

Seed Technology
FY 1989/90 Implementation & Financial Plan

N A R P
A G E R
T R S O
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National
Agricultural
Research
Project

المطسرون
الليوسوس
لابحسبات
المزاعسية



November 1990

LIFE-OF-PROJECT IMPLEMENTATION & FINANCIAL PLAN

NARP SEED COMPONENT (263-0152.04)

I. TECHNICAL ASSISTANCE

A. ACTIVITY: Provide technical assistance to support transfer of up-to-date technology to establishment, organization and implementation of government and private sector seed industry components and efforts.

1. **Inputs required:** One long-term Seed Industry Specialist (89 m/m) with general experience in organization and implementation of seed programs, private sector development, and technological aspects of establishing and operating industry components; short-term specialists (7 m/m) to provide support inputs in specific activities and conduct specific short-term in-country training programs, as shown in the plan of work.

2. **Cost of inputs:**

Long-term specialist (89 m/m)	\$1,513,000
Short-term specialists (7 m/m)	<u>\$ 105,000</u>
Total costs	\$1,618,000

3. **Implemented by:** ARC, Seed Sector, CAS, and CID

4. **Implementation period and activities:** The long-term specialist is in place under the CID technical assistance contract. He will perform the activities described in the implementation schedule. Short-term specialists under the CID contract will conduct activities included in the implementation schedule.

FY 1988: Long-term specialist in place (July 1, 1987).

NOTE: In this LOP-IFP, FY = GOE Fiscal year, from July 1 to June 30. The FY is often shown herein with both years, e.g., FY 1989/90, to indicate the period July 1, 1989, to June 30, 1990, or FY 1990.

FY 1990: Long-term specialist in place.

FY's 1991 - 1994: Long-term specialist in place; short-term specialists used for specific activities.

5. **Expected results:** Life-of-project and annual implementation and financial plans; a training plan based on needs assessment; a cotton seed facility design and procurement plan; tender documents including technical requirements and specifications for all other seed equipment, including eight seed plants with in-plant QC units, 6 seed testing labs, research unit, genetic resources unit, EMCIP plant spare parts, and referee lab. Technical assistance and support in modernizing operational efficiency and improving seed quality, including evaluation of seed supply industry organization and components, and needs to balance efficient operations; facility and equipment requirements; staff training; operation and maintenance manuals; management and record systems; quality control systems, requirements, sequences and management; balancing government and private sector operations and cooperation.

II. OVERSEAS TRAINING

- A. **ACTIVITY:** Training project management and operating personnel in concepts and technology required to maximize their efficiency and competence in implementing NARP and conducting an efficient ongoing government/private sector seed supply industry.

1. **Inputs required:** Ph.D. and M.S. training in Seed Technology; short-term training in TC 130-3.

2. **Cost of inputs:**

Ph.D. training (6)	\$ 240,000
Master's degree training (60)	2,100,000
USDA TC 130-3 training (17)	<u>187,000</u>
Total	\$ 2,527,000

3. **Implemented by:** ARC, Seed Sector, CAS, and AID.

4. **Implementation period and activities:** S&T/AGR has a cooperative agreement with Mississippi State University (MSU) which includes provisions for degree training programs at MSU. An AID Project Implementation Order for Technical Services (PIO/T) will be prepared by USAID and counter-signed by the Seed Component Director to contract with MSU for training 2 Ph.D's and

15 Master's degree candidates. The use of this contracting method will save project funds, because ISU will handle both the training and administrative activities. No overhead and/or administrative costs will be charged to the project (under the San Diego Contract, approximately 24.5% is charged for overhead and administrative costs). ARC/CAS will use the USAID/Cairo English language training program, available at no cost to the project. Candidates selected for the above-mentioned training can be scheduled, as needed, to receive English language training to achieve the appropriate level of English language.

FY 1990: Training plan developed, trainees and alternates selected, first group of trainees in English language training, applications for admission sent to university, first long-term trainees sent for training, first short-term trainees sent to TC 130-3.

FY 1991: Continued selection as required of trainees and alternates, trainees in English language training, applications for admission sent to university, long-term trainees sent for training, short-term trainees sent to TC 130-3.

FY's 1992 and 1993: trainees and alternates selected, first group of trainees in English language training, applications for admission sent to university, long-term trainees sent for training, short-term trainees sent to TC 130-3, long-term trainees return and are integrated into project activities.

FY 1994: long-term trainees return and are integrated into project activities.

5. **Expected results:** The minimum number of staff with technical training adequate to give them an in-depth understanding of technical operating and sectorial coordinating requirements for an efficient seed supply industry including both government and private sector. This should serve as the base for further staff training, ultimately involving short-term training conducted by this trained staff, further staff receiving equivalent training, and establishment of an in-country training facility. The ultimate output is enough staff with sufficient training to enable them to operate a cost-efficient seed industry which supplies high-quality seed adequate to meet actual farmer demand and involve enough private sector operations to minimize the government expenditures required.

III. COMMODITIES

- A. Foundation Cotton Seed Station:** Replace existing 76-year-old Cotton Foundation Seed Station with modern technology adequate to improve seed quality and reduce costs and losses.
1. **Inputs required:** Equipment, buildings, structures and installations to conduct and support operations of receiving unginced Foundation-class seedcotton, storing, blending, conveying to the gin, ginning, storing gin-run seed during the testing period, conveying seed to delinting, conditioning, testing and quality control, storage/delivery; handling and utilizing waste products; handling/storing Breeder seed and seed for maintenance and variety development.
 2. **Cost of inputs:** US \$8,000,000 in commodities, plus \$4 million renovation listed under Services.
 3. **Implemented by:** ARC Cotton Research Institute, Seed Sector, CAS.
 4. **Implementation period & activities:**

FY 1990: Prepare technical requirements and specifications; prepare documentation for a single-supplier turnkey installation; issue invitation for bids; receive and evaluate bids; award supply contract.

FY's 1991 and 1992: Construction/installation.

FY 1993: Construction/installation completed; facility staffed; staff trained; supplier conducts follow-up maintenance/training support.

FY 1994: Supplier conducts follow-up maintenance/training support; facilities in full use.
 5. **Expected results:** A Breeder and Foundation seed facility adequate to permit improved organization of the variety release/stock seed maintenance/supply program; improved quality of Foundation seed, permitting more complete transfer of genetic improvements to farmers; reduced cost of seed; modern seed technology introduced which can drastically improve field stands and reduce seed requirements; improved quality control within the program; loss of carryover seed prevented; seedstocks provided with earlier timing; better maintenance of equipment.

B. Replacement Seed Plants: Provide modern equipment in an efficient flow sequence to replace 8 existing seed conditioning plants which are old, in bad condition and causing loss of seed and seed quality. Partially resolve the loss of efficiency, seed and quality due to lack of in-house quality control, by providing equipment for in-plant quality control units at these conditioning plants

1. **Inputs required:** Conditioning and conveying equipment, support and installation structures for complete seed conditioning "lines" for field and fodder crop seed. Equipment for in-plant quality control sampling, testing and supervising internal seed program quality control and supporting improved Certification.

2. **Cost of inputs:** US\$13,500,000.

3. **Implemented by:** ARC Seed Sector, CAS.

4. **Implementation period & activities:**

FY 1990: Prepare technical requirements and specifications; prepare procurement documentation; issue invitation for bids; receive and evaluate bids; award single combined supply contract for all seed equipment.

FY 1991: Equipment supply/installation begins.

FY 1992: Equipment supply completed; installation continues; completed facilities staffed; staff trained; supplier conducts follow-up maintenance/training support.

FY 1993: Equipment installation completed; all facilities staffed; staff trained; supplier conducts follow-up maintenance/training support.

FY 1994: Supplier conducts follow-up maintenance/training support. Facilities in full use.

5. **Expected results:** First phase of the physical infrastructure required to support improved organization of seed conditioning; implementation of the updated policy of dispersing seed plants into areas of production/use to reduce the cost and time of seed transport and distribution; include fodder seed capability, to initiate improvement of fodder seed quality; improved quality of seed supplied to farmers, thus increasing crop yields; reduced cleaning losses; bagging of seed in modern packages more suited to

small-farmer needs; reduced cost and time of seed cleaning, thus improving seed supply; initiating a seed supply network which can reduce storage/handling losses and maintain seed quality; improved seed Certification and Seed Law implementation made possible; "custom" conditioning services provided to the private sector.

C. Seed Testing: Partially resolve the lack of timely seed testing services and quality control support to government and private sector seed supply, by providing equipment for 3 existing and 3 new seed testing labs.

1. Inputs required: Equipment for conducting seed quality analysis tests.

2. Cost of inputs: US\$3,000,000.

3. Implemented by: ARC Seed Sector, CAS.

4. Implementation period & activities:

FY 1990: Prepare technical requirements and specifications; prepare procurement documentation; issue invitation for bids; receive and evaluate bids; award single combined supply contract for all seed equipment.

FY 1991: Equipment supply completed, installation begins.

FY 1992: Equipment installation completed; facilities staffed; staff trained; supplier conducts follow-up maintenance/training support.

FY's 1993 and 1994: Supplier conducts follow-up maintenance/training support. Facilities in full use.

5. Expected results: Improved quality of seed testing results; reduced time seed must be held awaiting test information for labeling; improved uniformity of test procedures and results; improved quality of seed supplied to farmers; more accurate labelling of seed; less time and cost in getting seed into tests and to report test results; improved testing services to support Certification and Seed Law implementation; improved support to private-sector development; capability initiated to test seed for farmers/merchants, thereby improving quality of non-Certified seed.

D. Seed Research Section: Establish seed research oriented toward problem-solving and industry development, by equipping the Seed Research Section.

1. Inputs required: Equipment for conducting research aimed at supporting seed industry development and resolving seed supply problems under local conditions.

2. Cost of inputs: \$400,000.

3. Implemented by: ARC, Field Crops Research Institute, Seed Research Section, CAS.

4. Implementation period & activities:

FY 1990: Prepare technical requirements and specifications; prepare procurement documentation; issue invitation for bids; receive and evaluate bids; award single combined supply contract for all seed equipment.

FY 1991: Equipment supply completed, installation begins.

FY 1992: Equipment installation completed; facilities staffed; staff trained; supplier conducts follow-up maintenance/training support.

FY's 1993 and 1994: Supplier conducts follow-up maintenance/training support. Facilities in full use.

5. Expected results: Seed research facilities which can support improved organization, staffing and operation of research oriented toward developing solutions to seed industry problems under local conditions; development of information to support expanded private-sector participation in seed supply, improved quality of seed supplied to farmers, reduced costs/losses of seed supply, and development of seed export potential initiated.

E. Referee Testing Laboratory: Improve reliability and repeatability of seed testing results, by equipping a national-level Referee Testing Laboratory.

1. Inputs required: Equipment to conduct referee standardization, training, testing and development activities.

2. Cost of inputs: \$400,000.

3. Implemented by: ARC Seed Sector, CAS.

4. Implementation period & activities:

FY 1990: Prepare technical requirements and specifications; prepare procurement documentation; issue invitation for bids; receive and evaluate bids; award single combined supply contract for all seed equipment.

FY 1991: Equipment supply completed, installation begins.

FY 1992: Equipment installation completed; facilities staffed; staff trained; supplier conducts follow-up maintenance/training support.

FY's 1993 and 1994: Supplier conducts follow-up maintenance/training support. Facilities in full use.

5. Expected results: Physical base for establishing a modern referee testing program which can handle disputed test results and fulfill government's role of training analysts, improving timeliness of testing operations, standardizing procedures, and improving uniformity and repeatability of seed testing; this will in turn improve farmer faith in seed quality and support development of a government and private sector seed supply industry.

F. Genetic Resources Section: Provide and maintain genetic materials required to support ongoing development of higher-yielding varieties, by providing equipment needed for seed-related activities.

1. Inputs required: Equipment for collection, handling and maintenance of plant genetic resource seed materials.

2. Cost of inputs: \$400,000.

3. Implemented by: ARC, Field Crops Research Institute, Genetic Resources Section.

4. Implementation period & activities:

FY 1990: Prepare technical requirements and specifications; prepare procurement documentation; issue invitation for bids; receive and evaluate bids; award single combined supply contract for all seed equipment.

FY 1991: Equipment supply completed, installation begins.

FY 1992: Equipment installation completed; facilities staffed; staff trained; supplier conducts follow-up maintenance/training support.

FY's 1993 and 1994: Supplier conducts follow-up maintenance/training support. Facilities in normal use.

5. **Expected results:** A "germ plasma bank" which can collect, classify, catalog, and store domestic and foreign seed-related genetic materials adequate to support intensified crop variety breeding to increase yields and crop quality. A secondary benefit would be incorporation of medium-to-long-term storage of Breeder seed of new varieties.

- G. **EMCIP Spare Parts:** Support operating efficiency by providing needed spare parts and support equipment for EMCIP plants.

1. **Inputs required:** Spare parts, screens, etc., required to maintain EMCIP seed conditioning operations.

2. **Cost of inputs:** \$400,000.

3. **Implemented by:** ARC EMCIP and Seed Sector, CAS.

4. **Implementation period & activities:**

FY 1990: Prepare technical requirements and specifications; prepare procurement documentation; issue invitation for bids; receive and evaluate bids; award single combined supply contract for all seed equipment. Supply begins.

FY 1991: Supply completed; supplier conducts follow-up maintenance/training support.

FY's 1992 and 1993: Supplier conducts follow-up maintenance/training support.

FY 1994: Facilities in normal use.

5. **Expected results:** Improved operating efficiency of EMCIP plants; reduced down-time for repairs; longer and better operation of equipment; improved seed cleaning at more reasonable cleaning loss; at the same time that cereal seed supply is supported, improved national/ARC capability to clean fodder seed, thereby

improving fodder production and making more land available for cereal production.

H. Improved Operating Efficiency: Support and improve quality of internal continuing training by providing audio-visual equipment.

1. Inputs required: Audio-visual equipment to support continuing training of staff in operations and procedures, within the ARC Seed Sector (CAS), with training conducted by staff trained under NARP and other specialists.

2. Cost of inputs: \$35,000 (included in EMCIP budget item).

3. Implemented by: ARC Seed Sector, CAS.

4. Implementation period & activities:

FY 1990: Prepare technical requirements and specifications; prepare procurement documentation; issue invitation for bids; receive and evaluate bids; award single combined supply contract for all seed equipment.

FY 1991: Equipment supply completed; training section re-organized and strengthened; begin developing audio-visual training aids.

FY 1992 - onward: Initiate regularly-scheduled short-term in-country training programs on specific topics; require all staff to take regular upgrading training; continually develop improved up-to-date training materials and publications.

5. Expected results: Using this equipment as a base, organization of a training unit within the ARC Seed Sector (CAS) capable of conducting internal short-term training programs at regular intervals to upgrade and improve competence of all staff. Staff trained through NARP will become the "trainers", to expand transfer of technology and operational management skills they learned.

I. Data Management: Improve project management, planning and operating efficiency by providing computer equipment to collect, maintain, analyze and report up-to-date information to support management decision-making in government and private-sector seed supply.

1. Inputs required: Computer data-handling equipment.

11

2. **Cost of inputs:** \$500,000.

3. **Implemented by:** ARC Seed Sector, CAS.

4. **Implementation period & activities:**

FY 1990: Prepare technical requirements and specifications; prepare procurement documentation; issue invitation for bids; receive and evaluate bids; award supply contract.

FY 1991: Equipment supplied; statistics section re-organized and strengthened; staff trained in using the new equipment; data collection, handling and reporting formats/software set up.

FY 1992 - onward: Staff training continued, operating systems improved, improved management data generated and used to support management decisions which improve efficiency of the program.

5. **Expected results:** Using this equipment as a base, the ARC Seed Sector (CAS) Statistics Office re-organized, with emphasis on providing up-to-date information to support decision-making on seed production amounts/seasons/locations; production, supervisory and distribution sites included in the information network; final result is more efficient seed production planning, production more nearly suited to actual amounts and kinds needed, less seed lost due to better management of distribution; improved seed quality by improved handling and movement.

J. **Vehicles:** Improve capability at renewed conditioning plants and main supervisory offices, to transport seed from contract growers to conditioning plants. Improve mobility of quality control and supervisory personnel to visit farmers, fields, conditioning plants and storages to conduct quality control activities to improve seed quality, reduce losses, and improve the technical capability of the seed infrastructure.

I. **Inputs required:** 5-ton van trucks for seed transport; motorcycles for field inspectors and supervisory personnel; double-cab pickup trucks for supervisory personnel and to transport lesser amounts of seed

2. Cost of inputs: \$992,000, as follows:

20 5-ml trucks @ \$25,000	\$500,000
100 motorcycles @ \$1,000	100,000
12 double-cab pickups @ \$16,000	192,000
10 vans @ \$20,000	200,000

3. Implemented by: ARC Seed Sector, CAS.

4. Implementation period and activities:

FY 1990: Prepare technical requirements and specifications; prepare procurement documentation; issue invitation for bids; receive and evaluate bids; award supply contract. Supply begins.

FY 1991: Supply completed; vehicles in use.

FY 1992 - onward: Vehicles used in improving operations and quality control.

- 5. Expected results:** Improved transportation of seed and supervisory/quality control personnel, resulting in improved seed quality, more efficient operation of conditioning plants, reduced supervisory costs, faster delivery of seed to conditioning plants, reduced loss of seed fields and lots, and improved seed supply to farmers.

IV. SERVICES

- A. Administration:** Improved funding of seed program operations to permit increased quality control supervision, more timely delivery of seed, and better operations of the seed supply component.

- 1. Inputs required:** Per diem, day-laborers, fuel, repairs, maintenance, and office supplies are required annually. AID financing of these inputs will be gradually phased out while increased CAS funding will be phased in. The attached Operations Costs Table shows that AID contributions of these inputs will decline from 100% in 1990 to 25% in 1994 (the last year of NARP). Efforts will be made to increase annually the CAS operating budget so that by 1995 and beyond, the CAS budget meets all operating cost requirements.

In addition, CAS needs to support its administration and management with computers, copiers, facsimile, binding machines, and typewriters.

2. Cost of inputs: \$1,200,000 (see attached Table 6).

3. Implemented by: ARC Seed Sector CAS.

4. Implementation period and activities:

FY 1990: Improved funding of operations. \$90,000 will be made available from the Grant funds to provide approximately 600 CAS personnel with per diem to increase quality control supervision. \$100,000 will be used for day-laborers to provide assistance in field inspection, seed testing, certification, conditioning and administration. For more timely delivery of seed and better operation of seed components, \$100,000 will be used to improve transportation operations by providing fuel, repair and maintenance of vehicles. \$300,000 will be devoted to purchase of administrative support equipment to improve operations.

FY 1991 - onward: Annual fund inputs for day-laborers, per diem, fuel, supplies, repair and maintenance. AID Contribution declines, while CAS contribution increases.

5. Expected results: Improved supervision of farmer contract growers, improved quality of seed, faster delivery of seed to conditioning plants, reduced losses, and improved operation and integration of the seed program infrastructure.

B. Renovation: Replace existing buildings of the 76-year-old Cotton Foundation Seed Station, which are inadequate and badly deteriorated, with buildings adequate to house the equipment and operations required to improve seed quality and reduce costs and losses.

1. Inputs required: Buildings, structures and installations adequate to conduct and support Foundation seedcotton equipment and operations listed under Commodities.

2. Cost of inputs: US \$4 million.

3. Implemented by: ARC Cotton Research Institute, Seed Sector, CAS.

4. Implementation period & activities:

FY 1990: Prepare technical requirements and specifications; prepare documentation for a single-supplier turnkey installation of both buildings and equipment; issue invitation for bids; receive and evaluate bids; award supply contract.

FY's 1991 and 1992: Construction/installation.

FY 1993: Construction/installation completed; facility staffed; staff trained; supplier conducts follow-up maintenance/training support.

FY 1994: Supplier conducts follow-up maintenance/training support; facilities in full use.

5. **Expected results:** A Breeder and Foundation seed facility adequate to permit improved organization of the variety release/stock seed maintenance/supply program; improved quality of Foundation seed, permitting more complete transfer of genetic improvements to farmers; reduced cost of seed; modern seed technology introduced which can drastically improve field stands and reduce seed requirements; improved quality control within the program; loss of carryover seed prevented; seedstocks provided with earlier timing; better maintenance of equipment.

08/01/89

TABLE I
SUMMARY OF ACTIVITIES AND COSTS

ACTIVITY	TOTAL COST (US \$)
TECHNICAL ASSISTANCE:	
1. Long-term technical assistance	1,513,000
2. Short-term specialists support specific activities	105,000
TRAINING:	
3. Short-term training (17 staff in USDA TC 130-3)	187,000
4. Long-term training (6 Ph.D., 60 Master's degrees)	2,340,000
COMMODITIES:	
5. Cottonseed equipment	8,000,000
6. Renewed conditioning plants with internal QC (8)	13,500,000
7. Testing labs (6) & referee lab (1)	3,400,000
8. Seed research equipment	400,000
9. Germ plasma bank seed-related equipment	400,000
10. EMCIP plant spare parts (incl. audio-visuals)	400,000
11. Decision-supporting data management equipment	500,000
12. Vehicles	992,000
SERVICES:	
13. Cotton renovation	4,000,000
14. Administration	1,200,000
Technical item total	\$36,937,000
Contingency (5%)	\$1,752,000
Inflation	\$3,311,000
TOTAL	\$42,000,000

08/01/89

**TABLE 2
HARP SEED COMPONENT
LIFE-OF-PROJECT IMPLEMENTATION PLAN**

ACTIVITY	FY 89/90				FY 90/91				FY 91/92				FY 92/93				FY 93/94			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
TECHNICAL ASSISTANCE:																				
Long-term																				
Short-term																				
TRAINING:																				
Long-term																				
Short-term																				
COMMODITIES:																				
Cottonseed																				
Conditioning Plants & In-Plant QC																				
Testing Labs & Referee Lab																				
Research																				
Genetic Resources																				
EMCIP (incl. Audio-Visuals)																				
Data Management																				
Vehicles																				
SERVICES:																				
Administration																				
Renovation																				

----- = Implementation and/or Use

***** = Procurement of commodities and renovation

..... = Follow-up servicing by supplier while commodities and facilities are in use

08/01/89

TABLE 3
NARP SEED COMPONENT
LIFE-OF-PROJECT FINANCIAL PLAN

(US\$000; \$ & LC combined; see Table 4)

ACTIVITY	FY 89/90	FY 90/91	FY 91/92	FY 92/93	FY 93/94	TOTALS
TECHNICAL ASSISTANCE:						
Long-term	\$204	\$204	\$204	\$204	\$204	\$1,513
Short-term		15	30	30	30	105
TRAINING:						
Long-term	240	500	700	700	200	2,340
Short-term	70	40	45	32		187
COMMODITIES:						
Cottonseed	8,000					8,000
Conditioning Plants & In-Plant QC	13,500					13,500
Testing Laboratories	3,000					3,000
Referee Testing Laboratory	400					400
Research	400					400
Genetic Resources	400					400
EMCIP Spares (incl. Audio-Visuals)	400					400
Data Management	500					500
Vehicles	992					992
SERVICES:						
Administration	436	306	229	153	76	1,200
Renovation	4,000					4,000
TOTALS	\$32,542	\$1,065	\$1,208	\$1,119	\$510	\$36,444//\$36,937

NOTE: Commodity costs are placed in quarters in which initial earmarking of funds is expected.

08/01/89

12

TABLE 4
HARP SEED COMPONENT
FINANCIAL PLAN BY US\$ AND LOCAL CURRENCY

(All expressed in US\$000)

ACTIVITY	FY 89/90		FY 90/91		FY 91/92		FY 92/93		FY 93/94		TOTALS	
	US\$	LC	US\$	LC	US\$	LC	US\$	LC	US\$	LC	US\$	LC
TECHNICAL ASSISTANCE:												
Long-term	168	36	168	36	168	36	168	36	168	36	1,246	267
Short-term			15		30		30		30		105	
TRAINING:												
Long-term	240		500		700		700		200		2,340	
Short-term	70		40		45		32				187	
COMMODITIES:												
Cottonseed	8,000										8,000	
Conditioning Plants & In-Plant OC	13,500										13,500	
Testing Laboratories	3,000										3,000	
Referee Testing Laboratory	400										400	
Research	400										400	
Genetic Resources	400										400	
EMCIP Spares (incl. Audio-Visuals)	400										400	
Data Management	500										500	
Vehicles	992										992	
SERVICES:												
Administration		436		306		229		153		76		1,200
Renovation		4,000										4,000
TOTALS	28,070	4,472	725	342	945	265	930	189	398	112	31,470	5,467

08/01/89

18

**TABLE 5
NARP SEED COMPONENT
EXPENDITURES BY QUARTERS**

(US\$000, including total of \$ & LC costs)

02/01/89

ACTIVITY	FY 89/90				FY 90/91				FY 91/92				FY 92/93				FY 93/94			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
TECHNICAL ASSISTANCE:																				
Long-term	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51
Short-term					15						30		15	15					30	
TRAINING:																				
Long-term	96	48	48	48	200	100	100	100	280	140	140	140	280	140	140	140	50	50	50	50
Short-term				70				40				45				32				
COMMODITIES:																				
Cottonseed			3,000																	
Conditioning Plants & In-Plant QC			13,500																	
Testing Laboratories			3,000																	
Referee Testing Lab			400																	
Research			400																	
Genetic Resources			400																	
EMCIP (incl. Audio-Visuals)			400																	
Data Management			500																	
Vehicles			992																	
SERVICES:																				
Administration	25	206	100	105	60	85	85	76	55	60	65	49	35	44	44	30	18	20	20	18
Renovation			4,000																	
TOTALS	172	305	31,791	274	326	236	236	267	386	251	286	285	366	250	250	253	119	121	151	119

NOTE: Commodity expenditures are placed here in the quarter in which funds are expected to be earmarked. Actual expenditures will extend, depending on commodity category, over a period of 12-30 months as deliveries/work are completed, and on payment schedules included in procurement contracts.

TABLE 6
NARP SEED COMPONENT
NARP-FUNDED ADMINISTRATIVE COSTS

(LC, expressed in US\$000)

ITEM	FY 89/90	FY 90/91	FY 91/92	FY 92/93	FY 93/94	TOTALS
Labor (daily hire)	\$100	\$100	\$75	\$50	\$25	\$350
Per diem (500 travellers @ \$4/day for 36 days/year)	90	90	67	45	22	314
Repairs & maintenance	64	64	48	32	16	224
Fuel	36	36	27	18	9	126
Supplies	16	16	12	8	4	56
Computers & software (8)	60	0	0	0	0	60
Printers (6)	20	0	0	0	0	20
Copiers (5)	30	0	0	0	0	30
Facsimile (1)	4	0	0	0	0	4
Typewriters (10)	10	0	0	0	0	10
Binding machines (12)	6	0	0	0	0	6
TOTALS	\$436	\$306	\$229	\$153	\$76	\$1,200

07/30/89

NOTE. These operational costs will be shared with the MOA; the above amounts represent AID contributions which will cover 100% in years 1 and 2, 75% in year 3, 50% in year 4, and 25% in year 5.