

PD-AAE-440-E1

Sixth  
Semi-Annual Report

on

Agency for International Development Negotiated  
Contract No. AID/NE-C-1304 (Yemen)

Project No: 279-11-110-030

Contract For: National Sorghum and Millet Crop Improvement

Contents consist of a substantive and administrative  
report in accordance with General Provisions, paragraph  
12, AID 1420-23C (7-1-76)

Period of Report: September 16, 1979 through  
March 15, 1980

Previous Reports: January 15, 1977 through September 15, 1977  
September 16, 1977 through March 15, 1978  
March 16, 1978 through September 15, 1978  
September 16, 1978 through March 15, 1979  
March 16, 1979 through September 15, 1979

Prepared by: University of Arizona  
Department of Plant Sciences

2790030005304  
(2790030005303  
2790030005305  
2790030005306  
2790030005307)  
attached

(5)

26p.

Copy to:

Contracting Officer (3)  
Mission (4)  
AID Reference Center (2)  
Yemen Chief of Party (2)  
Coordinator, International Agriculture Programs (1)  
Department of Plant Sciences (2)

2790030005304

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### Substantive Report

Status of work and progress under the contract.

The following reports submitted by Mr. David L. Robinson, Research Assistant in Yemen through November 1979 and Dr. Harnek S. Sandhu, Plant Breeder in Yemen since February 9, 1980 portray actual activity. A summary of Dr. Deran Markarian's work, as in-country Agronomist and Chief-of-Party, is also included.

SANA'A (ID)  
Department of State  
Washington, D. C. 20520

Contract No. AID/NE-C-1304 Yemen  
Activities Report No. 58. September 16 - 30. 1979

PROGRESS:

1. Continued selfing and crossing at the Sana'a research farm.
2. Continued field data taking and other routine farm activities.
3. Al Jeroubah Farm construction details were worked on during this period. Contacts with potential construction contractors were made.
4. Maintenance work was done on laboratory facilities and equipment.
5. Received ten large boxes of assorted books and catalogs for the agriculture library. These had to be separated and categorized.
6. Travelled south to Taiz to return to UNDP remnant seed from the Yemen Sorghum Collection which had been brought to Sana'a for packaging and sending to USA to put in the world collection.

PROBLEMS:

Growth in Field D is very poor. Most of the test sorghum is less than 18 inches high. This could be due to many factors such as poor soil conditions, late planting or the fact that water could not be applied to the young seedlings when the irrigation pump was out of order in July-August. Most of the field is not worth harvesting.

PLANS:

1. Complete crossing and selfing activities.
2. Prepare for harvesting the research tests.
3. Visit the Outreach tests to check-up on them and to determine date of harvest.
4. Continue note taking and routine farm operations.

Contract No. AID/NE-C-1304 Yemen

Activity report 59 October 1-15

### Progress

1. Preparations were made for this years harvest. Cloth sacks used for grain and forage were cleaned, repaired, counted and labelled.
2. The fields at the Sanaa research farm were irrigated for the last time during this period.
3. Began taking height data on the sorghum plots.
4. Took stand count of the preliminary yield test in field D. The stand here is very good although growth is poor. Comparing the stand here with that in other replications may indicate poorly germinating genotypes.
5. Dr. R. L. Voigt arrives in Sanaa for about one month to make field selections and assist harvesting.
6. Andy Tacodao, IVS volunteer goes back to the Philipines after completing his two year contract.

### Problems

There is still not an adequate number of farm laborers to keep up with weeding and birdwatching at the Sanaa research farm.

### Plans

1. Make seed selections of genotypes to be further evaluated next year.
2. Begin harvest of test grain and forage at the Sanaa research farm when ready.
3. Visit outreach tests to determine their time of harvest.

Contract No. AID/NE-C-1304 Yemen

Activity report #60 October 16-31

### Progress

1. Began test grain harvest of 79008 on October 17 all seed heads in each plot are cut by hand and put into labelled cloth sacks to be dried and threshed later.
2. Test forage was also harvested. All the forage of each plot is weighed in the field immediately upon harvest. A representative sample is taken, weighed green, then hung up to dry and weighed again.
3. Outreach tests were visited and harvested for grain and forage.
4. A large Land-Sea container of auto parts and other project materials arrived during this period.

### Problems

There is no real storage space available for most of the equipment that has come in during this period. Therefore much precious laboratory space meant for research work is now being taken up by automobile parts.

### Plans

Continue harvest of grain and forage at the Sanaa farm and on the outreach tests.

Contract No. AID/NE-C-1304 Yemen

Activity report #61 November 1-15

### Progress

1. All of the grain and most of the forage has been harvested from field A.
2. Continued harvesting outreach tests during this period.
3. Field selections were made at the Sanaa research farm. These selected genotypes will be grown again next year for further evaluation.
4. Began hanging wire inside the laboratory and seed storage room for drying forage as there is no more space in the ramada.
5. Farm laborers began harvesting the non-test sorghum grain and forage in the borders.
6. Consulted with the German farm about the status of their head smut and stem borer tests. As mentioned in report #58, these tests, located in field D grew poorly and uniformity due to land levelness problems. Little useful data could be collected.
7. The projects new Chief-of-Party and Agronomist, Dr. D. Markarian and Plant Breeder, Dr. H. Sandhu arrived at post during this period.
8. The two Chevrolet Suburbans ordered for the project finally arrived at Hodeidah port.

### Problems

There is not enough room in the Ramada for hanging all the sacks of grain and forage for drying and rodent protection. Having to hang them in the lab room causes much inconvenience as they hang low. This is part of the bigger problem here of inadequate building space to meet project needs.

### Plans

1. Continue harvesting
2. Complete field selections
3. Begin threshing and clearing seed as soon as dry

Contract No. AID/NE-C-1304 Yemen

Activity report #62 November 16-30

### Progress

1. Continued harvesting at the Sanaa research farm. Almost all of field A and B are completed.
2. Seed selections from the farm to be used for planting in 1980 were completed during this period.
3. Data tabulation of 1979 plantings were worked on.
4. Took field notes and harvested national cooperative trials of sorghum, millet and maize.
5. Inventoried the project equipment and supplies that recently came in.
6. Dr. R. L. Voigt departed Yemen on November 20. He was in country for one month.

### Problems

Two new vehicles which have been in Yemen since early this month can not be used because they can not be registered and licensed with the Yemen Government, Several other AID vehicles are in the same situation; even though badly needed they are useless without proper registration and license plates.

### Plans

1. Complete data taking and harvesting of all test grain and forage at the Sanaa research farm.
2. Dry, thresh, clean and weigh grain of this years yield tests.
3. Thresh and clean the head selections.
4. Record dry weights of test forage.
5. Work on data tabulations and calculations of this years trials both from the Sanaa farm and outreach tests.

Contact No. AID/NE-C-1304 Yemen  
Activity Report No. S1, Feb. 9-29, 1980

I reached Sana on Feb. 9, 1980 at 6 a.m. No body came to receive me at the airport. Took a taxi to the house. House was locked and then came to Mission compound to find the keys. Mr. Merkley told me that the keys were at his place. Finally got the keys and after leaving my personal effects at the house came back to office.

Planting plan:-

This year 22 (13 sorghum + 6 Pearl Millet + 3 Maize) tests will be planted here at Sana Research Farm. In addition to these 22 there will be 7 out reach tests. Seed of the following 8 Sorghum tests is ready and work is in full swing on the rest.

Test No.	Expt. Title	No. of Entries
80-001	Head Rows	443
-002	Preliminary Yield Trial (I)	256
-003	" " " (II)	277
-004	Early Maturity Trial	22
-005	Short Grain Yield Trial	88
-006	Advanced Yield Trial	54
-007	F1 Populations	71
-008	Pollen Parents	54

Seed preparation of Elite and out reach tests is in progress

Out Reach Tests:-

In 1980, out reach tests will be planted at the following eight locations in Yemen Arab Republic. This test includes 50 entries derived from different tests on the basis of field performance in 1978 and 1979 crops, locations and status of land availability is as follow:-

.../...

1	Jahan Govt. Farm	Land availability confirmed				
2	Bani Hashish Farmers Field	"	"	"	"	
3	German Farm	"	"	"	"	
4	Garuba Farm	"	"	"	"	
5	Sana Research Farm	"	"	"	"	
6	Bani Mater	"	"	is not	confirmed	
7	British Farm Damar	"	"	"	"	
8	Ibb Schcol	"	"	"	"	

Dr. Markarian is still at Sana and is planning to leave for Hodeida in 1st week of March. He has been busy in putting up the old vehicles together. Field D needs leveling but Yahya Abdo is busy helping Dr. Markarian in the shop.

At Geruba, well drilling has been finished and a pump test is in progress for new well. Pump and Engine will be purchased in the next few days.

I have requested ICRISAT, CIMMYT, SDSU, UA and some private companies to send me seed of both sorghum and PMillet, what they think will do better under Yemen Arab Republic climatic conditions.

Sincerely yours

*Harnek S. Sandhu*  
Harnek S. Sandhu

HS.Sandhu:sac

Contract No. AID/NE - C - 1304 Yemen

Activity Report No. S2, March 1 - 15, 1980

Measured field A, B, C, and D at Sana Research Farm to develop planting plans for the spring 1980 crop. Field D needs leveling but there is no surveyer with the project team. We will have to plant this crop on unlevelled field D.

Surveyed the irrigation system at the Sana Research Farm. Pump needs repair. Some plastic irrigation pipes needs to be replaced.

Work is in progress to make field books. All entries from each tests are being recorded along with pedigree and source. Columns are prepared to take notes on various phenotypic, genotypic and agronomic characteristics.

All the field labor has been working on the cement mixer for the last 15 days preparing it for use at the Al Jaruba farm. The previous unknown user left a full load of cement in it which had hardened. It required many hours to return this useful piece of equipment to operational status. The settled cement had to be chipped out in small pieces with a hammer and chisel.

In addition to making up the seed for 8 tests reported in the last activity report, seed for the following five more tests has been put up for planting.

Test	Expt. Title	No. of Entries	Replications	No. of locations
80-009	Elite Yield Test	31	3	1
80-010	Out Reach Test	50	2	8
80-017	Regional Coop. PMYN	9	3	1
80-018	PM A Trial	21	3	1
80-020	PMDMN	50	2	1

Negotiation is in progress to acquire land for out reach tests at Bani Mater, British Farm and Ibb area. British Farm needs a letter from Agri. Ministry. Mr. Shuga will arrange that letter from Ministry some time next week.

Dr. Fredel, new in-charge of the German Farm, stopped at the Mission Office. We had nice discussion on drought tolerance. He reaffirmed the availability of land, but he is not sure if can spare water..

The seed lab and machine area was given attention during this time. All the farm equipment was checked and rearranged. Some bent irrigation pipes were recovered. These will be straighten next week and will be used at Jaruba Farm. Seed lab was cleaned and equipment rearranged.

To get the custom clearance of air freight (Suburban body parts) took longer than expected. Work is in progress on that vehicle, although belongs to horticulture project.

Dr. Markarian went to Hodeidah on March 5 and came back to Sanaa on March 8. He is busy in the shop repairing vehicles. He is planning to go to Jedah (Saudi Arabia) some time next week to buy parts for the old land grader.

Received seven sorghum and four corn cultivars from Prairie Valley Seed Inc., Nebraska. These will be included in one of our tests. More introductions are expected from other research organization in the near future.

The pump and engine has been installed at Jaruba farm. Soon work will start on irrigation channels and leveling.

Harnek S. Sandhu

Dr. Deran Markarian, In-Country Agronomist and  
Chief-of-Party Work Summary

Dr. Markarian arrived in country on the seventh of November 1979. He immediately started an orientation of the various locations, work areas, personnel and equipment availability, housing accessibility, etc, to gain an insight into the responsibilities of his functions. He met with Mr. David Robinson, Dr. Harnek Sandhu, and appropriate personnel from the offices of the Mission Director and Yemen Ministry of Agriculture to coordinate the many aspects of fulfilling contract obligations.

Top priority was given to bringing the Al Jaruba experiment station into an operational status. Vehicles, out for maintenance, even hampered his required trips to Hodeida to evaluate station requirements and to find suitable housing. It was also determined an operating cash fund would be necessary to conduct the many facets of his job.

The following areas describe major accomplishments.:

1. Labor force: Labor available verses requirements for the Al Jaruba station, Sana Station and the outreach program were reviewed in detail. Some farm project employees in Sana were terminated to conserve limited funds. An investigation of procedures to hire third country national professionals was initiated by the University of Arizona per his request.
2. Vehicles: Parts were immediately ordered from the States, through the University of Arizona, to return as many vehicles to operational status as possible. The transportation requirements were determined for this project as well as to provide support for the Ibb school personnel. Vehicles were allotted to accomplish the requirements. Dr. Markarian personally worked on the repair of some vehicles. Transmission repair manuals from the factory were obtained and forwarded per his request. Jeddah was visited to determine price and availability of vehicle parts and other equipment needed on the project.
3. Equipment and supply requirements were identified. Parts were ordered where necessary and repair initiated when possible.
4. Housing: Quarters were arranged for in Hodeiada. Agency for International Development furniture from the Sana Mission was provided for Dr. Markarian's use. A mobile home was also set up at the Al Jaruba station for temporary use and to provide over-the-night capability.
5. Al Jaruba Experiment Station: Machinery was moved to the station for land preparation and planting. Generators/alternators, required repair, as well as drilling, obtaining pumps and engines for water. Tractor hitch parts were ordered. A cement mixer was repaired and moved to Al Jaruba for use. Irrigation and field use was planned.
6. Peace Corp: Dr. Markarian met with the Peace Corp Supervisor and arranged for qualified volunteers from this organization to assist with the development of Al Jaruba.
7. Seed: Forage sorghum and sorgo seed was obtained for Yemcn planting.

8. Inventory: A considerable amount of time was required to determine status and location of equipment on hand verses equipment enroute to Sana.
9. Outreach Program: Requirements for this program were identified. Dr. Harnek Sandhu will administer the program.

## PLANS FOR ENSUING PERIOD

1. Continue with 4th year field research at Sana on sorghum and millet relative to breeding and agronomic work.
2. Continue development of the Al Jaruba research station.
3. Continue grow out of seed increase and classification of the Yemen sorghum seed collection.
4. Send a vehicle mechanic to Yemen.
5. Further grow out and purification of Yemen Elite Yield Test selected lines at Tucson. Seed for the 1979 planting was not received in time to plant prior to July 1979 and was damaged by frost. Plantings will be earlier in 1980.
6. Plantings of about 90 Yemen Sorghum genotypes will be made at Yuma, Arizona in July and August 1980 for seed increase and evaluation for Yuma root rot resistance.
7. Work will proceed in beginning to computerize the Yemen Sorghum Collection data in cooperation with Dr. George White of the U.S. Germplasm Resources Laboratory in Washington, D.C.
8. Approximately 1500 Yemen Sorghum Collection lines were grown out in Puerto Rico. Increased seed supplies from this grow out will be threshed, cleaned, processed, and stored at Tucson.

#### RECOMMENDATIONS COVERING CURRENT NEEDS IN FIELD OF ACTIVITY

1. There is an urgent need to select and develop a new field experiment station site at Sana'a. A short term professional with expertise in soils and field experiment station development and operation should assist with this.
2. There is a need for a weed control specialist to visit in-country during the growing season on a short term basis.
3. There is a need for more laboratory spaces at the Sana'a Experiment Station to dry and process harvested research materials.
4. There is a need for better vehicle maintenance in-country.
5. There is a need for trained project technicians to assist with all phases of the breeding and agronomic research.

#### ADDITIONAL INFORMATION PERTAINING TO THIS CONTRACT

- a. Dr. Robert L. Voigt returned to Yemen for approximately five weeks during October and November 1979. See attachment two for his trip report and attachment three for his Preliminary Progress report.
- b. Dr. Robert L. Voigt visited the International Crops Research Institute at Hyderabad, India during November 1979. See attachment four for his report.
- c. A report titled "A Preliminary Description of the Germplasm Collection of Sorghum Varieties from the Yemen Arab Republic" was finalized and published. See attachment five.
- d. General Motors Overseas Distribution Corp. shipped the remainder of vehicle parts which were ordered with two Chevrolet Suburbans in 1979. The Suburbans arrived in Yemen during November 1979.
- e. The 8' x 8' x 20' Sea-Land metal container which was filled with supplies and shipped from the University of Arizona on 31 May 1979 arrived in Yemen during October 1979.
- f. Permission was received for Dr. Markarian, in-country Agronomist and Chief of Party, to proceed to Yemen. He departed the States on the fourth of November, arriving in Sana the seventh of November 1979.
- g. Permission was also received for Dr. Sandhu in-country Plant Breeder, to proceed. He arrived in Sana on the ninth of November 1979 for an orientation tour. Dr. Sandhu returned to the States to finalize preparations for his regular assignment to Yemen. He received an orientation at the University of Arizona and at USAID in Washington before arriving back in Sana the ninth of February 1980, as a regular employee. Some food was shipped to Sana while he was on campus.
- h. Mr. Jim Wood and Bruce Anderson from the Consortium for International Development visited the campus on November 15, 1979.
- i. Routine administrative support occurred in the following areas: monthly reports of telegrams sent and long distance phone calls made were forwarded to proper agencies for billing; appropriate reports were finalized and distributed as they became available; shipping documentation (bill of lading and airway bill numbers) was forwarded to Yemen as equipment departed; budget reports were reviewed; information on how the transmission lights function in the new Suburbans was obtained and forwarded to Yemen; billing data from General Motors was coordinated with the Purchasing and Accounts Payable departments.
- j. A position announcement was written to open a vacancy for a vehicle mechanic for Yemen.
- k. In cooperation with New Mexico State University and the Title XII program, we requested a bid from General Motors Overseas Distribution Corp. for a Chevrolet pickup and a Suburban. Both vehicles will be shipped to Yemen at a later date.
- l. Prospective candidates for future hire on the Title XII program were interviewed.

- m. Justification for the use of a freight forwarder was submitted to the University of Arizona Purchasing Department.
- n. The water unit for the air conditioning system in the seed storage facility required leveling, cleaning, painting, a new float assembly, plus a new water line. The Yemen seed collection is stored in this facility. Yemen funds were not used for this repair work.
- o. Office space was provided to Dr. Ed Weber. He will be assisting on the Title XII program.
- p. Information was obtained on the procedure to use to ship bud wood. This requirement is anticipated at a latter date.
- q. Portions of the Yemen seed collection are being grown in a greenhouse on the University of Arizona Campbell Avenue Farm. This greenhouse was winterized and prepared for summer operation during this reporting period.
- r. The following items are examples of supply and equipment articles shipped to Yemen: Dr. Voigt hand carried a vehicle brake set and bills of lading on the two Suburbans; transmission service and overhaul manuals were pouch mailed; Order 31, vehicle parts, was sent via air. We made our own crates for the order since some of the items were bulky; ie, roof top and windshield frame. We then took this order to Tucson International Airport and specified the routing as Transworld Airlines to Rome, Yemen Air to Sana. The order arrived in Sana within ten days. Tire valve stems, tubes, timing chains, oil pump sleeves, keys, knurling tool and reamer, engine cylinder hone set, 3-point hitch tractor part and a vehicle steering unit are examples of additional equipment shipped at various times. A head gasket set for a 94 HP, 4 cylinder, Detroit Diesel engine was procured and shipped to Mr. Jeff Lee at USAID/W the same day he called with the requirement. Mr. Lee planned to have the set hand carried to Yemen.
- s. A cost proposal to provide project support services independently of USAID was prepared and forwarded per their request.
- t. Approximately 100 grams of seed for 41 syrup and sugar sorghum genotypes were mailed to Dr. Markarian via the Plant Introduction Center, Washington, D.C.
- u. An investigation of procedures to hire third country national professionals for work in Yemen was completed in January 1980. This information was needed relative to employing Mr. Madhu Acharya of India on the Yemen contract as an Agriculture Engineer. We have submitted his qualifications to USAID/W and are awaiting their approval. Mr. Acharya has extensive experience in Yemen.
- v. Operating funds of \$25,000 were transferred to the Bank of Credit and Commerce, International in Sana. These funds are for the Chief-of-Party, Dr. Markarian, to use in fulfilling contract obligations and developing the Al Jaruba station.
- w. Tracer action was initiated to locate two soil moisture meters which were shipped via air from a California vendor in 1979. The meters traveled via Air France to Aden, Peoples Democratic Republic (South Yemen) then via Alyemda Democratic Airlines to Sana. Contract personnel in Sana are attempting to locate the meters now.

## Administrative Report

This segment of the semi-annual report covers expenditures and personnel employed under the contract. A report on foreign national trainees is not applicable since the contract does not include any provisions for participant training.

## Expenditures

The latest inception to date computerized report dated April 3 , 1980 is included on the following pages. This report is for the month ending March 31, 1980. The report is generated by the University of Arizona computerized accounting system and can be used to determine overall expenditures from original inception of contract through March 31, 1980.

REPORT NO. G33204  
 ACCOUNT NO: 947301  
 ACCOUNTANT: J. COOK & P. BRON  
 NEXT LEVEL: 0-0011

UNIVERSITY OF ARIZONA  
 JOINT RESPONSIBILITY REPORT  
 FOR HEALTH ENDING 03-31-85  
 YEMSA SUPPORT 5610410120

PAGE NO 1  
 RUN DATE 04-03-85

AGENCY: AID GRANT NUMBER: AID 1A-G-1111 20MTDC AWARD AMOUNT: 250000 TERMINATION DATE: 03/31/91  
 N. G. MATLOCK 034101

\*\*\*\*\* CURRENT MONTH \*\*\*\*\*  
 \*\*\*\*\* INCEPTION TO DATE \*\*\*\*\*

BUDGET CHANGES	EXPENDITURES	ENCUMBRANCES ADDED		BUDGET	EXPENDED	ENCUMBRANCE BALANCE	BUDGET AVAILABLE
			PERSONAL SERVICES & ERL	424,744			
	7,320.99	7,154.99	SALARIES				
			SALARIES		260,704	33,042	322,746-
	7,320.99	7,154.99	CLASS TOTAL		260,704	33,042	
			WAGES				
	270.60		STUDENTS - HOURLY		1,104		1,104-
	1,034.40		REGULAR WAGES		21,247	6,601	37,048-
	1,294.20		CLASS TOTAL		22,341	6,601	
			ADJ TO SAL EXCP WAGES				
			ADJ TO SAL EXCP WAGES		1,603		1,603-
			ADJUSTMENTS TO ERL		243		243-
			CLASS TOTAL		1,846		
	1,414.22	1,510.59	EMPLOYEE RELATED EXPEND				
			EMPLOYEE RELATED EXPENSE		12,360	6,304	19,763-
			DU NOT USE		247		247-
			FICA TAX		9,313		9,313-
			DU NOT USE		11,377		11,377-
			DU NOT USE		7,702		3,702-
	1,414.22	1,510.59	CLASS TOTAL		27,002	6,304	
	10,034.41	10,445.50	CATEGORY TOTAL	424,744	347,007	46,127	37,630

REPORT NO. GA3294  
 ACCOUNT NO: PA7391  
 ACCOUNTANT: J COOK E P BROWN  
 NEXT LEVEL: 050011

UNIVERSITY OF ARIZONA  
 ITS RESPONSIBILITY REPORT  
 FOR MONTH ENDING 03-31-90  
 YEMEN SUPPORT 5010410120

PAGE NO 2  
 RUN DATE 04-03-90

AGENCY: AID GRANT NUMBER: AID TA-G-1111 20NTDC AWARD AMOUNT: 950000 U S MATLOCK 336661 TERMINATION DATE: 03/31/91

\*\*\*\*\* CURRENT MONTH \*\*\*\*\* INCEPTION TO DATE \*\*\*\*\*

BUDGET CHANGES	EXPENDITURES	ENCUMBRANCES ADDED	BUDGET	EXPENDED	ENCUMBRANCE BALANCE	BUDGET AVAILABLE
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OPERATING EXPENDITURES

162,664

OUTSIDE AND PROFESSIONAL  
 CONSULT-LECTURE/SEMIN-EXP  
 OPERATIONAL ADVANCE  
 OTHER OUTSIDE & PROFESS  
 SUSPENSE ACCOUNT

1,570.68

860

30,000

860-  
 30,000-  
 8,947-

8,947 ✓

1,570.68

CLASS TOTAL

9,807

30,000

OFFICE SUPP. AND POSTAGE  
 OFFICE SUPPLIES  
 PRINTED FORMS  
 STAMPS STMPD LHM & CARDS  
 POSTAGE- OTHER

64.92  
 20.00

610

140

1,806

310

610-  
 140-  
 1,806-  
 310-

94.92

CLASS TOTAL

2,875 ✓

290.73  
 30.00

37.23

OPERATING SUPPLIES & SVC  
 RESEARCH SUPPLIES  
 D.P. SUPPLIES - OTHER  
 EDUCATIONAL SUP - OTHER  
 RECREATIONAL SUP - OTHER  
 ANALYSIS SUPPS  
 SUSPENSE ACCOUNT

26,279 ✓

47

93

95

10

568 ✓

26,847-  
 40-  
 93-  
 95-  
 10-

310.73

37.23

CLASS TOTAL

26,517

568

MAINTENANCE AND REPAIRS  
 OFFICE EQUIPMENT

75 ✓

CLASS TOTAL

75

75-

REPORT NO. GA2014  
 ACCOUNT NO: P57301  
 ACCOUNTANT: J COJK & P PR024  
 NEXT LEVEL: 050011

UNIVERSITY OF ARIZONA  
 ITD RESPONSIBILITY REPORT  
 FOR MONTH ENDING 03-31-80  
 YEMEN SUPPORT 5010410120

PAGE NO 3  
 PRINT DATE 04-03-80

AGENCY: AID GRANT NUMBER: AID IA-G-111

W G MATLOCK  
 03661  
 ZCMTDC AWARD AMOUNT: 950000 TERMINATION DATE: 03/31/81

\*\*\*\*\* CURRENT MONTH \*\*\*\*\*

\*\*\*\*\* INCEPTION-TO-DATE \*\*\*\*\*

BUDGET CHANGES	EXPENDITURES	ENCUMBRANCES 100%		BUDGET	EXPENDED	ENCUMBRANCE BALANCE	BUDGET AVAILABLE
			TELEPHONE				
	134.00		TEL EQUIPMENT CHARGES		96		96-
			LONG DISTANCE CHARGES		2,912		2,912-
			WIDE AREA TEL SERVICE		108		108-
	44.25		AZ TEL SERVICE (LTS)				
	50.00		TELEGRAPH		828		828-
			TELEPHONE-OTHER		775		775-
			SUSPENSE ACCOUNT				
	-----	-----	CLASS TOTAL	-----	4,714 ✓	-----	-----
	224.25						
	-----	-----					
	5.52		PRINTING AND PHOTOLITHOGRAPHY				
			PRINTING - OTHER		354		354-
	5.52		CLASS TOTAL	-----	354 ✓	-----	-----
	-----	-----					
			RENT				
			REPRODUCTION EQUIPMENT		681		681-
			LEASE + RENTAL - OTHER				
	-----	-----	CLASS TOTAL	-----	681 ✓	-----	-----
	90.00		UTILITIES				
			UTILITIES - OTHER		305		305-
	90.00		CLASS TOTAL	-----	305 ✓	-----	-----
	-----	-----					
	120.00		MTSC AND OTHER COSTS				
			FREIGHT CUT		21,651 ✓		21,651-
	1,619.54	77.25	STUD OF PART REG FEES SP		8,741		8,741-
			TRIP EXPENSES		6,384	77 ✓	6,384-
			SUSPENSE ACCOUNT				
	1,739.54	77.25	CLASS TOTAL	-----	36,677	77	-----
	-----	-----					
	3,092.64	134.69	CATEGORY TOTAL	162,444	82,027	30,645	49,704

REPORT NO. GA2204  
 ACCOUNT NO: 567231  
 ACCOUNTANT: J COOK & P BROWN  
 NEXT LEVEL: 000011

UNIVERSITY OF ARIZONA  
 LTD RESPONSIBILITY REPORT  
 FOP MONTH ENDING 03-31-90  
 YLEFV SUPPORT 5010410120

PAGE NO 4  
 PRINT DATE 04-03-90

AGENCY: AID GRANT NUMBER: AID 14-6-1111 ZUMTDC AWARD AMOUNT: 750000 TERMINATION DATE: 03/31/91

\*\*\*\*\* CURRENT MONTH \*\*\*\*\* \*\*\*\*\* INFORMATION TO DATE \*\*\*\*\*

BUDGET CHANGES	EXPENDITURES	ENCUMBRANCES ADDED	BUDGET	EXPENDED	ENCUMBRANCE BALANCE	BUDGET AVAILABLE
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	BUDGET	EXPENDED	ENCUMBRANCE BALANCE	BUDGET AVAILABLE
<b>TRAVEL</b>	<b>145,255</b>			
IN-STATE TRAVEL				
IN-ST MILGE+VEH ST VEH		1,268		1,268-
IN-STATE SUBSISTENCE		180		180-
IN-ST REG FEE-CONFERENCE		10		10-
PERSONAL EFFECTS TRANS		29,150	428	29,578-
IN-ST OTHER TRAVEL EXP		62		62-
<b>CLASS TOTAL</b>		<b>30,670</b>	<b>428</b>	
OUT-STATE TRAVL-DOMESTIC				
OUT/DOM SUBSISTENCE		1,390		1,390-
OUT/DM PUBLIC TRANS		2,052		2,052-
OUT/DM OTHER TRAVEL EXP		4,857		4,857-
<b>CLASS TOTAL</b>		<b>8,299</b>		
OUT-STATE TRAVEL-FOREIGN				
OUT/FRN MILGE+VEH PRIVAT		70		70-
OUT/FOREIGN SUBSISTENCE		2,990	973	3,353-
OUT/FOREIGN PUBLIC TRANS		33,504	1,070	34,574-
OUT/FOREIGN REG FEE-CONF		60		60-
OUT/FOREIGN OTHER TRAVEL		564		564-
<b>CLASS TOTAL</b>		<b>37,196</b>	<b>1,443</b>	
<b>CATEGORY TOTAL</b>	<b>145,255</b>	<b>76,166</b>	<b>1,871</b>	<b>67,228</b>
<b>CAPITAL</b>		<b>79,053</b>		

17.48				
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17.48				
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250.00				
234.30				
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484.30				
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107.78				
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PERSONNEL EMPLOYED UNDER THE CONTRACT

Mr. David Robinson, Research Assistant in Yemen, full time through December 15, 1979.

Dr. Robert P. Upchurch, Head, Department of Plant Sciences, spent 15% of his time as Campus Technical Director.

Dr. Robert L. Voigt spent 35% of his time as Campus Assistant Technical Director/Plant Scientist.

Dr. W. Gerald Matlock, Director for International Agriculture Programs, spent 8% of his time performing duties as Campus Coordinator.

Mr. Dale E. McDonald, Department of Plant Sciences, spent 100% of his time performing procurement related duties and as a Research Assistant.

Mr. Robert Nieto and Mr. Carl Scaggs both served as Research Technicians during this period.

Ms. Anna Fisk, Department of Plant Sciences, spent 35% of her time performing secretarial duties associated with the project.

Dr. Deran Markarian, In-Country Agronomist and Chief-of-Party, spent 100% of his time in that capacity in Yemen.

Ms. Margaret Klemm and Ms. Judith Geagen, University of Arizona students, who worked part-time, spent 100% of that time performing clerical and secretarial-related duties of the project.

Dr. Harnek Sandhu served in Yemen as a Plant Breeder in Yemen from January 25, 1980, through March 15, 1980. He served 100% in that capacity.

Dr. Orrin Webster traveled to Puerto Rico to assist in the management of the Yemen project, and to assist in the collection bagging, harvesting, and threshing of sorghum.