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P R O J E C T P A P E R

RICE RESEARCH AND TRAINING
263-0027

EGYPT

September, 1981

CAIRO, EGYPT

AGENCY FOR INTERNATIONAL DEVELOPMENT PROJECT DATA SHEET	1. TRANSACTION CODE <input type="checkbox"/> A = Add <input type="checkbox"/> C = Change <input type="checkbox"/> D = Delete	Amendment Number <u>2</u>	DOCUMENT CODE <u>3</u>
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2. COUNTRY/ENTITY Arab Republic of Egypt	3. PROJECT NUMBER <u>263-0027</u>
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4. BUREAU/OFFICE NE <input type="checkbox"/> 03	5. PROJECT TITLE (maximum 40 characters) <u>Rice Research and Training</u>
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6. PROJECT ASSISTANCE COMPLETION DATE (PACD) MM DD YY <u>09 01 85</u>	7. ESTIMATED DATE OF OBLIGATION (Under 'B.' below, enter 1, 2, 3, or 4) A. Initial FY <u>77</u> B. Quarter <u>3</u> C. Final FY <u>81</u>
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8. COSTS (\$000 OR EQUIVALENT \$1 = LE .70)						
A. FUNDING SOURCE	FIRST FY <u>77</u>			LIFE OF PROJECT		
	B. FX	C. L/C	D. Total	E. FX	F. L/C	G. Total
AID Appropriated Total	2,367		2,367	12,335	11,432	23,767
(Grant)	(2,367)		(2,367)	(12,335)	(11,432)	(23,767)
(Loan)						
Other U.S.						
1. US owned LE		746	746		746	746
2.						
Host Country		807	807		7,386	7,386
Other Donor(s)						
TOTALS	2,367	1,553	5,920	12,335	19,564	31,899

9. SCHEDULE OF AID FUNDING (\$000)									
A. APPROPRIATION	B. PRIMARY PURPOSE CODE	C. PRIMARY TECH. CODE		D. OBLIGATIONS TO DATE		E. AMOUNT APPROVED THIS ACTION		F. LIFE OF PROJECT	
		1. Grant	2. Loan	1. Grant	2. Loan	1. Grant	2. Loan	1. Grant	2. Loan
		(1) ESF	141	080		9,767		14,000	
(2) Excur	141	080		746				746	
(3)									
(4)									
TOTALS								24,513	

10. SECONDARY TECHNICAL CODES (maximum 5 codes of 3 positions each)	11. SECONDARY PURPOSE CODE
12. SPECIAL CONCERNS CODES (maximum 7 codes of 4 positions each) A. Code B. Amount	

13. PROJECT PURPOSE (maximum 480 characters)

Provide new information and knowledge for rice production, seed processing and storage by increasing research and training capabilities.

14. SCHEDULED EVALUATIONS Interim MM YY <u>06 83</u> Final MM YY <u>02 86</u>	15. SOURCE/ORIGIN OF GOODS AND SERVICES <input checked="" type="checkbox"/> 000 <input type="checkbox"/> 941 <input checked="" type="checkbox"/> Local <input type="checkbox"/> Other (Specify)
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16. AMENDMENTS/NATURE OF CHANGE PROPOSED (This is page 1 of a 10 page PP Amendment)

To enable project recovery from 3 year implementation delay the following is required in this amendment:

1. Addition of 10.5 work years of TA.
2. Addition of construction activity _____ years.
3. Addition of commodity/machinery procurement.
4. Extension of PACD three full _____ years.

17. APPROVED BY	Signature Title Donald S. Brown Director	Date Signed MM DD YY <u>16 30 81</u>	18. DATE DOCUMENT RECEIVED IN AID/W, OR FOR AID/W DOCUMENTS, DATE OF DISTRIBUTION: MM DD YY <u>17 07 81</u>
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EGYPT
PROJECT PAPER AMENDMENT # 2

RICE RESEARCH AND TRAINING PROJECT 263-0027

Project Data Sheet

A. Summary and Recommendations

1. Grantee
2. Implementing Agency
3. Grant Amount
4. Project Goal
5. Project Purpose
6. Purpose of pp Amendment
7. Recommendations

B. Project Description and Progress to Date

C. Financial Requirements

1. Additional Funding
2. Total Project Costs
3. Source of U.S. Funds
4. Cost Estimate Review

D. Statutory Requirements

1. Project and Standard Item Checklist
2. Environmental Considerations
3. FAA Section 611 (e) Certification
4. FAA Section 612 (b) Determination

E. Special Covenant

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- I. GOE Request for Assistance
- II. Authorization Amendment
- III. Statutory Project and Standard Item Checklist
- IV. FAA Section 611 (e) Certification
- V. FAA Section 612 (b) Determination
- VI. Implementation Plan and Schedule

EGYPT
PROJECT PAPER AMENDMENT
RICE RESEARCH AND TRAINING PROJECT

Table of Contents

A. SUMMARY AND RECOMMENDATIONS

1. **Grantee:** The Government of the Arab Republic of Egypt.
2. **Implementing Agency:** Ministry of State for Agriculture and Food Security (MOA).
3. **Project Goal:** The Rice Research and Training Project is designed to improve the social and economic condition of the small rice farmer and increase the quantity and quality of food supplies.
4. **Project Purpose:** Provide new information and knowledge for rice production, seed processing and storage by increasing research and training capabilities.
5. **Purpose of Project Paper Amendment:** The purpose of this Project Paper Amendment is to:(a) add \$Eq/\$ 14,000,000 to allow for activities, plus inflation and contingency, as originally described in the Project Paper; and (b) to extend the PACD from 9/1/82 to 9/1/85.

This project was originally approved in June, 1977, with a U.S. input of \$8,195,000 and LE 2,227,000 of U.S. owned Egyptian pounds. Early in CY 1979 the project was amended because U.S. owned Egyptian pounds were no longer available. After the amendment, which added \$1,572,000 for the purchase of LE, the total U.S. input was \$9,767,000 and LE 522,000 (\$746,000 in dollar equivalent).

The current need for additional funds and the time extension stems from implementation delays. Difficulty in obtaining a U.S. contractor to administer the project delayed the signing of a technical assistance Host Country Contract (HCC) until June, 1980. During this three year period the cost of technical assistance had increased significantly. Similarly inflationary impacts on the prices of US manufactured agricultural field equipment and in the Egyptian construction industry had been significant. Consequently, by the time the Contract was negotiated in June, 1980 the available funds (\$9,767,000 and LE 522,000) were no longer sufficient to complete all the activities outlined in the Project Paper. In

fact, the available funding, including inflation and contingency amounts, was insufficient to cover even the full costs of the technical assistance contract, to say nothing of the facility construction or field equipment. At that time, it was verbally agreed by the Contracting Agency, the Contractor and AID that original objectives and funding requirements for achieving them would be examined at a later date with project funding adjustments made as required.

The amount now requested reflects the conclusion of the examination, that the original objectives remain valid, and is the level necessary to allow original project objectives to be met. The additional funding covers the increased costs, due to inflation and other factors, of technical assistance, equipment and construction. It also includes funding for contingency and inflation covering the entire life of the project.

It will be noted that the amount for inflation represents a considerable proportion of the additional funding. This is because: (a) in the original PP the allowance for inflation was underestimated due to the application of a flat, low percentage in the calculation; and (b) the use of the original PP funds for inflation to fund the TA contract. The current estimate of the requirement is based on a higher inflation rate on the new higher totals compounded over five years. The funding provided by the amendment covers this estimate which includes contingency and inflation monies that replace the amount used in concluding the TA contract.

6. Recommendation: USAID/Egypt recommends that: (1) an authorization amendment be approved adding \$14,000,000, which will bring the AID life of project funding to \$24,513,000 on terms and conditions set forth in the draft authorization amendment; (2) local cost financing with dollar appropriation be approved; and (3) the Project Assistance Completion Date (PACD) be extended three full years to September 1, 1985.

B. PROJECT DESCRIPTION AND PROGRESS TO DATE:

1. Project Description:

The Rice Research and Training Project is designed to produce new information and knowledge for rice production, seed processing and storage by increasing research and training capabilities. This will be accomplished by establishing a coordinated rice research and training program to develop a

cadre of well qualified researchers and training specialists. The knowledgeable, commodity-oriented cadre will focus on identifying and eliminating constraints to rice production on farmers' fields. The project is attempting to increase rice production through applied demonstration and field testing and by providing the knowledge and expertise which is prerequisite to a substantial production increase.

The Rice Research and Training Project is addressing five interdisciplinary factors related to rice production and processing:

A. Administration: A Rice Research Advisory Council with inter-ministerial representation has been formed to establish linkages between ministries to address the problems and issues of rice production and processing, which cut across government ministerial lines, scientific disciplines, and implementation approaches. A National Rice Research Administration (NRRA) has been established as an organization to coordinate and administer the national program for rice research and training.

B. Research: The main thrust of rice production research will be carried out at the Sakha Station; ancillary research, which is site specific, will be carried out at the three field testing stations of El Sirw, Zarzao and Gemmeiza. A cadre of 25 Egyptian technical specialists are being selected and trained in breeding, agronomy, biometrics, entomology, pathology, economics and research station management. The cadre of technical specialists will design and conduct a research project to eliminate indentified constraints.

C. Extension: A line of communication between researchers and farmers will be provided by a team of 20 rice production technicians for conducting on-farm trials and demonstrations in the six major rice growing governorates.

D. Mechanization: Appropriate levels and types of mechanization for rice production are being identified. A team of 25 technicians are being selected and will be trained to design, develop, modify and est equipment. Small groups of farmers will be encouraged to cooperatively purchase newly designed and tested equipment which has been manufactured locally.

E. Seed Production and Processing: An overall rice seed production and processing program aimed at providing improved, high quality seed to the farmers will be developed

to produce seed in sufficient quantities to meet the farmers' annual requirements. A team of 30 will be trained as seed farm managers, farm equipment operators and mechanics for producing the seed. A seed processing center will be constructed, in cooperation with the Major Cereals Improvement Project, with an annual capacity sufficient to meet seed requirements of both projects. A staff of 25, including plant managers and operators, mechanics and seed analysts will be given on-the-job training.

The Project originally had a sixth component entitled Milling and Processing, however, this component has been eliminated because: 1) this activity is being addressed by the UNDP in a separate project at the Rice Technology Center in Alexandria; 2) The UCAL was unable at the time of the contract negotiation to provide technical assistance in the Milling and Processing field.

The Project is being implemented by NRRRA under authority delegated by the Minister of Agriculture and the Minister of Trade and Supply. Technical assistance, commodity support, and training program inputs are being provided under a host country contract between the University of California, Davis which has subcontracted with the University of Arkansas and the International Rice Research Institute. A Project Technical Director has been provided by the project contractor to assist and coordinate all activities of the project in Egypt for the duration of the contract.

A comprehensive evaluation and review of the project accomplishments is expected to be conducted approximately three years after project initiation to determine the effectiveness and utility of completed activities. The evaluation will also serve as a basis for determining the direction of future national or regional programs related to rice production. A final project evaluation will be conducted eight months after conclusion of the project.

2. Project Status and Progress to Date:

The HCC with UCAL was signed in June of 1980. A subcontract between the prime contractor and the University of Arkansas will provide technical expertise in the field of plant protection, weed control and production economics. Another subcontract between UCAL and the International Rice Research Institute (IRRI) will provide expertise in the fields of mechanization and extension. These subcontracts were signed in July of 1980. The first expatriate mechanization expert from IRRI arrived in Cairo in the Fall of 1980, followed by the Technical Director from UCAL on December 1. The extension training expert arrived in February of 1981. An expatriate

UCAL employee working in Egypt on another UCAL Project was transferred to the Rice Project to serve as business manager in July of 1980.

The Technical Director worked closely, during his first months in Egypt, with the Egyptian Project Director General and his Deputy in developing work plans and budget for the first year of project activity. Unfortunately, this expatriate was involved in a vehicle accident which resulted in his medical evacuation and later demise. Therefore, the position of Technical Director for the contractor is presently vacant. The University of California is actively recruiting a competent replacement and a candidate is expected to arrive in Egypt during the summer of 1981.

In summary, research in rice production is progressing well at the Sakha Research Station. The Rice Research Advisory Council has been established and is active. The Rice Research Technical Committee, holds monthly meetings to discuss and review all project technical activities and is performing well. Additional expatriate experts will be arriving on long-term assignment in June of 1981.

C. FINANCIAL SUMMARY:

1. Additional Funding: The additional funding required to support activities as described in the original project agreement is estimated in U.S. dollars and dollar equivalent to be \$14,000,000. Of this total AID financing will be \$3,955,138 and \$Equivalent 10,044,862 (from U.S. dollar purchase of Egyptian Pounds). The Government of the Arab Republic of Egypt contribution remains at the original LCP total of US \$Equivalent of \$7,386,000. Revised life of project budget estimates for AID and GOE assistance follows on Tables I and II. The exchange rate used is \$1 = .70 LE.

A special note should be made regarding the total AID amendment request and, therefore, the total AID LOP obligation; the new request of \$14 million includes \$92,588 for rounding purposes. Therefore, the GOE request for assistance is \$92,588 less than the proposed AID obligation of \$14,000,000. This rounding procedure is noted in Table I and II on totals only.

2. Total Project Costs: Total LOP cost in both dollars and local currency equivalent is estimated \$31,898,716. AID financing will total \$24,513,000. GOE contribution is estimated to be \$Eq. 7,386,000 or 23% of total project costs.

3. Source of U.S. Funds: Fiscal year 1981 Economic Support Funds will be utilized for the activities proposed under this project amendment.

4. Cost Estimate Review of Amendment:

(a) Under line item Technical Assistance a total of \$2,593,000 in dollars and Egyptian pounds will be utilized to provide the additional technical assistance not provided for in the current UCAL Contract. This will add approximately 1 1/2 years of TA to the contract term. The amount included in the original HCC was sufficient for only the first three and one half years of project life.

(b) Under the Training component an additional \$367,000 is being added to cover all dollar account training costs for the fifth year of the project. Adequate pound account funds are available from the original contract to cover in-country training costs.

(c) For construction and A&E Services a total of \$3,660, 000, plus contingency and inflation, is budgeted. This amount will allow the completion of the package of facilities described in the original Project Paper. The facilities consist of staff housing, offices, laboratories of various types, seed testing, processing and storage facilities, equipment maintenance shops, and an extension and training center. Sketch plans for these facilities have been prepared by the Ministry of Agriculture, using the TA contractor. Construction is to be carried out using Egyptian construction firms which are available, under contract with the Ministry of Agriculture. The main construction effort is to be made at the 9-acre Sakha Research Station, on land provided by the Ministry for the exclusive use of the National Rice Institute. Much lesser amounts of construction work need to be done at the field testing sites located at Gemmeiza, Zarzao and El Sirw.

(1) The figures given for construction in Table 1 represent estimates of finished construction costs based on planned building dimensions for the various relatively simple structures. These areas, taken with an estimated unit construction cost per square meter, allowed the consultant to reach an extended price. Site investigation was carried out to estimate lump sums for site preparation, including streets, perimeter fencing, water, sewer and electrical service, and road access. Therefore, the total amount requested for the construction appears reasonable.

(2) A&E Services. \$Eq 265,000 has been provided for and Egyptian architectural and engineering firm to do final design specifications and preparation of tender documents for the construction of the project facilities. The nature of the design is such that Egyptian firms can easily handle it at less cost than a foreign firm could. Given recent USAID experience with similar type, size and complexity of construction, A&E services can be reasonably be concluded and tender documents issued within nine months of contract signing.

(3) Construction. The sum of \$Eq 3,395,000 plus 15% contingency, and inflation has been included for construction. Given recent USAID experience with relatively simple site preparation and construction all construction activities at the Sakha site should be complete within 18 months of contract signing.

All construction activities will be administered by the Egyptian project officials according to GOE and AID procedures and regulations, with the UCAL contract team providing supporting technical assistance.

(d) Under the Commodity/Field Equipment component the amount of \$1,664,000 in dollars and Egyptian pounds will be provided for the purchase of field equipment for research field activities as well as office and library furniture, laboratory, and seed processing equipment and expendible supplies. Specifications for the equipment will be set by UCAL and the MOA. The Ministry of Agriculture will be responsible for procurement of commodities.

(e) A total of \$5,716,000 is included for contingency and inflation. This relatively large amount results for the reasons outlined in the Summary and Recommendations Section of this paper.

D. IMPLEMENTATION PLAN AND SCHEDULE: See Annex VI.

E. STATUTORY REQUIREMENTS:

1. Statutory Project and Standard Item Checklist: All statutory requirements have been met. See Annex III.

2. Environmental Consideration: The proposed amendment activities will in no way be expected to harm the human, animal or plant environment with regard to negative effects related to increased pollution, noise, congestion or disruption of habitat. The original project paper, as approved, included an environmental discussion. No additional activities are contemplated different from those planned in the original project paper.

3. FAA Section 611 (e). See Annex IV.

4. FAA Section 612(b). See Annex V.

F. SPECIAL COVENANT:

Article 5, Section 5.2: Continuation of Support:

The Grantee shall make available after the termination of the Project, sufficient resources, including the provision of funds, to support on a long term basis the research and extension activities which have been supported by the Project.

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NO. 9, 10

Egypt Rice Research and Training Project
Amended LOP Budget Estimates

Table I

USG INPUTS

	\$ 1980	\$Eq.	(\$ 1981	\$Eq.	(\$ 1982	\$Eq.	(\$ 1983	\$Eq.	(\$ 1984	\$Eq.	(\$ 1985	\$Eq.	Total
1. Technical Assistance <u>1/</u>	188,197	152,128	839,009	304,757	1,182,199	380,143	1,222,440	374,285	1,112,530	327,500	824,927	231,000	7,139,115
2. Training	1,020	3,329	117,960	21,714	217,000	49,857	216,960	27,014	99,910	(-)	16,440	(-)	771,204
3. Construction 3a. N&E	(-)	(-)	(-)	(-)	(-)	650,000 265,000	(-)	1,830,000	(-)	457,500	(-)	457,500	3,395,000 265,000
4. Commodities/ Field Equipment	163,590	(-)	427,960	10,629	977,200	166,286	738,690	108,286	575,470	117,429	122,380	30,000	3,432,920
5. Other Costs	6,680	29,571	35,960	126,214	35,700	265,429	38,420	247,143	41,420	236,572	23,020	116,000	1,202,129
Program Total <u>3/</u>	359,487	165,028	1,415,889	463,314	2,412,099	1,776,715	2,216,510	2,586,728	1,829,330	1,139,001	986,767	834,500	16,205,368
Contingency (15%)	53,923	27,754	212,383	69,497	361,815	266,507	332,477	388,009	274,400	170,850	148,015	125,175	2,430,805
Inflation <u>2/</u>	(-)	(-)	(-)	(-)	241,210	355,343	465,467	1,138,160	548,799	1,890,742	384,839	759,395	5,783,955
TOTAL	413,410	212,782	1,628,272	532,811	3,015,124	2,398,565	3,014,454	4,112,897	2,652,529	3,200,593	1,519,621	1,719,070	24,420,128*

1/ Technical Assistance includes the University of California as prime contractor and sub-contracts with the University of Arkansas and the International Rice Research Institute. Travel and per diem is included in this line item.

2/ Inflation factors used are: 1980 (none), 1981 (none), 1982 (10,20), 1983 (21,44), 1984 (30,66), 1985 (39,91).
Figures in parentheses reflect rates applied to US\$ and \$EQ respectively.

3/ LOP line item totals 1,2,4,5 are based on the prime and subcontract figures and firm estimates for contract amendment.

* Rounded up to 24,513,000 on the Project Data Sheet, and throughout text.

Table II

(000s)	LOP Original PP Budget Estimate				PP Amendment #2 (LOP) Budget Estimates*			
	AID (\$)	AID (\$/Eq)	GOE (\$Eq)	Original LOP Total (\$/Eq.)	AID (\$)	AID (\$/Eq)	GOE (\$Eq)	LOP Total (\$/Eq.)
1. Technical Assistance	4,138	633	(-)	4,771	5,370	1,770	(-)	7,140
2. Training	405	123	(-)	535	670	102	(-)	772
3. Construction /A&E	(-)	745	670	1,419	(-)	3,660	670	4,330
4. Construction / Field	2,012	265	(-)	2,277	3,001	433	(-)	3,434
5. Other Costs	(-)	(-)	(-)	(-)	182	1,021	(-)	1,203
6. Salaries	(-)	(-)	3,477	3,477	(-)	(-)	3,477	3,477
7. Vehicle Operation	(-)	(-)	228	228	(-)	(-)	228	228
8. Operation & Maintenance	(-)	(-)	1,535	1,535	(-)	(-)	1,535	1,535
Program Total	6,555	1,777	5,910	14,242	9,223	6,986	5,910	22,119
Inflation ^{1/}	658	182	591	1,431	1,641	4,144	591	6,376
Contingency (15%)	982	268	895	2,135	1,388	1,048	885	3,321
TOTAL	8,195	2,227	7,386	17,808	12,252	12,178	7,386	31,816**

^{1/} See Table I

The project was first amended in 9/78 to increase the US\$ grant amount from \$2,367,000 to \$3,867,000 due to incremental funding nature of the project.

The Project was amended for the second time in 6/79 to increase the US\$ life of project costs by \$1,572,000 to \$9,707,000, and the incremental funding element approved in the original PAF II from \$5,828,000 to \$7,400,000 to allow dollar finance of the remaining local cost obligation in the amount of \$1,572,000.

Note: the Grant Agreement has been amended twice to reflect the above noted changes.

** Rounded up to 31,899, on Project Data Sheet and throughout text.

Table III

-10C-

BUDGET REQUIREMENTS BY YEAR: GOE SHARE (LE 000)

	1st Year	2nd Year	3rd Year	4th Year	5th Year	All Years
<u>1. Administration</u>						
Salaries	20	25	30	30	30	135
Office rent and utilities	10	10	10	10	10	50
Vehicle operation	3	3	3	3	3	15
Operation costs	10	10	10	10	10	50
						<u>250</u>
<u>2. Research</u>						
Salaries	125	175	200	250	300	1050
Office rent and utilities	10	20	25	25	25	105
Vehicle operating expenses	5	10	10	10	10	45
Land rent for experiments	5	5	5	5	5	25
Maintenance, offices & flats	5	5	10	10	10	40
						<u>1265</u>
<u>3. Extension</u>						
Salaries	10	20	30	40	40	140
Office rent and utilities	5	7	9	9	9	39
Vehicle operating expenses	5	10	15	15	15	60
On-farm trials	15	25	35	35	35	145
						<u>384</u>
<u>4. Mechanization</u>						
Salaries	40	70	75	75	75	335
Office and workshop rental and utilities	10	10	10	10	10	50
Operational funds	30	40	50	50	50	220
						<u>605</u>
<u>5. Seed Production and Processing</u>						
<u>a. Production</u>						
Salaries	30	40	50	50	50	220
Land rent	10	40	50	50	50	200
Operation	25	40	50	50	50	215
<u>b. Processing</u>						
Salaries	25	50	60	60	60	255
Plant maintenance	-	5	10	10	10	35
Operation	-	25	35	50	50	160
						<u>1085</u>
<u>6. Milling and Processing</u>						
Salaries	25	50	75	75	75	300
Operational funds	25	35	50	50	50	210
Vehicle operation	4	8	8	8	8	36
						<u>546</u>
	452	738	915	990	1040	4135
Inflation (10%)	45	74	92	99	104	414
Contingency (15%)	68	111	137	149	156	621
	<u>565</u>	<u>923</u>	<u>1144</u>	<u>1238</u>	<u>1300</u>	<u>5170</u>

ARAB REPUBLIC OF EGYPT
MINISTRY OF AGRICULTURE

MINISTER'S OFFICE

June 4, 1981

Mr. Donald S. Brown
Mission Director
Agency for International
Development
5, Latin Americ St.,
U.S. Embassy
Cairo

Dear Mr. Brown,

The purpose of this letter is to request that the Government of the United States of America, through the Agency for International Development, grant additional assistance to the Government of the Arab Republic of Egypt, to be used by the Ministry of Agriculture in the Rice Research and Training Project (263-0027).

As you are well aware, the original budget of this project was developed in 1977. Since that time, inflation has been excessive and, therefore, the original amount budgeted (\$/\$ equiv. 10,422,800) is now insufficient to cover all phases of the proposal project activities.

The contract between this Ministry and the University of California at Davis, signed in June 1980 for four years, to provide technical assistance account for \$ + \$ equiv. 9,881,314 leaving only \$541,486 for field equipment and facilities.

Since the main objective of the Rice Research and Training Project is to establish the National Rice Institute at Sakha, including the following disciplines:

- a) Varietal Improvement;
- b) Plant Protection;
- c) Agronomy;
- d) Seed Production;
- e) Mechanization;
- f) Extension.

ARAB REPUBLIC OF EGYPT
MINISTRY OF AGRICULTURE
MINISTER'S OFFICE

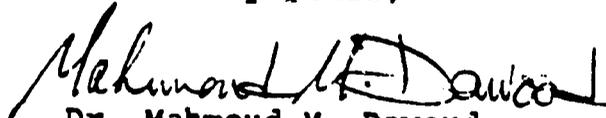
-2-

To establish the National Rice Institute and to extend the project over a five-year program rather than the current four-year program, an additional grant of \$ + \$ equiv. 13,907,412 is requested as shown on Attachment (A).

I am sure that the Rice Research and Training Project, through improving rice production, will be of great social and economic benefits to Egypt.

Your earliest consideration of this request will be highly appreciated.

Sincerely yours,



Dr. Mahmoud M. Dawoud
Minister of Agriculture & Food Security

ARAB REPUBLIC OF EGYPT
 MINISTRY OF AGRICULTURE
 MINISTER'S OFFICE

Attachment "A"

Proposed Rice Project
Add-on Budget

	<u>(000s)</u> <u>\$</u>	<u>(000s)</u> <u>(\$ Equiv)</u>	<u>(000s)</u> <u>(\$/\$ Equ.)</u>
			<u>Total</u>
Technical Assistance	1,183	1,410	2,593
Training	367	--	367
Construction of National Rice Institute - Building & Facilities	--	3,660	3,660
Commodities/Field Equipment (includes packing and shipping)	<u>1,400</u>	<u>264</u>	<u>1,664</u>
Subtotal	2,950	5,334	8,284
Inflation	701	3,680	4,381
Contingent 15%	<u>442</u>	<u>800</u>	<u>1,242</u>
TOTAL	4,093	9,814	13,907

SECOND AMENDMENT
TO
PROJECT AUTHORIZATION

Name of Country: Arab Republic
of Egypt

Name of Project: Rice Research
and Training

Number of Project: 263-0027

1. Pursuant to Section 532 of the Foreign Assistance Act of 1961, as amended ("FAA"), the Rice Research and Training Project for the Arab Republic of Egypt was approved by the A.I.D. Administrator on September 19, 1977, and subsequently amended by the A.I.D. Administrator on March 28, 1979, for total authorized funding of Nine Million Seven Hundred Sixty-Seven Thousand United States Dollars (\$9,767,000) and Five Hundred Twenty-Two Thousand Two Hundred Egyptian Pounds (LE 522,200). That authorization, as amended, pursuant to Part II, Chapter 4, Section 531 of the FAA, is hereby amended by adding Fourteen Million United States Dollars (\$14,000,000) in grant funds over a four-year period from the date of this authorization amendment and deleting Two Hundred United States-owned Egyptian pounds (LE 200), for total authorized Project funding of Twenty-Three Million Seven Hundred Sixty-Seven Thousand United States Dollars (\$23,767,000) and Five Hundred Twenty-Two Thousand United States-owned Egyptian Pounds (LE 522,000) in Grant funds ("Grant") subject to the availability of funds in accordance with the A.I.D. OYB/allotment process, to help in financing the foreign-exchange and local currency costs of goods and services required for the Project.

2. The Project Authorization, as previously amended, is further amended by deleting in its entirety the project description contained within the first three paragraphs and commencing with the words: "The Project shall consist of. . .", and substituting therefor the following Project description:

"The Project will finance technical assistance, commodity support and training in support of a Coordinated Rice Research and Training Program. It will assist the Cooperating Country to acquire new information on and knowledge for rice production, processing and storage by increasing the research and training capability of the Cooperating Country."

5C(2) - PROJECT CHECKLIST

Listed below are statutory criteria applicable generally to projects with FAA funds and project criteria applicable to individual funding sources: Development Assistance (with a subcategory for criteria applicable only to loans); and Economic Support Fund.

CROSS REFERENCES: IS COUNTRY CHECKLIST UP TO DATE? HAS STANDARD ITEM CHECKLIST BEEN REVIEWED FOR THIS PROJECT?

A. GENERAL CRITERIA FOR PROJECT

1. Continuing Resolution Unnumbered; FAA Sec. 634A; Sec. 653(b).
 - (a) Describe how authorizing and appropriations Committees of Senate and House have been or will be notified concerning the project; (b) is assistance within (Operational Year Budget) country or international organization allocation reported to Congress (or not more than \$1 million over that figure.)?
 - a. Advice of Program Change; Congressional Activity Data Sheet
 - b. Yes.

2. FAA Sec. 611(a) (1). Prior to obligation in excess of \$100,000, will there be (a) engineering, financial other plans necessary to carry out the assistance and (b) a reasonably firm estimate of the cost to the U.S. of the assistance?
 - a. Yes.
 - b. Yes, such estimates have been received.

3. FAA Sec. 611(a) (2). If further legislative action is required within recipient country, what is basis for reasonable expectation that such action will be completed in time to permit orderly accomplishment of purpose of the assistance?
- No further legislative action is required, other than action ratifying the grant agreement amendment.
4. FA Sec 611(b); Continuing Resolution Sec. 501. If for water or water-related land resource construction, has project met the standards and criteria as set forth in the Principles and Standards for Planning Water and Related Land Resources, dated October 25, 1973?
- Not applicable.
5. FA Sec. 611(e). If project is capital assistance (e.g., construction), and all U.S. assistance for it will exceed \$1 million, has Mission Director certified and Regional Assistant Administrator taken into consideration the country's capability effectively to maintain and utilize the project?
- Yes, the Mission Director has so certified.
6. FAA Sec 209. Is project susceptible of execution as part of regional or multilateral project? If so why is project not so executed? Information and conclusion whether assistance will encourage regional development programs.
- Not applicable
7. FAA Sec. 601(a). Information and conclusions whether project will encourage efforts of the country to: (a) increase the flow of
- The project will not directly increase the flow of international trade or foster private initiative and competition or encourage development of cooperatives or strengthen free labor unions. It is expected to improve the technical efficiency of agriculture and related services.

international trade; (b) foster private initiative and competition; and (c) encourage development and use of cooperatives, and credit unions, and savings and loan associations; (d) discourage monopolistic practices; (e) improve technical efficiency of industry, agriculture and commerce; and (f) strengthen free labor unions.

8. FAA Sec. 601(b). Information and conclusion on how project will encourage U.S. private trade and investment abroad and encourage private U.S. participation in foreign assistance programs (including use of private trade channels and the services of U.S. private enterprise).

A large portion of services and commodities will have their source and origin in the U.S. A large portion of services and commodities will be procured from U.S. private enterprise.

9. FAA Sec. 612(b), 636(h); Continuing Resolution Sec. 508. Describe steps taken to assure that, to the maximum extent possible, the country is contributing local currencies to meet the cost of contractual and other services, and foreign currencies owned by the U.S. are utilized in lieu of dollars.

The Grant Agreement so provides

10. FAA Sec. 612(d). Does the U.S. own excess foreign currency of the country and, if so, what arrangements have been made for its release?

No

11. FAA Sec. 601(e). Will the project utilize competitive selection procedures for the

Yes

awarding of contracts, except where applicable procurement rules allow otherwise?

12. Continuing Resolution Sec. 522.
If assistance is for the production of any commodity for export, is the commodity likely to be in surplus on world markets at the time the resulting productive capacity becomes operative, and is such assistance likely to cause substantial injury to U.S. procedures of the same, similar or competing commodity?

No.

B. FUNDING CRITERIA FOR PROJECT

1. Development Assistance Project Criteria

- a. FAA Sec. 102(b), 111, 113, 281(a). Extent to which activity will (a) effectively involve the poor in development, by extending access to economy at local level, increasing labor-intensive production and the use of appropriate technology, spreading investment out from cities to small towns and rural areas, and insuring wide participation of the poor in the benefits of development on a sustained basis, using the appropriate U.S. institutions; (b) help develop cooperatives, especially by technical assistance, to assist rural

Not applicable.

and urban poor to help themselves toward better life, and otherwise encourage democratic private and local governmental institutions; (c) support the self-help efforts of developing countries; (d) promote the participation of women in the national economies of developing countries and the improvement of women's status; and (e) utilize and encourage regional cooperation by developing countries?

- b. FAA Sec. 103, 103A, 104, 105, 106, 107. Is assistance being made available: (include only applicable paragraph which corresponds to source of funds used. If more than one fund source is used for project, include relevant paragraph for each fund source.)

Not applicable

(1) [103] of agriculture, rural development; if so (a) extent to which activity is specifically designed to increase productivity and income of rural poor; 103A if for agriculture research; full account shall be taken of the needs of small farmers, and extensive use of field testing to adapt basic research to local conditions shall be made; (b) extent to which assistance is used in coordination with

programs carried out under Sec. 104 to help improve nutrition of the people of developing countries through encouragement of increased production of crops with greater nutritional value, improvement of planning, research, and education with respect to nutrition, particularly with reference to improvement and expanded use of indigenously produced foodstuffs; and the undertaking of pilot or demonstration of programs . explicitly addressing the problem of malnutrition of poor and vulnerable people; and (c) extent to which activity increases national food security by improving food policies and management and by strengthening national food reserves, with particular concern for the needs of the poor, through measures encouraging domestic production, building national food reserves, expanding available storage facilities, reducing post harvest food losses, and improving food distribution.

(2) [104] for polpulation planning under sec. 104(b) or health under sec. 104(c); if so, (i) extent to which activity emphasizes low-cost, integrated delivery systems for health, nutrition and family planning for the poorest people, with particular attention to the needs of mothers and young children, using paramedical and auxiliary medical personnel, clinics and

health posts, commercial distribution systems and other modes of community research.

(4) [105] for education, public administration, or human resources development; if so, extent to which activity strengthens nonformal education, makes formal education more relevant, especially for rural families and urban poor, or strengthens management capability of institutions enabling the poor to participate in development; and (ii) extent to which assistance provides advanced education and training of people in developing countries in such disciplines as are required for planning and implementation of public and private development activities.

(5) [106; ISDCA of 1980, Sec. 304] for energy, private voluntary organizations, and selected development activities; if so, extent to which activity is: (i) (a) concerned with data collection and analysis, the training of skilled personnel, research on and development of suitable energy sources, and pilot projects to test of suitable energy sources, and pilot projects to test new methods of energy production; (b) facilitative of geological and geophysical survey work to located potential oil, natural gas, and coal reserves and to encourage exploration for

potential oil, natural gas, and coal reserves; and (c) a cooperative program in energy production and conservation through research and development and use of small scale, decentralized renewable energy sources for rural areas:

(ii) technical cooperation and development, especially with U.S. private and voluntary or regional and international development, organization;

(iii) research into, and evaluation of, economic development process and techniques;

(iv) reconstruction after natural or manmade disaster;

(v) for special development problems, and to enable proper utilization of earlier U.S. infrastructure, etc., assistance;

(vi) for programs of urban development, especially small labor-intensive enterprises, marketing systems, and financial or other institutions to help urban poor participate in economic and social development.

c. [107] is appropriate effort place on use of appropriate technology? (relatively smaller, cost-saving, labor using technologies that are generally most appropriate for the small farms, small businesses, and small incomes of the poor.)

d. FAA Sec. 110(a). Will the recipient country provide at least 25% of the costs of the program, project, or activity with respect to which the assistance is to be furnished (or has latter cost-sharing requirement been waived for a "relatively least developed" country)?

e. FAA Sec. 110(b). Will grant capital assistance be disbursed for project over more than 3 years? If so, has justification satisfactory to Congress been made, and efforts for other financing, or is the recipient country "relatively least developed"?

f. FAA Sec. 281(b). Describe extent to which program recognizes the particular needs, desires, and capacities of the people of the country; utilizes the country's intellectual resources to encourage institutional development; and supports civil education and training in skills required for effective participation in governmental processes essential to self-government.

g. FA Sec. 122(b). Does the activity give reasonable promise of contributing to the development of economic resources, or to the increase of productive capacities and self-sustaining economic growth?

2. Development Assistance Project
Criteria (Loans Only)

a. FAA Sec. 122(b).
Information and conclusion on
capacity of the country to repay
the loan, at a reasonable rate of
interest.

b. FAA Sec. 620(d). If
assistance is for any productive
enterprise which will complete
with U.S. enterprises, is there
an agreement by the recipient
country to prevent export to the
U.S. of more than 20% of the
enterprise's annual production
during the life of the loan?

3. Project Criteria Solely for
Economic Support Fund

a. FAA Sec. 531(a). Will this
assistance promote economic or
political stability? To the
extent possible, does it reflect
the policy directions of FAA
Section 102?

b. FA Sec. 531(c). Will
assistance under this chapter be
used for military, or
paramilitary activities?

a. This assistance will
promote economic stability
by increasing the efficiency
of rice research, production,
and processing programs and
ultimately contribute to
increasing the options
available for development
resources.

b. Not applicable.

5C(3) - STANDARD ITEM CHECKLIST

Listed below are the statutory items which normally will be covered routinely in those provisions of an assistance agreement dealing with its implementation, or covered in the agreement by imposing limits on certain uses of funds.

These items are arranged under the general headings of (A) Procurement, (B) Construction, and (C) Other Restrictions.

A. Procurement

1. FAA Sec. 602. Are there arrangements to permit U.S. small business to participate equitably in the furnishing of commodities and services financed? Yes.
2. FAA Sec. 604(a). Will all procurement be from the U.S. except as otherwise determined by the President or under delegation from him? Yes.
3. FAA Sec. 604(d). If the cooperating country discriminates against U.S. marine insurance companies, will commodities be insured in the United States against marine risk with a company or companies authorized to do a marine insurance business in the U.S.? Not applicable
4. FAA Sec. 604(e); ISDCA of 1980 Sec. 705(a). If offshore procurement of agricultural commodity or product is to be financed, is there provision Not applicable

against such procurement when the domestic price of such commodity is less than parity? (Exception where commodity financed could not reasonably be procured in U.S.)

5. FAA Sec. 603. Is the shipping excluded from compliance with requirement in section 901(b) of the Merchant Marine Act of 1936, as amended, that at least 50 percent of the gross tonnage of commodities (computed separately for dry bulk carriers, dry cargo liners, and tankers) financed shall be transported on privately owned U.S.-flag commercial vessels to the extent that such vessels are available at fair and reasonable rates?

No. 50 percent of all shipping will be on U.S. bottoms.

6. FAA sec. 621. If technical assistance is financed, to the fullest extent practicable will such assistance, goods and professional and other services be furnished from private enterprise on a contract basis? If the facilities of other Federal agencies will be utilized, are they particularly suitable, not competitive with private enterprise, and made available without undue interference with domestic programs?

Yes. No other U.S. federal agencies are contemplated as the source of assistance.

7. International Air Transport. Fair Competitive Practices Act, 1974. If air transportation of persons or property is financed on grant basis, will provision be made that U.S. carriers will be utilized to the extent such service is available?

Yes.

8. Continuing Resolution Sec. 505. If the U.S. Government is a party to a contract for procurement, does the contract contain a provision authorizing termination of such contract for the convenience of the United States?

Host government will arrange for all procurement according to GOE and AID regulations.

B. Construction

1. FAA Sec. 601(d). If capital (e.g., construction) project, are engineering and professional services of U.S. firms and their affiliates to be used to the maximum extent consistent with the national interests?
2. FAA Sec. 611(c). If contracts for construction are to be financed, will they be let on a competitive basis to maximum extent practicable?
3. FAA Sec. 620(k). If for construction of productive enterprise, will aggregate value of assistance to be furnished by the U.S. not exceed \$100 million?

No, all construction will be done by Egyptian firms.

Yes.

Not applicable.

C. Other Restrictions

1. FAA Sec. 122(b). If development loan, is interest rate at least 2% per annum during grace period and at least 3% per annum thereafter?
2. FAA Sec. 301(d). If fund is established solely by U.S. contributions and administered by an international organization, does Comptroller General have audit rights?

Not applicable.

Yes.

3. FAA Sec. 620(h). Do arrangements exist to insure that United States foreign aid is not used in manner which, contrary to the best interests of the United States, promotes or assists the foreign aid projects or activities of the Communist-bloc countries? 3. Yes.
4. Continuing Resolution Sec. 514. If participants will be trained in the United States with funds obligated in FY 1981, has it been determined either (a) that such participants will be selected otherwise than by their home governments, or (b) that at least 20% of the FY 1981 fiscal year's funds appropriated for participant training will be participants selected otherwise than by their home government? 4. No.
5. Will arrangements preclude use of financing: 5. Yes.
- a. FAA Sec. 104(f). To pay for performance of abortions as a method of family planning or to, motivate or coerce persons to practice abortions; to pay for performance of involuntary sterilization as a method of family planning, or to coerce or provide financial incentive to any person to undergo sterilization?
- b. FAA Sec. 620(g). To compensate owners for expropriated nationalized property?

c. FAA Sec. 660. To provide training or advice or provide any financial support for the police, prisons, or other law enforcement forces, except for narcotics programs?

d. FAA Sec. 662. For CIA activities?

e. FAA Sec. 636(i). For purchase, sale, long-term lease, exchange or guaranty of the sale of motor vehicles manufactured outside U.S., unless a waiver is obtained.

f. Continuing Resolution Sec. 504. To pay pensions, annuities retirement pay, or adjusted service compensation for military personnel?

g. Continuing Resolution Sec. 506. To pay U.S. assessments, arrearages or dues.

h. Continuing Resolution Sec. 507. To carry out provisions of FAA section 209(d) (Transfer of FAA funds to multilateral organizations for lending.)

i. Continuing Resolution Sec. 509. To finance the export of nuclear equipment fuel, or technology or to train foreign nationals in nuclear fields?

j. Continuing Resolution Sec. 510. Will assistance be provided for the purpose of aiding the efforts of the government of such

country to repress the legitimate rights of the population of such country contrary to the Universal Declaration of Human Rights?

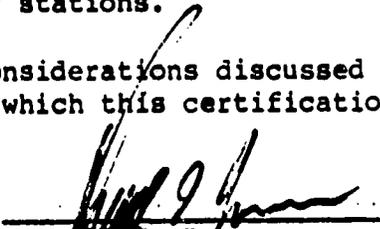
k. Continuing Resolution Sec. 516. To be used for publicity or propaganda purposes within U.S. not authorized by Congress?

ANNEX IV:

Certification Pursuant to Section 611(e) of FAA
1961 as Amended

I, Donald S. Brown, Director, the principal officer of the Agency for International Development in Egypt, having taken into account, among other things, the maintenance and utilization of projects in Egypt previously financed or assisted by the United States, do hereby certify that in my judgement, Egypt has both the financial capability and the human resources to effectively install, maintain and utilize the capital assistance to be provided for the construction of a National Rice Research and Extension Station and minor renovation of three field testing stations.

This judgement is based upon general considerations discussed in the project assistance paper as amended to which this certification is to be attached.



Donald S. Brown

ANNEX V:

Recommendation for Dollar Funding of Local Costs:

The total local currency cost of the project, as amended, is \$19,564,000 (LE/\$Eq). This represents the combined USG and GOE contribution.

The total US. contribution to the local currency cost of project activities is \$Eq. 12,178,000. Of this amount, \$Eq 10,044,862 represents requested new obligation under this project amendment for an additional 1.5 years of U.S. technical assistance, construction and equipping of the physical facilities at the Sakka research station. This amount represents additional USAID project assistance which was originally envisioned in 1977 with the signing of the project agreement.

The remaining \$Eq 7,386,000 represents personnel, land, construction costs, equipment operation and maintenance and other in-kind support being provided by the Government of the Arab Republic of Egypt (GOE). Thus, the GOE contribution to the total project cost is 23%.

Given the current restrictions on expansion of the GOE budget, it would be unrealistic to require the GOE to provide a greater share of total project costs. To do so would inevitably introduce delays. Furthermore, it would reduce the project net contribution to Egypt's development resources. The Mission, therefore, proposes to fund \$Eq 10,044,862 or 32% of the total project costs.

The source of AID provided local currency will be dollar purchase of Egyptian pounds. At present, the projected availability of excess currency pounds is fully programmed for other activities. Due to the high level of AID activity in Egypt, excess currency cannot cover the needs for project cost and other purposes. If additional excess currency becomes available for this project, it will be used in preference to dollar-funded purchase.

In accordance with Section 612(b) of the FAA, as amended, it is therefore recommended that \$10,044,862 be allocated for dollar purchase of Egyptian pounds to help meet the local currency costs of the project.

IMPLEMENTATIONORGANIZATION AND MANAGEMENT

A. Administrative Organization

1. The National Rice Institute: The National Rice Institute (NRI) will have functions and authority relationships parallel to the other institutes under the Ministry of Agriculture. The MOA will designate a Project Director who will select individuals from government agencies and institutions to become full-time members of the NRI. Institute members, although working on separate programs, will coordinate their activities towards the major goals of this Project.

The administrative offices for the NRI will have permanent headquarters in Giza within the Ministry of Agriculture where adequate space and office supplies will be provided. The headquarters staff of NRI, for purposes of this Project, will be composed of the following:

Project Director
 Project Deputy Director
 Project Technical Director
 Administrative Officer
 Administrative and Support Staff

2. Project Technical Committee: The Project Technical Committee will be composed of the Director of the NRI, the Project Technical Director, the Liaison Scientist employed by IRRI and the Program Co-leaders and the Contractor Principal Investigator for the Project. The Annual Work Plan will be the responsibility of the Director of the NRI and the Project Technical Director. The plan will be reviewed by the Rice Production Advisory Council.

3. Rice Production Advisory Council: The Rice Production Advisory Council of 12 to 15 members will include representatives from, but not necessarily limited to:

Ministry of Agriculture
 Ministry of Trade and Supply
 Ministry of Irrigation
 Agricultural Development Bank
 Rice producer representative

Council members will be senior ranking individuals or officers. Functions of the RPAC will be to review progress of the NRI, review work plans for the next year and to advise on program directions and emphasis.

4. The Project Director: The Project Director shall
- a. Serve as the principal representative of the ARE for all activities of this project.
 - b. Insure that logistical, administrative, research, and extension support are provided as needed to carry out the project activities.
 - c. Direct the activities of the ARE personnel provided to work on the project.
 - d. Assure that all Project activities for which the ARE is responsible are implemented pursuant to agreed upon plans and schedules.
 - e. Establish and maintain coordination with appropriate Contractor/USAID authorities for timely and efficient implementation of the Project activities.
 - f. Manage, in collaboration (as requested) with the Project Technical Director the funds provided to the Project by the ARE and USAID.
 - g. Arrange for the construction of research site facilities funded under this project.
 - h. Arrange for the procurement of the field equipment funded under this project.

5. The Contractor: The Contractor and collaborating sub-contractors will provide technical assistance to the component activities of the Project. Because of the diverse nature of the Project activities, some of its separate components will be carried out by one or more sub-contractors. Curriculum vitae for each long-term Contractor or sub-contractor will be furnished to the Director of the NRI for approval. Manpower requirements are detailed in Tables 1 and 2 attached.

The contractor and collaborating sub-contractors will perform as follows:

- a. In cooperation with the MOA and NRI, coordinate and direct a program of technical assistance to the various elements of the Egyptian rice subsector.
- b. Recruit, engage and direct technical specialists in discrete Project activities relating to research and training in rice production in Egypt for the following functional assignments (total work months are indicated in Tables 1 and 2 attached:
 - 1) Project Technical Director: One agricultural specialist with general management and research and administrative experience.

- 2) Rice Production Research. Rice production specialists with expertise in breeding, plant pathology, entomology, agronomy, economics, management and production training. Consultants in these disciplines will be used as the need arises.
- 3) Agricultural Mechanization. One specialist in agricultural engineering capable of designing, adapting and evaluating agricultural machinery.
- 4) Extension. One rice production trainer who is an expert in all aspects of rice production.
- 5) Seed production and Research Farm Development. One specialist with expertise in research farm development, rice production, farm machinery operation and repair, and seed processing.

c. Provide administrative and logistical support, both at the home base and in Egypt to Project technical specialists.

d. Establish and maintain coordination with the NRI to effect the required Project activities.

e. Provide for and implement as required the Project training programs in coordination with the NRI and other training institutions.

6. The Project Technical Director: The Project Technical Director will work with the Director of the NRI and function as follows:

a. Serve as the principal technical representative in Egypt for all activities of the Project throughout its duration.

b. Provide technical and administrative assistance to the ARE authorities responsible for planning and implementing work programs under the Project; day-to-day coordination will be maintained with the Project Director.

c. Direct the activities of technical personnel provided by the Contractor.

d. Assure that all Project activities for which the Contractor is responsible are scheduled and implemented pursuant to mutually agreed plans and schedules.

e. Establish and maintain coordination with appropriate ARE authorities for timely and efficient implementation of the Project activities.

f. Monitor and provide to the ARE continuing evaluation of the Project.

g. Supervise development of documentation for proposed redesign of the Project or amendments to the Contract -- as determined by the ARE and the Contractor.

h. Design and coordinate implementation of the training program.

i. Arrange for and implement procurement procedures for laboratory equipment/commodities as needed for the project.

7. USAID

The USAID/ Egypt Assistant Director for Agricultural Resources, or his designee, will have AID management responsibility. Day-to-day monitoring will be by the appointed USAID project officer.

The USAID Project Officer will ensure that implementation of the project is in accordance with existing USAID and USG handbook requirements and Mission Orders. S/he will be responsible for coordinating with the GOE Project Director and advising on implementation steps involving AID. The Project Officer will be responsible for keeping AID management informed of project activities and in planning for evaluation.

B. Training

Training will be provided by scientists and training specialists in the US, at IRRI, in Egypt or in third country institutions. Out-of-country training will emphasize applied technology relating to rice production and processing. A few MSc. and PhD. candidates will be trained in the US.

Some NRI members or future members will be given short-term non-degree or post-graduate training at appropriate institutions. Short-term out-of-country training will be for up to one year in interdisciplinary research or on rice production and applied research. On-the-job training in water management and machinery development will be provided in Egypt.

Training arrangements will be made by the Project Technical Director and the Rice Production Trainer. An estimate of training needs is presented in Table 3 attached.

Research: The 3 degree trainees would be for the PhD degree. The time required is at least 36 months. Six non-degree trainees would be for post-graduate specialization, for up to one year in each program area. The 12 non-degree trainees would receive 4 months training at IRRI.

Mechanization: Two degree trainees in agricultural mechanization will study for the MSc degree in the US. Four trainees will be trained for 6 months in the rice mechanization program at IRRI.

Seed Processing: Three trainees will receive 6 months training in the US in the various steps and techniques of seed multiplication, certification, processing and testing.

Extension: Four extension rice production staff will receive the 6 month rice production training course given at IRRI. The 4 extension specialists should hold MSc degrees before entering the course. This is to be followed by an additional 6 months specializing in their appropriate fields at various US institutions. Three additional extension personnel will also be trained at IRRI.

C. Research

Research candidates will be chosen by the Project Director with the concurrence of the Project Technical Director. They will be posted at Sakha. To qualify for appointment, candidates must hold at least a BSc degree in agriculture and have the potential to become first rate professional researchers. Appointments will be probational for the first year and on an contractual basis.

The Egyptian research team will be selected during the first year and will work in the following disciplines:

Rice breeders	(6)
Agronomists	(4)
Soil and Water Management	(2)
Plant Pathologists	(2)
Entomologists	(2)
Weed control	(2)
Farm Station Management	(2)
Economists	(2)
Testing Station Management	(3)

Expatriate specialists will support the development of the overall research program, provide on-the-job training, and assist with implementation of the research program.

Specifications and details of equipment for the research component will be determined and developed by the Program Co-leaders and the Project Technical Director.

D. Extension

An IRRI specialist in rice production training programs, along with the staff members of the Sakha station who have

attended the Rice Production Training Program at IRRI, will develop a training program similar to that at IRRI but for Egyptian conditions. The Project Director with the concurrence of the Project Technical Director will select one or two trainees from each of the six main rice producing governorates for the first group of trainees. They will be trained for six-months during the full cycles of a rice production season, after which they will return to their governorates. The trainees will be hired on a probationary period of two years. Those trainees meeting the standards set, will be retained as Rice Production Extension Advisors (RPEA). The selection and training process will be continued for up to three years until at least 20 have completed the course and returned to work in the governorates.

RPEAs will work directly with selected farmers in carrying out on-farm trials and demonstrations of proper and improved cultural techniques aimed at increased production.

E. Mechanization

A specialist in agricultural engineering design from IRRI will be provided to assist in the design, adaptation, and evaluation of agricultural machinery for three work years, starting with the first year of the Project. Four engineers will be selected for design and testing at Sakha. Shops and facilities for engineering work will be located at Sakha.

F. Seed Production and Research Farm Development

The bulk of the rice breeding and development program will be conducted at the Sakha station with a winter nursery in another suitable location. Breeder seed will be increased and multiplied at Sakha.

2,500 feddans owned by the Plant Protection Organization will be leveled by the ARE for the rice seed multiplication. The rice will be grown in large block and maintained as pure varieties from harvest through threshing, cleaning and bagging.

Seed produced on the 2,500 feddans could amount to about 5,000 tons. It will be cleaned, processed and bagged at the seed processing plant to be erected at Sakha. Storage facilities capable of holding up to 5,000 tons will be built as well.

The seed specialist employed by the Contractor will work in cooperation with the Major Cereals Project and the sub-contractor for the seed processing plant to develop specifications for the machinery and equipment required to process 5,000 tons of rice seed.

TABLE 1. LONG-TERM SPECIALISTS IN MONTHS (by residence in Egypt)

Program Component	Yr. 1	2	3	4	5	All Years
Administration						
-Technical Director	12	12	12	12	12	60
Agronomy & Economics Research						
-Agronomist (production)	-	12	12	12	-	36
-Agronomist (Soil/Water)	-	-	12	12	12	36
Seed Production and Research Farm Management						
-Seed specialist	6	12	12	6	-	36
Agronomy & Economics Research						
-Economist	-	12	12	6	-	30
Pest Control Research						
-Entomologist/Pathologist	-	6	12	6	-	24
Breeder Research						
-Plant Breeder	-	12	12	12	12	48
Mechanization						
-Design Engineer	12	12	12	-	-	36
Extension						
-Rice production trainer	9	12	12	12	3	48
Administrative/Financial Officer	12	12	12	12	12	60
	51	102	120	90	51	414

TABLE 2. SHORT-TERM SPECIALISTS IN MONTHS (by residence in Egypt)

Program Component	1	2	3	4	5	All Years
Rice Breeding	1	1	1	1	1	5
Entomology	-	-	1	1	1	3
Agronomy	2	2	1	2		8
Seed Production	2	1	1	1	1	6
Biometrics	1	-	1	-	1	3
Mechanization	-	1	1	1	1	4
Plant Pathology	1	2	2	2	2	9
Unspecified	-	2	2	2	2	8
	7	9	10	10	10	46

TABLE 3. TRAINING PROGRAM (United States and at IRRI)

Program Component	#	Months	Location	Total Mos.
Research				
Degree (PhD)	3	36	US	108
Non-Degree				
Post-Doc	6	12	US	72
Other (GEU)	12	4	IRRI	48
Extension				
Non-degree				
Extension Leader	1	12	US (6)/IRRI (6)	12
Extension Spec.	3	12	" "	36
Mechanization				
Degree (MSc)	2	24	US	48
Non-degree	4	6	IRRI	24
Seed Processing and testing	3	6	US	18
	34			366

IMPLEMENTATIONImplementation Schedule Revised

<u>A. Overall</u>	<u>Responsible Organization</u>	<u>Original Target</u>	<u>Revised Target</u>
PP Approved	AID/W	7/77	7/77
Grant Agreement Signed	USAID-GOE	8/77	8/77
Contract Signed	MOA-Contractor	3/78	6/80
Initial CPs Met	MOA	3/78	9/80
Rice Research Advisory Council Formed	MOA	3/78	8/80
Project Director Appt.	MOA	9/77	8/80
Project Tech. Dir. Appt.	Contractor	4/78	11/80
Project Amendment Appr.	AID/W	--	8/81
Grant Agreement Amended	MOA/USAID	--	9/81
 <u>B. Research</u>			
Research Specialists Identified	Contractor	12/77	8/80
Research Agronomist and Research Breeder Arrives in Cairo	Contractor	4/78	11/80
Research Programs Underway	MOA/Contractor	5/78	3/81
Plant Pathologist Arrives	Contractor	-	8/81
Research Lab Equipment Installed	Contractor/ MOA	-	1/84
Improved Varieties and Production Practices Developed	Contractor/ MOA	6/82	6/84
Training Complete	Contractor/ MOA	6/82	6/85
 <u>C. Extension</u>			
Extension Chief Selected	MOA	10/78	8/80
Extension Specialist Arrives Cairo	Contractor	6/79	2/81
First Extension Field Staff Selected	MOA/Contractor	10/79	3/81
Governorate Extension Work Begins	MOA/Contractor	4/80	4/81
Extension Work Extended to All Rice Producing Governorates	MOA	4/82	4/83

D. Mechanization

Mechanization Section Chief Selected	MOA	5/78	--
Mechanization Specialist Arrives	Contractor	5/78	9/80
Prototype Machinery Produced	Contractor/ MOA	11/78	12/81
Machinery Design.Modification Complete	Contractor/ MOA	5/81	9/82
Training Complete	Contractor/ MOA	5/81	9/83

E. Seed Production/Processing

Section Chief Selected	MOA	4/78	9/81
Seed Production Farms Management Specialist Arrives Cairo	Contractor	11/78	9/82
Processing Plant Constructed	MOA	11/78	12/83
Field Equipment Arrives	MOA	11/78	9/82
New Seed Produced	MOA	12/80	3/83

F. Construction

Competitive Procurement of A&E Firm Initiated	MOA		8/81
USAID Approves MOA Selection	USAID		9/81
MOA signs A&E Contract	MOA		10/81
Preliminary Designs Complete and submitted to MOA-USAID	Contractor		3/82
Comments returned to Contractor	MOA/USAID		4/82
Final Designs Complete and Tender Docs ready	Contractor		6/82
Competitive Procurement of Construction Contractor	MOA/A&EContractor		6/82
Contract Submitted for USAID Approval	MOA		8/82
Contract Approved	USAID		8/82
Construction Begins	Contractors		9/82
Site Inspections	MOA/USAID		Cont.
Construction Complete	Contractors		12/83