بريد ٢٥٦ - الدقي - جيزة ج ٢٠٠
٧٠٤٦٦٠ - ٧٠٤٧٢٠
٧٠٤٩٦٤ - ٧٠٧٢٤٧

DATE 3 Oct. 1983 التاريخ

TO: Dr. Zakaria El Haddad Project Coordinator
Dr. David Gaiser Team Leader
FROM: Fred Schantz, Extension and Training Coordinator
SUBJECT: Demonstration/Training Workshop Equipment

In reference to my memo of 29 Sept. 1983 concerning Project Demonstration/Training Workshops, we recommend the following demonstration/training equipment be placed in 12 of these workshops in order to allow demonstrations/training sessions in the Projects' 11 districts as well as the Shiek Ahmed pre-test village:

- 1 each- Arc (electric) welder
- 1 each- Air compressor
- 1 each- Hydraulic jack
- 1 set - oxygen/acetylene welder

These items in addition to the set of hand tools already on order will serve to equip the mechanization extension specialists with the minimum equipment support necessary to carry out complete area demonstrations and training sessions on farm machinery servicing, maintenance and minor repairs in Project village areas.

As previously discussed, we are also ordering service trucks (2 for governorate level equipment servicing training) and mobile workshops (30 for village-level training) for in-field maintenance and minor repairs training as required.

5 Oct 1983 date Approved

cc: Roger Engstrom
Ahmed El Beheri
Dr. Mamdough El Baz
Ibrahim El Gatas
File

Monthly Activities
Rural Extension Information Director
September, 1983

Submitted by: Dr. Ahmed Mamdouh El Baz

Summary:

5 days out of the office because of the Grand Bioram.

Designing, defining specifications, bidding, printing, receiving and distributing sticking labels in the name of the project and its address too, to put it on demonstration and training equipment belonging to the project. These stickers will also put on agricultural machines funded by soft loans offered by the project.

Editing and issuing or extension articles:

1st about selecting of suitable irrigation pumps in the monthly extension magazine.

2nd about threshing and winnowing machine designed by the project, on daily Al-Ahram. Besides, other short news published on weekly cooperative journal.

Distributing 50 siphon tubes, and attending a demonstration day in Dakhliya governorate.

At Icon company stores in Nasr City to handle formerly requested A.V. aids and sets, but with no result, because of ill management of workers in the company.

Preparing three extension specialist, about mechanizing operations in wheat, maize, and cotton.

Following up 30 extension signs for Soil Improvement unit.

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

AGRICULTURAL MECHANIZATION PROJECT

A. I. D. Proj. NO. 263 - 0031

EGYPTIAN MOA/USAID

5 th. Floor - Building of the

General Society For Land Reform

P. O. B. 256 Dokki - Giza, ARE.

704660 - 704720

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مشروع المكننة الزراعية
وزارة الزراعة المصرية - وكالة التنمية الأمريكية
الدور الخامس - مبنى الجمعية العامة للإصلاح الزراعي

مستودع بريد ٢٥٦ - الدقي - جيزة ج ٢٠

٧٠٤٦٦٠ - ٧٠٤٧٢٠

٧٠٤٣٦٤ - ٧٠٧٢٤٧



DATE 22 Sept 1983 التاريخ

To : Dr. Zakaria El Haddad

From : Dr. Mamdouh El Baz, Extension Information Director
Mr. Fred Schantz, Extension and Training Coordinator

Subject : Request to Purchase Training Audio-Visual Equipment

We request approval to purchase for the Project the following items formerly accepted in the 1983 Training Plan:

1. 1 each - Overhead projector
2. 1 each - 16mm film projector
3. 1 each - Tape recorder
4. 1 each - Slide projector
5. 1 each - Viewing screen
6. 1 each - Slide Sorter, board type
7. 1 each - 25 meter extension cord
8. 1 each - 35mm camera

One set will be located at the Mechanization Research Institute Training section at Jeniclaeye and one set in the Cairo Office.

cc. Ibrahim El Gatas.

File

Approved Date

El Haddad

APPENDIX A-3.1

one unit is enough for the financing

87-

MONTHLY ACTIVITIES OF THE Gebel Asfar
PREPARED BY G.B.Stringer
For the Month of September 19 DATE 7 Oct. 83 19

A. SUMMARY:

See monthly report & report to Dr. Sahrif

B. PROBLEMS:

- 1.
- 2.
- 3.

C. PLANS FOR NEXT MONTH:

APPENDIX A-4


Signed

7 Oct 1983
Date

Monthly Activities
Gabal Asphar
September, 1983

Submitted by: Maher Iskander
Gordon Stringer

Equipment Rental:

Bulldozer, Fiat and Poclairn - very little progress was made during the month due to the official holidays. The first Fiat was exchanged for another one. The Poclairn was out of order.

Land Leveling:

Two fields of approximately 80 feddans are ready for leveling. None of the Companies contacted by the project would agree to come to the work site and do the job. A third field will soon be ready for leveling. It is about 47 feddans. Leveling will start here with the equipment on hand until the J.D. 762-A arrives.

E.G.C.T. Equipment:

Approximately L.E. 170,000 has been officially received/delivered. The balance is in the farm shop awaiting either field trails and/or completion of shortages.

ICON Equipment:

Two tractors have been delivered. On the 4250 tractor during the first 85 hours of work we have suffered 4 punctures. This has been due to the nature of the field and work being done. Two of these punctures were rips in the carcass due to hidden stumps in the field. There were a few spare items delivered with the tractor. Some do not fit the tractor - such as oil filters and tire wrenches. The 3040 tractor has suffered 1 puncture during the first 40 hours in the field.

The training program on equipment assembly for the ICON and EGCT equipment started on 3 September.

Next Month:

We will continue to clean up the 47 feddan field and start the leveling work there. Canal and structure work needs to start on the canal along the 80 feddans so that they will be ready after these fields are leveled.

Monthly Activities
Machinery Credit Committee Meeting
(Minutes) (11th)
September, 1983

Submitted by: Fouad Metri

The meeting met on Sunday and Monday the 25th and 26th, 1983 (September) all members were present.

Financial status of loans were discussed firstly, low expenditures were pointed out in relation to the total actual expenditures approved by either banks or committee. This indicates the unseriousness of requests submitted. The committee sees that banks should be informed of refusing requests before 30/6/1983 to enable the committee examine and approve new requests. Governorates should then be advised by project management of total requests currently examined and approved as of 1/7/1983 and the total loans actually expended.

Due to low expenditures in the Minia Governorate (5%) and relatively higher in Behera around (19%), the committee then request the withdrawal of the amount of 50,000 LE of the amount allocated for El Minia and adding it to El Behera, and per the committee's decision of giving active governorates their needs.

The consolidation of the amounts allocated to El Qalubia Governorate to reach LE 20,000 of the surplus which is LE 100,000 to be able to cover the amount being spent for the purchase of 18 rotatiller.

El Qalubia Governorate

Discussion were carried out concerning the 18 requests by farmers. The project administration had requested that El Qalubia governorate, Agricultural directoral should submit a bid, after all procedures were carried out, were Giza Motors Co. were chosen to deliver the rotatiller, 14 HP Model Kobra. Yet the following reservations were made:

1. Agent should have spare parts of the cultivators
2. A maintenance workshop should be available.
3. The necessary guarantee for the cultivator.

Eng. Fouad Metry and Eng. Zaki Helmy were instructed to go to the company to make sure of the previous reservations.

The committee then examined the requests submitted.

The approval of request submitted by the Agricultural Cooperative at Tahanoub, Shebeen El Kanater Markaz for the purchase of one Italian backhoe for canal cleaning, Model Argentrio.

El Gharbia Governorate

The committee has previously approved in its 8th meeting the requests of 14 cooperatives for the purchase of agricultural machinery. The credit bank in the El Gharbia governorate was informed of this decision on 29/6/1983.

During the follow up on the loan status, it was obvious that no actual expenses were effected. On 14/9/1983 and as requested by Dr. Zakaria El Haddad, Eng. Samir Shawky and Eng. Fouad Metry followed up on the situation in the El Gharbia Governorate, meeting with officials of the banks and Cooperative directorate, heads of cooperatives to be able to finalize all procedures necessary concerning the loan expenditure and the purchase of the machinery required. As was clear in the attached report the Bank management, in the government made some guarantees. These reservations were not accepted by the cooperatives, such as putting their money as collateral, their property, etc. was refused on the basis that it is general or public property, besides their membership is temporary.

The bank requested a certificate indicating the property of each member, this obstructed most of the cooperatives of fulfilling terms of the loans.

The committee has invited bank Directors, Cooperatives Directors for a meeting at the project premises in Dokki, attended by the Project Director and Project Coordinator to discuss all the above problems and solving all obstacles to facilitate all procedures required for the purchase of the machinery.

A copy of the report has been sent to Eng. Hussein Serry, Head of the central administration for cooperation in that matter and follow-up as was suggested by Dr. Zakaria El Haddad.

The committee then examined the requests submitted as follows:

The approval on the request submitted from farmer El Ghobashy Maarouf Hegazy, Kafr Shoubra El Yaman, Zefta concerning the purchase of a cultivator, Model Baspo, 14 Hp.

The postponement of the approval on the request submitted by Tarek Abdel Latif Abo El Ezz, Kafr El Zayat concerning the purchase of a cultivator, Model Baspo, 14 Hp because the price was not suitable.

The postponement of the request by farmer Moustafa Abdel Ghafar Kafr El Shouwahy - Kafr El Zayat concerning the purchase of the cultivator F.M. 14 HP till the catalogue is available.

El Sharkia Governorate

The committee has previously approved the purchase of machinery and equipment for the agricultural cooperatives in the governorates at a maximum of LE 60,000 for each cooperative.

The Credit Bank has been informed the project management that its board and the principle banks board has approved to provide the cooperatives the sums of money required after finalizing the procedures. A committee headed by Dr. Salah Abdel Maksoud, Head of Agricultural Engineering, Faculty of Agriculture, Zagazig University. The Cooperative Union to set the specifications necessary for the machinery and date was set to bid.

El Beheira Governorate

The approval of the following requests. Abdel Rahman Hamdy, Isam El Din Abdel Hamid, Abdel Moneim M. Saad Hussein, Aly M. Soliman, Abbas Khalifa, Mohamad Abdel Fattah of Waked villages, Zafaran, Kafr El Haga, Menshat El Ibrahimia Abyouka, El Fatiry, Kom Hamada and Itay El Baroud Markazes, Damanhour concerning the purchase of self propelled mower for each.

The approval of the request submitted by farmer Mahasen Abdel Hamid of El Zafaran village, Kom Hamada concerning the purchase of a agricultural trailer, locally manufactured.

The approval of the request submitted by farmer Mohamad Said Hanafy of Basinia village, Abo El Matamir concerning the purchase of one locally manufactured disc harrow.

The approval of the request submitted by farmer El Sayed Basouny, Besentawi village, Abo Homos concerning the purchase of one Backhoe for cleaning canals, Model Argentrio.

El Minia Governorate

The approval of the request submitted by Abdel Azeim Mohamad Atteya of El Malawy Matay concerning the purchase of a mower, Model Gasbaroud

The purchase of the harvester and combine were not approved for the presence of technical difficiencies.

Next meeting will be on 16/10/1983.

COMMITTEE MEMBERS

COMMITTEE RECTOR

Monthly Activities
In-Country Training Unit
September, 1983

Submitted by: Zaghloul Sayed El-Sayed

Summary:

1. Training course for Mechanic Level II started on July 23, 1983 for 11 trainees in Maamoura Center.
2. Training course for Field Instruction started on 24th September, 1983 for 10 trainees in Maamoura Center.
3. Training course for Tractor Mechanic started on September 24, 1983 for 17 trainees in Nubaria Center.
4. Training Course for Combine Operations and maintenance started on September 24, 1983 for 19 trainees in Sakha Center.
5. Two training courses for Tractor driving locally in Beni Suef.
1st course from 3/9/1983 to 9/9/1983 for 8 trainees.
2nd course from 10/9/1983 to 15/9/1983 for 7 trainees.

Plans for Next Month:

1. Training course for extension specialists starts on October 1, 1983 for 18 trainees at Sakha Center.
2. Training course for Tractor Implement starts on October 8, 1983 for 15 trainees (in Maamoura Center).

September 1983 Training Schedule

<u>DATE/TIME</u>	<u>LOCATION</u>	<u>COURSE NO.</u>	<u>COURSE TITLE</u>	<u>COMMENTS</u>
MACHINERY MANAGEMENT EXTENSION UNIT				
July-Sept.	Maamoura T.C.	3 Ex 12.1	Mechanic: Level I	13 Trainees
July 23 - Nov. 11	Maamoura T.C.	3 Ex 30	Mechanic: Level II	11 Trainees
13 Aug - Sept. 15	Maamoura T.C.	3 Ex 20.1	Tractor Op	15 Trainees
Aug. 20 - Sept. 1	Maamoura T.C.	3 Ex 44.3	Mechanic Short Course: Irrigation	13 Trainees
Sept. 24 - Oct. 5	Sakha T.C.	3 Ex 44.4	Combine Op/Main- tenance	19 Trainees
Sept.	Project Vill.	3 Ex 37.1-15	Land Leveling	75 Trainees
Sept-Oct	Sharkia	3 Ex 41.1-.9	Harvesting (rice)	13 Trainees
(Aug. 1 - Aug. 20)	Gabal Asfar	3 Ex 44.5	Bulldozer Driver	14 Trainees
Sept. 3 - Sept. 29.	Gabal Asfar	3 Ex 44.6	Machinery Assembly	9 Trainees
Sept. 3 - Oct. 4	Phillippines/ Thailand	3 Ex 6	Observation/Study Tour:	9 Trainees
Sept. 3 - Oct. 4	Phillippines/ Thailand	3 Ex 7	Observation/Study Tour: Ag. Mech.	10 Trainees
RESEARCH AND DEVELOPMENT UNIT				
Aug. 7 - Feb. 6, 1984	U.S.A.	3 RD 1	Tech. Training	1 Trainee
Aug. 7 - Feb. 6, 1984	U.S.A.	3 RD 2	Tech. Training	1 Trainee
PLANNING AND EVALUATION UNIT				
July 7 - Jan. 6, 1985	U.S.A.	3 PE 1a	MSc: Ag. Economics	1 Trainee
LAND (SOIL) IMPROVEMENT UNIT				
Aug. 6 - Sept. 9	Nubaria T.C.	3 Li 6.1	Tractor Driver	18 Trainees
Sept. 3-9	Beni Suef		Tractor Driver	8 Trainees
Sept. 10- Sept. 15	Beni Suef		Tractor Driver	7 Trainees
LOCAL MANUFACTURING				
Sept.	Beheria Co.	3 LM 1.9	Grain Thresher Dev.	2 Trainees
Sept.	Beheria Co.	3 LM 1.9a	Mech. Drawing	6 Trainees

36 - In-Country Courses for Trainees
5 - Participant Courses for Trainees

Total: 41 courses
for 245 trainees

Monthly Activities
Participant Training Officer
September, 1983

Submitted by: Samir Shawky

Technical Training (non-academic)

Two groups of 22 trainees of the extension unit travelled. They represented two governorates Gharbia and Sharkia, they visited Thailand and the Phillipines for four weeks during the period from 3/9/1983 to 2/10/1983.

It was planned that two more groups will travel on 12/9/83 also affiliated to the extension unit, represented by the Agricultural Directors and cooperatives in governorates, they will visit the U.S.A. for four weeks. This program was cancelled. The participant training program was also cancelled (non-academic) as a whole.

It is worth mentioning that 10 visits were effected already for the number of 66 trainees of the total plan set and prepared. The total visits recommended were 16 for the total number of 150 students.

Academic Training

All documents requested were finalized of one student in addition to nine trainees' documents sent to the AID. The above student passed the TOEFEL with a score of over 500. The approval of Dr. El Sahrighi was given.

English Training Course

No students from the Project were sent for the English course at the American University in Cairo. The course started on 26/9. None of the courses were registered during my travel abroad, after my return the USAID officer responsible for registration was on leave.

Problems:

The discontinuation of the non-academic Technical Training program.

A memo was submitted to the Project Director, Dr. El Sahrighi indicating the status of Technical Training program including some suggestions in the method of carrying out the program.

Academic Program

A number of students sat for the TOEFEL but non passed the 500 score except on student. Project management did not send his papers to USAID. Therefore, the program will stop due to unatained levels of English required.

It is also suggested that the engineer of the Agricultural Mechanization Institutions should be sent to the U.S.A. to obtain the academic grants after passing English courses at the AUC. Also those who know the language will be able to make procedures necessary for travel. Another memo was submitted to Dr. El Sahriqi concerning the institutions engineers language status.

Future Plans

Eng. Hussein Heiza will be in charge and responsible for the Participant Technical Training Program and duties in the future.

AGRICULTURAL MECHANIZATION PROJECT

A. I. D. Proj. NO. 263 - 0031
EGYPTIAN MOA/USAID
5th Floor - Building of the
General Society For Land Reform
P. O. B. 256 Dokki - Giza, ARE.
704660 - 704720
704364 - 707247



مشروع المكنة الزراعية
وزارة الزراعة المصرية - وكالة التنمية الأمريكية
الدور الخامس - مبنى الجمعية العامة للإصلاح الزراعي
مستودع بريد ٢٥٦ - الدقي - جيزة ج ٢٠ ع
٧٠٤٦٦٠ - ٧٠٤٧٢٠
٧٠٤٣٦٤ - ٧٠٧٢٤٧

DATE 15 Sept 1983 التاريخ

To : Dr. David Gaiser - Team Leader
Dr. Zakaria El Haddad - Project Coordinator
From : Fred Schantz, Extension and Training Coordinator
Subject : Participant Training Status

The attached chart summarizes the Project's participant training activities through the 31 Sept. 1983. This has been prepared in order to point out the following:

1. Only 15% of the US 2 million has been spent to date. Of the three academic candidates cleared to begin programs one entered his program, one disappeared before he received approval and one postponed her program. The observation/study tours are being completed but are now experiencing bureaucratic difficulties.
2. Since the funds for our Project's participant training programs are supposed to be spent during the life of the Project and probably will not be at the present spending rate, consideration needs to be given as to how participants who begin long - term programs (which will run beyond the life of the project) will be funded when the project ends in Sept. 1985.
3. Considering the lack of qualified candidates - or qualifiable during the period remaining - the possibility of shifting a portion of these funds to be used for in-country training activities, or something else, should probably be discussed in order to fully utilize these grant allowances.

cc. Samir Showky
File.

PARTICIPANT TRAINING STATUS (SEPT 31, 1983)

NO.	COURSE NUMBER		PARTICIPANTS			PROGRAM		TIME FRAME	COMMENTS
	PROJECT	USAID	GROUP/LEADER	NO. OF PART.		TYPE	TO		
				plan	actual				
<u>Technical</u>									
1.	3T9	PIO/P 00429	Samir (Tr.)	10	10	Obs/Study	USA	7J1-2Aug. 83	Completed
2.	2T3	PIO/P 00432	Ibrahim (Tr.)	10		" "	"	(Oct. 1983)	(Postponed)
3.	2EX48	PIO/P 00434	Mamdouh (Ext)	10		" "	"	12Sept.-13Oct83	(Postponed)
4.	2EX2	PIO/P 00441	Fouad (Ext)	9		" "	"	12Sept-13Oct 83	(Postponed)
5.	2PE3	PIO/P 00436	Maher (F.M)	11		" "	"	12Oct-13Nov 83	Ready
6.	3EX3	Group 1	Fouad S (Ext)	13	7	" "	Phil.	26J1-9Aug. 83	Completed
7.	3EX4	Group 6	(Zaki as Tr. (Ext)	13	9	" "	Thai	17Aug-25Aug83	Completed
8.	3EX5	Group 3	Wagih (Ext)	13	12	" "	Phil/Thai	13Jul-Aug.83	Completed
9.	3EX6	Group 5	Moh. A. Aziz (Ext)	13	9	" "	Phil/Thai	13Sept-4Oct83	in progress
10.	3EX7	Group 2	Soldan (Ext)	12	10	" "	" "	3Sept-4Aug. 83	in progress
11.	3S10	PIO/P 90544	Dr. Orabi (Si)	2	1	" "	USA	2Jul-30Aug. 83	Completed
12.	3S13	PIO/P 90557	Dr. Araby (Si)	2	2	" "	USA	31Jul-10Sept83	Completed
13.	3S15	Group 4	Fayoumi (Si)	4		" "	Pakistan	20Sept-21Oct-83	(Postponed)
14.	3EP10A	PIO/P 00438	Nour (Evaluation)	6		" "	USA	10Oct-15Nov. 83	Ready
15.	3RD1	PIO/P 00433	Nazek (R.D.)	1	1	Tech. Tr.	USA	7Aug.-Feb 6. 84	in progress
16.	3RD2	PIO/P 00430	Adel (R.D)	1	1	Tech Tr.	USA	7Aug-83-6Feb. 84	in progress
				130	63				
<u>Academic</u>									
1.	2EX45.1:	PIO/P 90556	Nader Fawzi	1		Academic	USA	(1983-1985)	PROCESSING
2.	3RM14	PIO/P 90554	Adel El Gohary	1		"	"	" "	"
3.	Cancelled	PIO/P 00428	Hassan Khalil	1		"	"	" "	"
4.	3PE9	PIO/P 90545	Zaki	1		"	"	" "	Dropped on
5.	2PE8	PIO/P 90555	Sohair M.	1		"	"	" "	Not quali
6.	3PE1-A	PIO/P 90553	Ataf Abdel Razeq	1		"	"	" "	Ready
7.		PIO/P	Nabil Helmi	1	1	"	"	Aug. 83-Jan 85	IN PROGRESS
8.	3RM1-1	PIO/P	Ayman ElMofti	1		"	"	(1983-1985)	PROCESSING
9.	3PE2	PIO/P	Aly Kamel	1		"	"	" "	"
				9	1				

APPENDIX A.7.3

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FISCAL REPORT
OF THE TRAINING AND EXTENSION SUBPROJECT
for the MONTH of September 1983

The following is a summary of the fiscal report No. _____ in Local Currency (L.E.) related to the referenced Training and Extension Subproject.

<u>LINE ITEM</u>	<u>BUDGET</u>	<u>EXPENDITURE</u>	<u>BALANCE</u>	<u>QUARTERLY BALANCE</u>
1. Instructors Fees	_____	<u>80.00</u>	_____	_____
2. Equipmental Rental	_____	<u>3208.00</u>	_____	_____
3. Petroleum, Oils, Lubricants	_____	<u>- 0 -</u>	_____	_____
4. Training Aids, Equipment	_____	<u>721.985</u>	_____	_____
5. Machine Operator Fees	_____	<u>- 0 -</u>	_____	_____
6. Room/Board	_____	<u>3280.100</u>	_____	_____
7. Transportation	_____	<u>97.500</u>	_____	_____
8. Expendable Training Materials	_____	<u>2334.285</u>	_____	_____
9. Incidental Living Expenses	_____	<u>2630.500</u>	_____	_____
10. Training Center Fees	_____	<u>7523.800</u>	_____	_____
11. Administrative Expenses	_____	<u>6.200</u>	_____	_____
TOTALS: (Receipts)	_____	<u>19,882.370</u>	_____	_____
Outstanding Petty Cash/Checks:	_____	<u>12,500.000</u>	_____	_____
		<u>GRAND TOTAL: 32,382.370</u>	_____	_____

<u>DEMONSTRATION/TRAINING EQUIPMENT (COMMODITIES)</u>	_____	<u>- 0 -</u>	_____	_____

[Signature]

Shimel
(Finance)

Oct 2 1983
(date)

ITEM	QUANTITY			UNIT PRICE (LE)	TOTAL
	SFPP	AMP	TOTAL		
1. Silage Mower	200	150	350	1200	420,000
2. Grain Drill	15	50	65	3000	195,000
3. Land Scraper	15	50	65	900	58,500
4. Rotatiller	15	-0-	15	3000	45,000
5. Tractor	-0-	25	25	15000	375,000
6. Lazer Unit	-0-	2	2	40000	80,000
7. Backpack Sprayer	500	-0-	500	80	40,000
8. Chopper/Grinder	15	5	20	5000	100,000
9. Bedder	15	-0-	15	3000	45,000
10. Seed Planter	12	-0-	12	4000	48,000
11. Ditcher	3	5	8	500	4,000
	<u>790</u>	<u>286</u>	<u>1076</u>		
				SFPP EST. SUBTOTAL: 553,000	
				AMP EST. SUBTOTAL: <u>857,500</u>	

Est. Total: LE 1,410,500

E. A. ...

A.4 SERVICE CENTER/VILLAGE WORKSHOP SUBPROJECT

A.4.1 Service Center Development Program

Activity Report
July, 1983

Submitted by: Graham G. Sparrow

Due to a number of factors namely, Ramadan, vacations, overseas trips and no transport, progress has been slow this month.

A letter was sent out last month to our clients in which the clients were given twenty days to finalize all their legal requirements or they would lose our offer to fund their projects. Only three to my knowledge have replied asking for an extension of time. The remainder we must assume believe that the funds are no longer available to them, or they would have made contact with the project.

The problem is that the project may have been put in a difficult position, in as much, that having given the clients a deadline, we now have to decide whether to go back to the clients or to start locating new clients. This, of course, will result in the retardation of the overall program at the very least one year, in order to reach the position before the deadline was given.

We have been informed that the Service Center under construction in Beni Mazar was about 80% completed at the end of last month, requiring only the delivery of the insulated sheeting for the office area. When installed this will complete the major structure then leaving only the interior.

My counterpart left the latter part of July on an observation tour of Thailand, to see the production of crops in that country (rice, wheat, etc.) he will return about the 22-23rd of August.

My project vehicle broke down completely on the 12th of last month, but it was not sent in for repairs until one week later. I hope that it will be repaired and ready to go on my return from vacation.

A.4 SERVICE CENTER/VILLAGE WORKSHOP SUBPROJECT

A.4.1 Service Center Development Program

Activity Report
September, 1983

Submitted by: Graham G. Sparrow

We have had four new applications for Service Center's this month, two are from Behera Governorate and one each from Sharkia and Giza Governorates. One of the two from Behera is an engine reconditioning factory, who had in the early stages of the project requested a loan to expand their operation. The application was declined as this was not an agricultural repair business and the owner did not wish to become involved in repairs, his second application was a repeat of the first.

We discovered that the Central Bank in Cairo has sent a letter to the branch banks, in which the terms and conditions are outlines. It appears that any loan over L.E. 25,000 has to be secured with a 100% guaranty. In the original terms and conditions, the terms were different for the small workshops and service centers. The bank appears to have put them both under one set of rules: this may explain why Shiaty Co. of Tanta did not cooperate with the bank because the bank was demanding 100% security. This situation was reported to the management at the time.

The project had eighteen meetings this month with the bank, new clients and old clients. Although we have not received official confirmation as yet, the indication is that within the next two months we could receive bank approval for up to eight Service Center applications. Until this time, there are only two people working full time on the Service Center program. We tried on several occassions unsuccessfully to get the other members of the subproject involved on a full time basis. When the applications begin to be approved by the bank, the only two full time members won't be able to cope with the work load. Also, there is not anyone to assist us who understands what we have been doing. This in itself will cause delays in processing the new service centers.

The current credit fund loan breakdown is as follows:

<u>Service Centers</u>	<u>Valued - L.E.</u>
9 - applications at the bank	1,982,000
6 - applications in progress (project)	765,000
1 - application under construction	<u>250,000</u>
	2,997,000
1 - application cancelled by management may be reinstated	250,000

<u>Village Workshops</u>	<u>Valued - L.E.</u>
Applications completed	256,897
Applications approved but not actioned	150,000
Applications awaiting approval (bank)	413,000
Applications in progress	<u>252,000</u>
	1,072,797
Service Centers	<u>2,997,000</u>
TOTAL AMOUNT ALLOCATED	<u>4,069,797</u> =====

A.4 SERVICE CENTER/VILLAGE WORKSHOP SUBPROJECT

A.4.2 Village Workshop Program

Activity Report
August, 1983

Submitted by: Eng. Moussa Shafik
R.E. Snyder

General:

Activity this month has been concentrated primarily in Behera and Minia Governorates where the majority of our clients and potential clients are located.

We have done some research in Giza Governorate, but as yet have not had time to follow up on the contacts made.

It appears that the banks in Behera and Minia are becoming more cooperative. This can no doubt be attributed to the fact that a few loans have been completed and their personnel are more familiar and comfortable with our project.

Travel/Visits:

During the period the visits, follow up visits, files delivered to the banks, bank approvals and completed contracts is as follows:

1. Visits for research and follow up -----	36
2. Files delivered to the banks (requesting approval) -----	3
3. Received bank approval -----	1
4. Contracts completed -----	1

Loan Activity:

Loan activity is as indicated on the tables following this report.

Problems:

Office space and furniture are still inadequate for our needs. Our file cabinets are full to overflowing which has caused misplacement and even loss of important documents.

The new system for procurement of office supplies took five weeks for delivery in August. Hopefully it will improve this month.

Believe we should reconsider the system for having vehicles repaired. Too often the vehicle is sent several times for the same service, and is often returned uncompleted.

Loan Activity Month of August

1. Workshop development Completed Loans

No	Client	Delivered Date	Location	Loan value
1	Ebrahem Ateya Ebrahem	18/1/1983	El-Delengat-Behera	12,636
2	Hassan El-Said Shalaby	15/3/1983	Zauiat Gazal - Behera	18,800
3	Mohamed Mohamed Kehla	9/3/1983	El-Delengat - Behera	8,815
4	Mohamed Mohamed El-Malawy	31/3/1983	Benha- Qaluibia	44,000
5	Morsy Ebrahim El-Bagory	31/3/1983	Benha- Qaluibia	37,950
6	Afefy Abd El-Rashied Afify	16/5/1983	Toukh - Qaluibia	10,000
7	Abd El-Ghany Aly Hafez	16/5/1983	Benha - Qaluibia	38,780
8	Abu Zeid El-Shazly Abu-	19/6/1983	Basion - Gharbia	35,000
Total				205,981

2. Loan delivered to the bank and approved

No	Client	delivered Date	Location	Loan value
1	Sobhy Yousef Ateya	14/1/1983	Minia - Minia	15,000
2	Abd El-Bary Abd Rabu	22/2/1983	Sheben El-Kanater-Qalub	50,000
3	Hassen Mostafa Ahmed	9/3/1983	Kanater El-Kaireia-Qalub	17,000
4	Mohamed Emam Zaki	6/5/1983	" " "	20,000
5	Mohamed Mohamed Yousef	6/5/1983	Toukh El-Kaireia	25,000
6	Mohamed Ali Allah Mohamed	25/7/1983	Kfer El-Zayat-Gharbia	50,000
7	Abd El-Satar Aly Aly Ahmed	3/7/1983	Minia - Minia	9,000
Total				186,000

3. Loan delivered to the bank and still under invetation

No	Client	delivered date	Location	Loan value
1	Addel Meanem Adly	16/5/1983	Hosck Essa-Behera	7,000
2	Mohamed Mostafa El-Anany	16/5/1983	Hosch Essa-Behera	20,000
3	Mohamed Ahmed Zenhom	16/5/1983	" " "	12,500
4	Yousef Hassan Emarra	26/4/1983	Toufikia - Behera	17,400
5	Refaat Mohsen Mohamed	18/5/1983	Samalot - Minia	13,000
6	Ibrahim El-Said El-Hadary	1/6/1983	Basiun - Gharbia	43,000
7	Ibrahim Mohamed El-Sammam	1/6/1983	Abu El-Matamer-Behera	15,000
8	Foad Aziz Abd El-Meseh	1/6/1983	Abu El-Matamer-Behera	20,000
9	Selem Hessen Selem	21/6/1983	Samalot-Minia	10,000
10	Ahmed Yousef Ahmed	21/6/1983	Samalot-Minia	24,000
11	Selem Mohamed Selem	5/7/1983	Malawy - Minia	40,000
12	Ibrahim Ibrahim Soliman	5/7/1983	Edwa - Minia	20,000
13	Sameha Afify Bakar	24/7/1983	Kom-Hammada - Behera	20,000
			Total	261,900

4. Loan in our office for processing

NO	Client	Date	Location	Loan value
1	Adel El- Dosoky	4/4/1983	Kafr Shokr- Qalubia	20,000
2	Ahmed Mohamed Abd El-Kader	3/5/1983	Magaga - Minia	25,000
3	Hassan Mahmoud Mohamed	4/5/1983	Bany Mazar - Minia	20,000
4	Adel Mohamed Nagih	2/5/1983	Abu Korkas - Minia	10,000
5	Moustafa Aly El-Boraey	17/5/1983	Zefta- Gharbia	18,000
6	Mahmoud Abd El-Wahab	17/5/1983	Samanod - Gharbia	25,000
7	Gamal Fathy Labib	22/6/1983	Tough - Qalubia	12,000
8	Mohamed Mohamed Ganem	17/5/1983	" "	13,250
9	Saber Abd Allah Abd El-Razik	16/5/1983	Beltan - "	32,000
			Total	175,250

Total of small workshop 829,131 L.E.

A.4 SERVICE CENTER/VILLAGE WORKSHOP SUBPROJECT

A.4.2 Village Workshop Program

Activity Report
September, 1983

Submitted by: Eng. Moussa Shafik
R.E. Snyder

General:

Work this month was primarily in Behera and Garbia governorates with one trip each to Minia, Sharkia and Qalubia.

If the problems with the bank in Sharkia are ever solved we will no doubt have a large increase in loan activity in that governorate. Very little research has been done here to-date.

We have been informed that two mechanical engineers will join our subproject in the near future. It is suggested that one of these engineers will take over the duties of Eng. Moussa Shafik as the counterpart for R. Snyder. This will leave Moussa free to work on other projects that he is involved with.

We are about to begin a monitoring system, to follow up on clients who have taken loans. The purpose of this will be to determine the success of our efforts and to see if the clients needs any additional help from our project. A questionnaire is being designed, with questions on it to indicate the progress of each project. We will no doubt have a copy of this form to include in our October report.

Travel/Visits:

Travel this month was extensive. There were forty-seven visits made this month to the banks and clients in various governorates. Of these visits seven were contacts with new clients, 6 to the banks and the balance repeat calls to known clients to further the progress on their loans.

Loan Activity:

Disbursement thru September, 1983	<u>L.E.</u> 256,897
Loans with bank approvals	150,000
Loans at banks but not approved	413,900
Loans being reviewed in our office	252,000

Training:

To-date training for small shop owners has been a disappointment, very often the persons that the client wants trained is going to school. Where training conflicts with school, they naturally opt to send the person (often a relative) to school

rather than training. We also have had several cases where the client reneged on a training commitment because it coincided with his busy work season. Naturally, making money gets priority over training.

It may be helpful if the training section would take over all training activity, including follow up visits to our clients to schedule classes, etc.

We will discuss this further with the training section.

Problems:

No matter how much we try to ignore it the problem of inadequate office space and the lack of furniture just won't go away. A point in case is our files. They are almost useless, and little can be done about it until we get additional file cabinets. New file cabinets will also present a problem, finding space for them.

Our research of village workshops has been somewhat hampered due to the lack of transportation. The young engineers doing this work have had their travel limited primarily to the regular taxi and bus routes. Consequently, there are numerous smaller villages between and around those towns surveyed that have not been checked for potential clients. If we could arrange transportation for them for 3 or 4 days per week our surveys would be more thorough and we would no doubt find additional clients in some of the smaller villages. Another way to approach this would be thru newspaper ads. This has been suggested on previous occasions, but for one reason or another our management staff have chosen not to use this medium.

A.5 LAND IMPROVEMENT SUBPROJECT

Activity Report
3rd Quarter, 1983
Submitted by: Erroll D. Coles

Summary of Activities:

During July, 1983 the land levelling demonstration program continued in Abuha, the EWUP project site, and later in Birba El Khobra village. From March until May, nearly 90 feddan were levelled with most of the work taking place in a contiguous areas and in one area the feddan belonged to 20 farmers.

So far the farmers response to landlevelling is very favorable, especially where farmers have taken the opportunity to use long furrows in place of the traditional basin method. Farmers report that irrigation time is 20 to 30% less with long furrow methods than with the traditional methods. Further, those farmers that use the traditional method on levelled land tend to use longer furrows and basins increasing from 7 m. in length to 10 or 15 m. Irrigation time is also improved by 30 to 40%.

The smaller decrement in time with long furrows can be attributed to the fact that a longer head of water is not available from the meskas. There is also some reluctance on the part of the farmer to use greater discharges per furrow, thus diverting from his customary small stream. For his usual small stream and with the lengthened basins the farmer is obtaining a better time with the extended short furrow/small basin. By improving the meska discharge, longer streams, and a slightly greater head, can be obtained thereby improving the irrigation time. However, village extension agents should provide the necessary follow-up encouraging the farmers to use long furrows and greater streams of water.

By August, 10 feddans had been levelled in El Beck Basin, Atlat village, together with an additional 55 feddan for the extension sub-project. By the end of August, a total of 360 feddan had been completed in Minia, since the start of the demonstration program in April. The various areas completed to date are shown in the following table.

Land Levelling for Spring/Summer 1983	
Abou Quarkas - Sugar Cane	30 feddan
Abuha. E.W.U.P. project area	120 feddan
Abu Askar Basin	60 feddan
Birba el Khobra Extension area	15 feddan
El Beck Basin	70 feddan
Metai Extension area	55 feddan
Metai Training operators	<u>10 feddan</u>
Total	360 feddan

From the foregoing levelling operations the mean tractor time to complete one feddan was 3 hours and about 70 cubic meters per feddan of soil was moved.

The tractors, implements and loser equipment were serviced during the latter part of August.

The demonstration unit moved to the Suger Company's land during the middle of September. The number of trial plots were levelled and together with field in the Wadi Kreit area. A total of a 100 feddans were levelled.

A further 15 feddans were levelled in El Atlat village area.

Extension Activities:

The coordination of land improvement activities with the extension and training sub-projects continued in July, including landlevelling of extension demonstration areas for the fall planting season. And two syphon tube irrigation and long furrow demonstrations were conducted in El Beak basin.

The L.I. extension coordinator has successfully obtained the cooperation of the farmers to plough their fields before the landlevelling unit arrives at the basin. As the small demonstration unit still does not have a chisel plow, the demand for the gamaya's equipment is high during this time of year, the farmers must make arrangements for plowing.

Syphon tube irrigation demonstration where also held in El Beak basin in cooperation with the extension sub-project in August. A better response was shown by the farmers and on this occasion header ditches were used.

Training Activities:

In July, the training program was finalized for operators, mechanics and field supervisors. The program consisted of:

- a. Training drivers for one of Minia, Beni Suef and Fayoum.
- b. Training operators at the Nubaraya and Mansura Training Centers.
- c. Special on-the-job training on landlevelling using the laser control equipment.

The first complement of 20 drivers started training in Minia and then proceeded to Nubaraya on the 5th of August. The driver training started in Beni Suef in the later half of August and 10 operators then went on to Nubaraya in September.

Twelve mechanics from Minia began training at Mamura. The training plan for the next quarter is as follows:

- a. Training drivers in the Fayoum area will proceed during October supervised by Eng. Hassan Bana.

- b. Training operators from Beni Suef at Nubaraya during November, and
- c. Training Mechanics at the Level II grade, at Mamura, during November.
- d. Field training at Minia during December.

Participant Training:

At the end of July, Dr. Adel Ouabi, Dr. Ahmed el Arabo and Eng. Hassan el Bana, returned from the courses on soil conservation and water management conducted by the Utah State University.

Equipment Procurement:

Ragab reports that the tractors supplied by Ford Motor Company will be available in October or November. Delays occurred because of the misdirection of original invoices required for customs clearance.

The implements supplied by Allied Products are stored in Alexandria and will be assembled early in the next quarter, when the tractors are delivered.

The laser control equipment was received by mid-August and is being assembled and tested by Spectra-Physics, who will install the equipment on the tractors on their arrival.

Planning of Future Activities:

Field work is now underway to select demonstration basins in the Minia governorate, in the following locations:

Beni Mousa Village

Ali Basha basin	40 feddan
Tweill basin	40 feddan

El Atlat village

Galal basin	150 feddan
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Beni Abeed Village

Rawfia basin	46 feddan
Mesl basin	86 feddan
El Beahry basin	<u>63 feddan</u>

Total	425 feddan
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The planning, summary and design of the basins generally follow a carefully ordered pattern.

- a. Reconnaissance survey: A coordinated examination of potential basins, together with extension personal and farmers. This program is currently being carried out to select basins to be constructed in the spring 1981: April to June.

The information gathered during this survey is:

1. basin area
 2. farmers' names
 3. irrigation and water lifting method
 4. soil problems
 5. cropping patterns
- b. Survey Program: After basins for survey have been identified, the soils and topographic surveys will be carried out by LISP staff. And the sociological surveys will be done by the planning and evaluation sub-project.
- c. Basin Design: In December, following the completion of field activities, the design process will begin. This will include but not be limited to:
1. Evaluation of topographic survey to identify the need for land levelling - Criteria: 80% of the field readings falling within ± 2 cm. is considered level and requires no work (Note: 20 meters grid is assumed)
 2. Preparation of leveling design and earthwork volumes for determining the construction time, as developed on the HP85 computer.
 3. Design of meska for water delivery.
 4. Design of on-farm irrigation systems for demonstration farms for extension sub-project personnel.
 5. Review of soils data to determine if land levelling, sub-soiling, or mole plowing are required or are constrained in some way.
 6. Road access requirements will be reviewed and appropriate solutions considered.
 7. An estimate of the time required to complete the basin rehabilitation will be determined and a tentative work schedule set.
- d. The Basin Plan: Based on the designs, a season's construction plan will be prepared for review. This plan will be presented to project management for approval and to extension personnel for its information. The plan will be reviewed with the Undersecretary of Agriculture and other relevant personnel in each governorate. This plan will detail the construction work and the planning/survey/design activities that will be undertaken for fall construction season of 1984. Parties interested in landlevelling activities should present their requirements for inclusion in the following season's work plan for areas to be considered in the work plan.

Surface Irrigation:

Concomitant with the landlevelling operations and other improvements planned for the basins, is the introduction of new irrigation methods to replace the traditional small basin and short furrow system. Both of these methods are not suitable for

the effective mechanization of small farmers. Besides being adversely labor intensive, the traditional methods require a great deal of time for irrigation increasing their pumping costs. Also, improved irrigation methods require a larger volume of water to be delivered to the farm to provide a satisfactory head of water.

The physical conditions of the vertisol soils requires a large initial discharge into the furrow. These soils are, in fact, highly impervious and most, nearly 90%, of the water enters the soil profile through inter-ped cracks. First, water should be applied when the soils have cracked and, secondly, sufficient water should be applied as rapidly as possible, and in a quantity needed to penetrate the "crack" system, to a sufficient depth to bring the soil to field capacity.

There would be little point in carrying out a costly basin rehabilitation program unless the maximum benefit can be derived from it. Benefits are from lower cost of pumping, shorter irrigation time, more efficient crop production and higher yields. Besides, there is very indication that more efficient irrigation controls salinity. Though these benefits have not been measured in the field, there is strong evidence that such benefits are being obtained, yet the relative levels are still to be measured.

The use of syphon pipes, spill pipes are methods of metering and controlling the flow of water into the furrows. But it is not sufficient to use these methods because the whole system has to be implemented before realizing just the full benefits. This will require a Basin Rehabilitation Program (BRP), as well as a comprehensive extension effort to inform the farmer of the available mechanisms for long furrow and long basin irrigation, i.e. canvas dams, syphon pipes and spill pipes, orifice gates and so on.

It should be clearly understood that the B.R.P. is the technical part of the extension program: the extension effort is to proselytize the benefits to be derived from such a program and demonstrate the irrigation methods to the farmers.

The importance of proper irrigation demonstrations to the farmers by the extension and training sub-projects, cannot be too strongly stressed. The urgency of starting these demonstrations at an early date must integrate with a full B.R.P. program.

Mole Plowing:

The Land Improvement Sub-project has acquired a Rnsomes mole plow; it is intended to use this implement to improve drainage conditions, particularly in those areas where drain spacings of 40 to 60 m. are not lowering the watertable. Then properly installed mole drains can be installed.

The success of mole drains will depend on giving careful attention to a number of factors:

- a. The soils should be neither too dry or too wet.
- b. The mole drains must be provided with rigid pipe outlets to prevent the holes from collapsing or eroding.
- c. Outlets must be free-flowing
- d. The soil surface should be tilled, preferably disked.
- e. Mole draining should be carried out on levelled lands.

A paper written by Rycroft reviewing the literature to 1973, may be of interest. However, the dissertation prepared by Leeds-Harrison of the National College of Agricultural Engineering, U.K., or the research work carried out at El Hamul in Delta, should provide guidelines for any future sub-project activity.

A.5 LAND IMPROVEMENT SUBPROJECT

Activity Report
August, 1983

Submitted by: Erroll D. Coles

Demonstration Program:

In the first week of August, the sub-project completed the spring season construction plans of the Basin Rehabilitation Program. During this week, all leveling work in El Beek Basin, El Atlas Village, was completed. In the middle of the month, an area of 55 feddan was leveled as a cooperative effort with the extension sub-project. This area belongs to one farming group and was leveled over a period of 10 days.

The work undertaken to date by the sub-project's equipment may be summarized as follows:

Areas Leveled - Spring/Summer 1983

<u>Location</u>	<u>Approximate Area</u>
Sugar Cane areas (Abou Quarkas)	30 feddan
Abyuha - EWUP area	120 feddan
Abou Askar Basin	60 feddan
Extension Area - Birba El Khobra	15 feddan
El Beek Basin	70 feddan
Extension area - Matai	<u>55 feddan</u>
Total	350 feddan

A review of project records indicates that the approximate tractor time per feddan was three hours and that approximate earthworks volume was 70 cubic meters per feddan. Because this season work concentrated on training and demonstration, a greater area was not covered to allow moving to different areas.

The remaining period in August was spent in equipment maintenance and other activities.

Work during the month was constrained by the absence of one team member in the United States for training and the planned training program in India and Pakistan for the remaining team members. The second program, however, was indefinitely postponed. (Persons responsible for the Demonstration Program: Amr Marie, A. El Fayoumi, and M.M. Moustafa).

Extension Activities:

Two long furrow siphon pipe demonstrations were held in El Beek Basin in cooperation with the extension sub-project. (Responsible person: M.M. Moustafa).

Training:

The program for training equipment operators and mechanics continued throughout the month. A summary of the courses is provided below:

<u>Course</u>	<u>Participants</u>	<u>Location</u>
Operators	18, Minya	Nubaria
Mechanics	12, Minya	Manura
Drivers	18, Beni Suef	Beni Suef

Two of the courses were carried out under the auspices of the Extension and Training Sub-Project. The third was carried out in the field by the LISP staff.

As stated previously, members of the sub-project attended participant training courses in the United States.

<u>LISP Participant Training</u>		
<u>Name</u>	<u>Course</u>	<u>Location</u>
Dr. A. Orabi	Soil Conservation	Utah State Univ.
Dr. A. El Arabi	On-Farm Water Mangmt.	Utah State Univ.
Eng. H. El Banna	On-Farm Water Mangmt.	Utah State Univ.

Equipment Procurements:

The LISP equipment being procured by IFB was scheduled to arrive as follows:

<u>ITEM</u>	<u>SUPPLIER</u>	<u>ARRIVAL DATE</u>
Tractors	Ford	Sept. 15, 1983
Implements	Allied	Sept. 5, 1983
Laser	Spectra Physics	in-country

Additional equipment which is to be procured through local procurement was identified and the required documents prepared.

Planned Activities:

During September the sub-project plans to continue training activities and preparing the work plan for the Fall 1983 construction season.

A.5 LAND IMPROVEMENT SUBPROJECT

Activity Report
September, 1984

Submitted by: Erroll D. Coles

Demonstration Program:

A. Field Operations:

In September, the field operations of the Demonstration Program was inactive due to the servicing and maintenance of equipment and the fact that it was the middle of the cropping season. Soya beans started to be harvested and selected areas became clear for leveling about the 10th of September. Unfortunately, at this point, the sub-project was requested to level sugar lands in Kom Ombo by the Research Sub-project, the Sugar Company, and project management.

This land, totaling approximately 100 feddans, was selected as an experimental site. No data on earthmoving requirements or on required field configurations was available and sub-project personnel were forced to move equipment on the basis that the experimental designs could be constructed with the equipment available. The sugar company and the Bairam Holidays resulted in equipment transportation being delayed until early October. This severely curtailed field activities in the Minya Demonstration Program.

The sub-project leveled 15 feddan in El Atlat Village in Minya on an ad-hoc basis as a demonstration and to train new drivers. The operation took 1 week and resulted in 4 drivers receiving a taste of field experience. The project staff was impressed by the ability and the background of this new staff.

Training Programs:

During the month, the sub-project had two training programs on-going (aside from informal training in the demonstration program). One course for mechanics in the Mamura Training Center and one for drivers in Nubarria.

Equipment Procurement:

The sub-project began to process procurement orders with the approval by USAID of the Third Quarterly Cash Needs Request Specifications, for 25 land scrapers were reviewed by the technical and procurement committees and approved. This approval led to the issuing of a Request for Quotations on September 26 which was due for opening on October 10.

A second batch of procurements for demonstration and operating equipment for the Land Improvement Sub-project was submitted for review in the middle of the month. These procurements were delayed to be included with Demonstration Training Sub-Project

procurements. This decision was made to ensure standardization of types of equipment between sub-projects. This particular procurement is currently in progress for review by the technical and procurement committees.

The IFB procurement for Land Improvement equipment was schedule to arrive in September. The status of this equipment, to be received from 3 suppliers, is as follows:

<u>Item</u>	<u>Supplier</u>	<u>Delivery Date</u>	<u>Current Status</u>
Laser equipment	Spectra-Physics	August 1983	In-country, awaiting assembly on tractors
Tractors	Ford	September 1983	At sea
Implements	Allied	September 1983	Alexandria, awaiting assembly

- The Sub-project personnel are on stand-by and program plans are necessarily tentative during the fall construction season because exact delivery and assembly dates of the above equipment are unknown.

Planned Activites:

Fall Construction Season: September 1983 - December 1983

A. Demonstration Program: Field Operations:

The sub-project Field Unit No. 1 is expected to return to Minya Governorate in mid-October. The sub-project has set a tentative plan of leveling the following basins:

<u>Basin Name</u>	<u>Village</u>	<u>Area</u>
Ali Basha	Beni Mousa	40 feddan
Tawill		40 feddan
Galal	El Atlat	150 feddan
Rawfia	Beni Abeed	46 feddan
Mesl		86 feddan
El Beahry		<u>63 feddan</u>
	Total Area	425 feddan

The larger equipment units are not expected to be in the field until late in the season due to equipment delivery dates. Due to the uncertainty of equipment assembly and delivery, no definite areas have been chosen. (Person responsible for these activities: Amr Marie).

B. Planning, Survey and Design of Basin Rehabilitation Program:

Reconnaissance Program:

The LISP staff is currently visiting basins and developing a planning basin development in the spring construction season. In cooperation with the Extension Sub-Project personnel, the following data is being collected:

Basin Requirements for Planning:

1. Cropping pattern: phased in spring season for sugar cane, fowl bean, wheat and berseem areas.
2. Area of basin.
3. Farmers' names and farm size.
4. Irrigation method: sakia, tambour, pump gravity
5. Soils Problems: salinity, alkalinity

This data is used as input to the basin survey program which is outlined in LISP Working Papers Nos. 1 and 3 presented in the Quarterly Report. (Responsible persons: Hassan El Banna, Ahmed El Fayoumi).

Survey Program:

After basins for survey have been identified, the soils and topographic surveys will be carried out by LISP staff. The sociological surveys will be carried out by staff of the Planning and Evaluation Sub-Project. (Person responsible from LISP staff: Moustafa Mahmoud, Yasser).

Design:

In December following the completion of field activities, the design process will begin. This will include but not be limited to:

1. Evaluation of topographic survey for need of land leveling - Criteria: 80% of the field reading falling within + 2 cm. is considered level and requires no work (Note: 20 meters grid is assumed).
2. Preparation of leveling design and earthwork volumes for determining construction time required. Developed on in-house HP85 Computer.
3. Design of meska for water delivery.
4. Design of on-farm irrigation systems for demonstration farms for extension sub-project personnel.
5. Review of soils data to determine if land leveling, sub-soiling, or mole plowing are required or are constrained in some way.
6. Road access requirements will be reviewed and appropriate solutions considered.

7. An estimate of the time required to complete the Basin Rehabilitation will be determined, and a tentative work date set.

Plan:

Based on the designs, a season construction plan will be prepared for review. This plan will be presented to project management for approval and to extension personnel for its information. The plan will be reviewed with the Undersecretary of Agriculture and other relevant personnel in each Governorate. This plan will detail the construction work and the planning/survey/design activities that will be undertaken for fall construction season of 1984. Parties interested in land leveling activities should present their requirements for inclusion in the following season work plan. Only basin areas will be considered in the work plan.

C. Training:

The sub-project plans to continue the training of drivers, mechanics, and supervisors. In the coming two months, the following programs are set to take place:

<u>Program</u>	<u>Participants</u>	<u>Location</u>	<u>Date</u>
Driver Training.	Fayoum drivers	Fayoum	Oct./Nov.
Operator Training	Beni Suef	Nubaria	November
Mechanics Level III	Minya	Mamura	November

Additional in-field, on-the-job training will be carried out by field unit No. 1 in Minya. This training will center on field supervisors and drivers who have already completed the training course at Mamura. This program is scheduled to continue until the arrival of the new equipment field units.

A.6 LOCAL MANUFACTURING PROGRAM

Activity Report
August, 1983

Submitted by: Richard Berky

Introduction:

During this reporting period, the major activity has been the field test and development of the all crop threshing machine. Certain other development work was undertaken as required by the peculiar conditions of field test experienced in Egypt = for example, a simple hoist system for loading machinery and transporting it quickly to the various small fields and threshing locations.

Activity was also begun to bring drawings and bills of materials up-to-date and make new layouts incorporating these changes in a manner suitable for low cost manufacturing. Since the decision has been made to proceed with a trial production run of machines, preliminary work leading to quantity procurement of production materials has been started.

Key persons in the manufacturing program are enrolled in English language courses at the American Language Center in Alexandria. It is planned to expand this activity into a shop English course for the next term.

Another new activity area has been initiated. It is directed towards establishing a pre-manufacturing training/development center at the Agricultural Mechanization Institute at New Behera, near Ganaclis.

The project has also prepared a public relations type video tape coverage of a farmer operated machine demonstration which was used in an audio visual extension seminar.

Planning is proceeding on the design and building of a mini-manufacturing workshop, which is to be semi-portable to facilitate turnkey sales and financing into the various governorates. Capacity is projected for 200 threshing machines plus equivalent capacity of other machines to be designed yielding the same sales volume as an additional 200 threshing machines.

Working tours' to the U.S. concerning the technology for up-grading grey iron foundries into the pouring of ductile iron and also experience in prototype build and field test of a sugar cane harvester are being developed.

Planning is proceeding towards manufacture of threshing machines through subcontract by private industry.

Current Status:

Investigation shows that the substitution of 70 mm. cold formed angled 5 mm. thickness would result in a weight reduction of 130 kg. and a cost reduction of about 40 L.E. The adoption of lighter gauge steels, the elimination of the flywheel, etc. can reduce the thresher weight below 900 kg. and reduce material costs by 1/3. This along with use of better methodology can reduce the exfactory cost (break even) to about LE 1500.

Some testing in wheat, beans and berseem continues. Work with the latest recutter design consistantly give straw in the 2-3 cm. length, at capacities of 1300 kg/hr. and losses below 2%. Tractor power limits capacity but it is evident that changing the main drive ratio could up the capacity by 20%. It is apparent that sustained uniform feeding by hand will be difficult in conditio.s of extra heavy straw. At present no priority is placed on increased capacity per se. The original design specs, were for 750 kg. per hour capacity and grain losses less than 5%. We can easily double these specs but there is no current need. High moisture straw will certainly alter the capacity, unless a higher horsepower is used. Anticipated problems along this line appear manageable.

Future Work:

Work is proceeding slowly on all fronts generally the pace is limited by administrative under staffing and lack of funding on a timely basis. The project is slowly shifting emphasis from the public to the private sector, a step long overdue.

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

AGRICULTURAL MECHANIZATION PROJECT

A. I. D. Proj. NO. 283 - 0031

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٧٠٤٣٦٤ - ٧٠٧٢٤٧

DATE 23/8/1983 التاريخ

TO : Dr. David Gaiser
FROM : Richard Berky
SUBJECT : Feasibility Study for Farm Tool Manufacturing

To-date considerable thought and effort have gone into study of the feasibility of public sector manufacture of farm machinery. Serious efforts have been made according to the developmental methods suggested by Dr. Schultz and mentioned in the project document. The results have not been encouraging. It does not appear economically feasible to "reeducate" the public sector. Therefore, the following approach appears more promising.

1. Manufacture a limited number of threshing machines, say 25, within the private sector by subcontract to private sector.
2. Manufacture or purchase systems complementary to the threshing machine supporting complete custom harvesting system and establish decentralized custom operator businesses for "turnkey" harvesting using applicable credit facilities as encouragement and provide guaranteed service and extension as part of a market feasibility study.
3. Design and have manufactured turnkey mini-manufacturing plants which would be established at decentralized locations by means of suitable credit facilities along with one year of technical and marketing assistance in order to assess the technical feasibility and assistance needs of local manufacturing.

In summary, a real economic model providing maximum exposure of new local manufacture systems throughout Egypt can be used to evaluate realistically the techno-economic feasibility of local manufacture sales and service and allow its extension and projection to establish priorities.