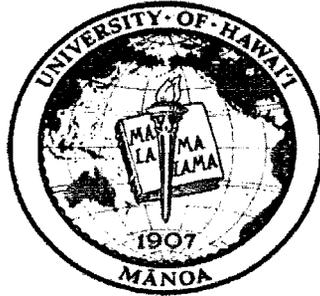


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Final Performance Report

HAWAII-IRAQ PARTNERSHIP FOR REVITALIZING AGRICULTURAL HIGHER EDUCATION AND DEVELOPMENT (AHEAD)

University of Hawaii
Office of Research Services

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**Cooperative Agreement
RAN-A-00-03-00094-00**

Performance Period

October 1st, 2003- December 31, 2005

BEST AVAILABLE COPY

HAWAII-IRAQ PARTNERSHIP FOR REVITALIZING AGRICULTURAL HIGHER EDUCATION AND DEVELOPMENT (AHEAD)

PROJECT TEAM AND PARTNERS

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The Presidents, Deans, and faculty of AHEAD's target Universities/Colleges in Iraq were models of true partnership, collaboration, and also friendship. Our special thanks to Drs. Obay S. Al-Dewachi (President of Mosul University), Asmat M. Khalid (President of Dohuk University), Moafak Ahmad (Dean of College of Agriculture and Forestry at Mosul) and Mosleh Duhoky (Dean of College of Agriculture at Dohuk). We also thank the hundreds of faculty and graduates who participated enthusiastically in all facets of the project.

We wish to also acknowledge the significant contributions of our regional institutional partners to the progress, completion, and overall success of the project, namely:

- American University of Beirut (AUB), Drs. Nuhad Dagher (Dean of Faculty of Agriculture and Food Sciences) and Shadi Hamadeh (who coordinated AHEAD's activities at AUB).
- International Center for Agricultural Research in Dry Areas (ICARDA), Drs. Adel El-Baltagy (Director General), William Erskine (Director of Research) and Samir El-Sebae (Head, Human Resources Development, who served as AHEAD coordinator).
- University of Jordan (UJ) namely, Drs. Mostafa Qrunfleh (Dean of Faculty of Agriculture) and Mahmoud Kasrawi (who served as AHEAD coordinator).

The support staff at these institution did excellent work in support of AHEAD's activities

Generous donations of thousands of books and many scientific journals were received by AHEAD from Prentice Hall, the SABRE Foundation, and individual University of Hawaii faculty. These were safely delivered to libraries in our partner universities on a timely basis.

Special thanks to Mr. Michael Masterson (Economic Development Officer, U.S. Embassy Office in Mosul) for his continuing valuable support of the project, including the arrangement of leveraged funds for the UM Learning Center and delivery of imported publications to our partner universities.

We thank the numerous faculty at the University of Hawaii played very important roles as resource personnel and hosts to Iraqi students and scholars.

Finally, we gratefully acknowledge the strong encouragement and assistance provided by CTAHR leaders and support staff (especially Dean Andrew Hashimoto and Dr. Brian Turanon), and University of Hawaii administrators in planning and carrying out all phases of the project.

**HAWAII-IRAQ PARTNERSHIP FOR REVITALIZING
AGRICULTURAL HIGHER EDUCATION AND
DEVELOPMENT (AHEAD)**

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HAWAII-IRAQ PARTNERSHIP FOR REVITALIZING AGRICULTURAL HIGHER EDUCATION AND DEVELOPMENT (AHEAD)

1. ACRONYMS

Following is the list of acronyms and terms used throughout this report

AHEAD	Agricultural Higher Education and Development
AUB	American University of Beirut
CA	College of Agriculture (UD)
CAF	College of Agriculture and Forestry (UM)
COP	Chief of Party (Team Leader)
CTAHR	College of Tropical Agriculture and Human Resources
ELI	English Language Institute
GRE	Graduate Record Examination
GRF	Graduate Research Fellows
HELP	Hawaii English Language Program
ICARDA	International Center for Agricultural Research in Dry Areas
NICE	New Intensive Course in English
NREM	Natural Resources and Environmental Management
PCT	Professional Conference Travel
PD	Project Director
PM	Project Manager
POW	Plan of Work
RCUH	Research Corporation of the University of Hawaii
RFP	Requests for Proposals (Research Grant Program)
Sul	University of Sulaimaniya
Sal	University of Salahiddin
TEEAL	The Essential Electronic Agricultural Library
TOFEL	Test of English as a Foreign Language
UD	University of Dohuk
UH	University of Hawaii
UHM	University of Hawaii at Manoa
UM	University of Mogul
USAID	United States Agency for International Development
VSP	Visiting Scholar Program

2. PURPOSE OF THIS PERFORMANCE REPORT

This report is submitted to fulfill the final reporting requirement of Cooperative Agreement **RAN-A-00-03-00094-00** between the University of Hawaii and the U.S. Agency for International Development. The Agreement provided the funding for implementing the AHEAD Project as one of USAID's higher education grants under the HEAD program. This report is the final step in bringing the AHEAD project to a close.

This report is a synthesis. Aside from financial, employment and casualty reporting; approximately 80 weekly, monthly, quarterly and special progress reports have been provided earlier to the USAID during the course of the project. Those reports include important details that may not be repeated here but are considered integral to our overall reporting on behalf of the project. We intend for this final report to provide a broad narrative account of all AHEAD's accomplishments to help the USAID and our project partners in assessing the overall success of the project.

3. PROJECT AND PERFORMANCE REPORT GOALS

The stated **broad** goal of the AHEAD Project was to engage and collaborate with Iraqi university partners, including administrations, faculty, students, and stakeholders to establish a *Center of Excellence* in agricultural education, research, outreach, and training in northern Iraq. Designated primary partners were the College of Agriculture and Forestry at the University of Mosul (CAF/UM), and the College of Agriculture at the University of Dohuk (CA/UD). As the project progressed, we found it quite constructive to network with several other universities, technical institutes, and other agricultural and land use agencies throughout Iraq as well.

Two **specific objectives** are pursued for implementing AHEAD's goal:

- To strengthen academic programs and extension training in agricultural sciences at the UM College of Agriculture and Forestry (CAF) and the UD College of Agriculture
- To rehabilitate the research infrastructure and agricultural research programs at both colleges.

This report is based on the substantial progress, knowledge and experience gained in addressing the above goal and objectives during the two-year life span of the AHEAD project. In writing it, we have identified the following reporting goals:

- Document and validate the accomplishments and significant milestones of the project
- Identify the exacerbating circumstances and specific risks encountered during the course of project implementation
- Outline the issues, tasks and activities that are necessary for the success of follow-up projects
- Provide relevant recommendations for the benefit of planners of similar future projects

4. EXECUTIVE SUMMARY

4.1. Background and Overview

Iraq, named Mesopotamia (**the land between the rivers**) in ancient times, has long been known as a cradle of civilization, where cities, writing, and the rule of law first developed. Some parts of Mesopotamia were sparsely inhabited—and others not at all—until after about 8000 B.C., when the domestication of plants and animals brought about an agricultural revolution. This key step in the development of human civilizations made possible an increased food supply and an accompanying growth of population which allowed nomads and cave dwellers to become farmers and herders. People began to move down from the mountains to the grassy uplands and well-watered plains of northern Mesopotamia. By 6000 BC primitive villages stretched from Assyria along a fertile strip just below the Armenian hills to the Euphrates River and beyond.

With a recent economy primarily dominated by oil revenues, it is often overlooked that Iraq remains predominantly an agricultural nation. From a total work-force of approximately 4.5 million, the agricultural sector is by far the largest component, employing 2 million individuals, or 44% of the total work force. Furthermore, approximately 13% of the land is under cultivation, with an additional 37% having arable potential. Unfortunately, agricultural industries, whether encompassing production, processing, or marketing, have not progressed well in recent years because of reduced priority and trade sanctions in the prevailing political setting. Clearly, agricultural revitalization has high potential for addressing food security issues positively and quickly. Agricultural revitalization will impact a large number of Iraq's citizens, and so it deserves high priority in the reconstruction efforts.

Agricultural revitalization should be based on sound science and technology if it is to fulfill the critical need of achieving food security and self-reliance in the country. This is the key responsibility of agricultural higher education institutions. In addition, a clear need exists for reversing the well-documented decline in nutritional status in Iraq's population, especially for children. Revitalizing agricultural higher education should emphasize the introduction of innovative technologies; produce a strong cadre of scientists and teachers; enhance export capability, promote environmentally sustainable use of resources with a long-term perspective; emphasize programs for reducing nutritionally-driven suffering of children; and enhance social and economic equity in the Iraqi society at large.

USAID's "Higher Education and Development" (HEAD) program was initiated to redress these and other sectoral development issues by supporting educational reform at Iraqi universities. Restoring and enhancing Iraq's capacity to conduct higher education was envisaged to require such strategies as bringing libraries (including holdings, internet connectivity, and information technology management) up to current graduate education standards; bringing faculty up-to-date in their respective fields of expertise; and enhancing state-of-the-science research and graduate education.

4.2. Chronology of the AHEAD Project

- Our Team from the College of Tropical Agriculture and Human Resources (CTAHR), University of Hawaii at Manoa (UHM), secured partnership commitments from the universities of Mosul and Dohuk, and submitted the AHEAD proposal on Monday August 4, 2003 in response to the competitive RFA from the USAID for the Higher Education and Development (HEAD) programs.

- On September 30, 2003 USAID approved the proposal to revitalize Agricultural Higher Education And Development (AHEAD) in northern Iraq, with a first year allocation of \$3,770,724.00.
- AHEAD's full scale implementation began on April 1st, 2004, following the development, negotiation and approval of a formal Plan of Work (POW) by the USAID. USAID later granted consecutive no-cost extensions which allowed the project to continue until December 31, 2005.

4.3. Implementation Steps

- Drs. Samir A. El-Swaify (Project Director), Dr. Ekhlass Jarjees (Project Manager), and Dr. Brian Turano (Grants Specialist) participated in the Orientation Meeting for HEAD grantees held by the USAID in Amman, Jordan in mid-December 2003.
- Drs Samir El-Swaify (Director) Jarjees (Manager) subsequently undertook a fact-finding trip to Mosul and Dohuk. The trip was from December 13, 2003 to January 14, 2004 (See Appendix for more details). We conducted a comprehensive walk-through of CAF/UM and CA/UD facilities with the college Deans, department heads, and designated faculty to inspect their facilities and infrastructure. Follow-up meetings with these institutional representatives, advisory committees, and selected students provided a foundation for assessing the specific needs and priorities to be addressed in program implementation. We also established contact with Mr. Mike Shusko who was the designated CPA representative at Mosul.
- Pending a national search and recruitment of a Chief of Party (COP), Dr. Jarjees was assigned as an interim COP, a task she assumed until January 14, 2004. Mr. Radhwan Badi was recruited as the on-site Administrative Assistant. Mr. Adel Youkhana (CAF/UM) and Radhwan Badi (CA/UD) were designated as Coordinators of AHEAD's activities at their respective colleges.
- Preparation and USAID Mission review of AHEAD's Plan of Work (POW) took place during February and March, 2004.
- An international search was conducted for an on-site Chief of Party. Dr. Abduljabbar Salman was selected after consultation with the USAID Mission and Iraqi partners. He was appointed as COP and posted at AHEAD's Headquarters in Dohuk.
- In a follow-up trip from March 28 to April 23, 2004 (See Appendix), Drs. Samir El-Swaify, Ekhlass Jarjees, and Abduljabbar Salman traveled to Baghdad, met with designated officers at the USAID Mission and secured their final approval of AHEAD's POW. The three went on to Mosul and Dohuk to introduce the newly hired Chief of Party to our partners and install him in his post at headquarters provided by CA/UD.
- The Project Director and Project manager departed Iraq for Amman, Aleppo and Beirut where they negotiated formal Partnership Agreements with the University of Jordan (UJ), the International Center for Agricultural Research in Dry Areas (ICARDA), and the American University of Beirut (AUB), respectively.
- Support and consultation personnel were appointed at both Iraq and Hawaii Headquarters
- All competitive activities related to Objective 1 were initiated by inviting applications for PhD support, visiting scholar program (VSP), graduate research fellowships (GRF), research mini-grants (RFP), and professional conference travel (PCT). (See Appendix)
- Procurement of the equipment, supplies and services needed for infrastructure enhancement moved at a fast pace and continued to the expiration date of the project.
- Professional Development and Strategic Planning Workshops were planned and carried out for nearly 230 Iraqi faculty members and academic leaders. Four workshops were held in August, 2004 at the University of Jordan. Four workshops were held in early February 2005 at

ICARDA. Three workshops were held in late February, 2005 at the American University of Beirut (See Appendix)

- We participated in the International Conference on Health and Environment in Iraq sponsored by the Stony Brook University/USAID Environmental Health HEAD Program (Amman, September 19-22, 2005). We contributed a co-authored presentation on the progress of the AHEAD project and interrelationships between agricultural development and environmental health. The USAID Project Officer, Ms. Ann Vitale was also at the conference. We took advantage of this opportunity to consult with her on various matters, especially the final reporting requirements.
- A final project review and evaluation was carried out following the Stoney Brook conference and through October 15, 2005. This visit paved the way also for an orderly notification of on-site employees concerning termination of their appointments before the December 31, 2006 close-out of the project.
- Regular reporting on project progress and activities was performed weekly (employment and casualties), monthly (narrative and financial), quarterly (narrative and financial), and on special occasions.
 - We launched a project Website that archives program reports, press releases, and other public relations materials. See <http://www.hawaii.edu/ahead>.

4.4. Benefits of Project Activities Accomplishments

4.4.1. *To Iraq*

- Restoring and enhancing the expertise of human capital in engaged universities and other agricultural institutions to carry out educational mandates for effective teaching, research, training and outreach.
- Promoting long-term contact, exchange, and synergy among Iraqi higher educational institutions and between them and American universities and institutions.
- Upgrading vital educational infrastructure, including libraries, electronic communications, internet connectivity, and scientific support field stations and laboratories up to modern standards
- Energizing the economic and business environments through direct employment, contracting, in-country procurements, banking, travel, housing, etc.

4.4.2. *To the United States of America*

- U.S. scientists gained valuable experience, expertise, and satisfaction while contributing to the implementation of high priority agricultural sector goals of stimulating economic growth and agricultural sustainability through enhancing higher education and outreach in agricultural sciences in Iraq.
- Promoting deeper awareness of educational institutions and the community of the needs, challenges and opportunities for engaging faculty and students in meaningful activities and partnerships overseas.
- Establishing short and long-term links, exchanges, and collaborations with hosted counterparts from Iraqi Universities.
- Gaining benefits from available indirect costs, tuitions, employment, and other economic and business transactions in support of the program.

4.5. Synopsis

The AHEAD project accomplished substantive and substantial progress in meeting its goal and objectives. Details are provided in the following sections. However, as intended in the RFA, the project was initially proposed as a three-year program. Therefore, our overall progress was constrained by reducing the duration from originally intended 3 years and the funding allocation to only one year.

Our Iraqi partners have acknowledged the considerable gains from AHEAD to their respective institutions. There is perhaps no better testimony for the project's success than their willingness to follow-up by building on the realized gains with longer term projects, using their own funds. We have pledged full cooperation in new initiatives should their efforts succeed in attracting the necessary resources.

5. DETAILS OF PROJECT ACCOMPLISHMENTS

To complement the narrative below, we have prepared a photographic gallery with a similar sequence of objectives and activities. Please see Appendix B.

5.1. Strategy for Carrying out AHEAD Objectives

Objective 1: *“To strengthen academic programs and extension training in agricultural sciences at the UM College of Agriculture and Forestry (CAF) and the UD College of Agriculture”*

This objective focused on building and invigorating scholarly human capital. Its intended outcome was to develop a cadre of highly qualified, well trained faculty in key agricultural disciplines who will contribute to advancing the country’s agricultural agenda of enhanced economic growth, sustainable production, enhanced environmental quality, improved food security and safety, and increased job opportunities. Our POW identified the following *activities* for achieving this objective, all of which were conducted on a competitive basis:

- a. Graduate degree training in high priority agricultural sciences and technologies,
- b. Graduate research fellowships for ongoing UM/CAF and UD/CA graduate students to allow completing thesis / dissertation research in well-equipped environments (GRF),
- c. Visiting scholarships for faculty to undertake “mini-sabbatical” leaves with counterparts at prestigious institutions (VSP),
- d. Professional travel to international or regional scientific meetings (PCT),
- e. Professional development and strategic planning workshops for faculty and academic program leaders,
- f. Mini-grants, provided as in-residence funds to stimulate faculty research in high priority areas (RFP), and
- g. Intensive language training to increase English proficiency among Iraqi faculty

As the project progressed, we also identified an increasing need to address women development issues. Several initiatives were undertaken in this area as well.

Objective 2: *“To rehabilitate the research infrastructure and agricultural research programs at both colleges.”*

This objective focused on establishing a strong infrastructure that is capable of effectively supporting agricultural higher education and research, providing state-of-the-art capabilities for scientific literature and information retrieval, and allowing ready access to modern communication means and timely information flow. The POW identified the following *activities* for achieving this objective:

- a. Enhancing communication capabilities,
- b. Rehabilitating research and instructional laboratories and facilities,
- c. Enhancing library collections, literature availability and retrieval capabilities, and
- e. Reactivating the publication the Iraq Journal of Agricultural Sciences (Mesopotamia Agriculture)

5.2. Level of Success in Completing Project Objectives

Evaluations were carried out by project investigators using input from Iraqi beneficiaries of AHEAD programs and senior contacts with partner institutions. These are summarized in Appendix E. A broad summary of overall progress is attached in Table 1, below. Completion rates in the table are measured against expectations from one year of funding.

Table 1. Summary of Overall Accomplishments by Objective

ACTIVITY	POW OUTPUT INDICATOR	COMPLETION % OF 1st YEAR TARGET
1a. Training graduate students	Completion of graduate study	<30%
1b. Graduate Fellowships (GRF)	Design and Conduct Research for advanced degrees in Iraq	>100%
1c. Visiting Scholar Program (VSP)	Number of participants and final Reports Submitted	100%
1d. Professional Conference Travel (PCT)	Travel awards and completion reports	50%
1e. Administrative and scholarly workshops	Workshops completed	92%
1f. Research Mini-Grant Program for ten UM and UD Faculty (RFP)	Final reports submitted	90%
1g. Increasing English proficiency	Completing short courses in Scientific English	75%
2a. Enhancing communication capabilities	Established computing and Internet Centers	85%
2b. Rehabilitating research and instructional facilities	Procured scientific equipment and supplies	80%
2c. Enhancing library and literature	TEEAL and upgrades	100%
2e. Reactivating Journal of Agricultural Sciences	Number of quarterly volumes published	75%

5.3. Milestone and Deliverables

Project implementation began in earnest after the approval of the POW on April 1, 2004. Since then, the project has made steady progress in everyone of the above-stated activities. Details of the progress were reported in weekly, monthly, quarterly and special reports to the USAID Mission in Baghdad. These reports contained substantial and important details that need not be repeated here, but are summarized in alter sections. Project achievements have also been the subject of several articles in newspapers and magazines, on the Internet, and in television and radio reports in Iraq, Hawaii and elsewhere.

Overall, over 2,000 Iraqi students, faculty, administrators, and staff have directly benefited from AHEAD-funded activities. Funding limitations, a shorter implementation span than intended, and the well known uncertainties associated with operating in Iraq have combined to slow down progress on several fronts, so the above table shows some unfinished tasks that need to be completed in order to meet our ambitious objectives as set forth in the approved POW.

A major accomplishment that is not specifically detailed below (although clearly inferred) is the strong collaboration established with several regional institutions in the course of implementing the AHEAD Project. These include the University of Jordan, the International Center for Agricultural Research in Dry Areas, and the American University of Beirut. This collaboration was formalized in Memoranda of Partnership Agreements that have resulted in immediate benefits to several facets of Objective 1. Less formal, but nevertheless meaningful collaborations have been established with resource scientists at agricultural institutions in Morocco, Egypt and California.

It is instructive to emphasize that our consultations with present and potential additional partners in Iraq have shown a convincing need to expand AHEAD's scope to other universities, and to develop strong links with certain government ministries to revitalize extension and outreach services. However, it is evident that such initiatives will not be possible without substantial additional funding.

5.4. Accomplishments for Objective 1

Activity 1.a. Graduate Degree Training

Six students were admitted for PhD studies at UH. The lone woman student in this group withdrew due to special family circumstances. Five male students (Adel Youkhana, Amjad Ahmad, Khalid Besefky, Raid Haleem and Rofail Toma) came to Hawaii and engaged in research and classroom activities at the University of Hawaii. Mr. Toma returned to Iraq during the fall semester of 2005 due to special family circumstances. The remaining students' accomplishments have been significant and were well-documented in the regular reports submitted by the AHEAD team to the USAID Mission in Baghdad. *The approved POW calls for the students to earn their degrees at the University of Hawaii.* However, as of the end of the project, they had completed only one full year of study and research at UH. Messers Besefky and Haleem returned to Iraq in December 2005, but remain enrolled (on formal leave) at UH in anticipation of future funding from new sources. Messers Ahmad and Youkhana, both of whom are with CAF/UM, remain actively enrolled at UH with emergency funds that will expire in June, 2006. They are actively seeking support from the Iraqi Ministry of Higher Education and the University of Mosul toward completion of their PhD degrees at UH.

Activity 1.b. Graduate Research Fellowships (GRF)

Fifteen active graduate students at the CAF/UM were supported by grants to peruse thesis and dissertation research. This number far exceeded that intended in the POW (6) because of anticipated cost savings due to engaging them either at collaborating institutions in the region (9), or in-residence at UM in Iraq (5, within funded RFP projects, dubbed Mini-RFP), rather than at the University of Hawaii. Details are shown in Tables 2 and 3, respectively.

Table 2. List of Iraqi GRF Awardees at Partner Institutions

Student Name	Hosting Institution	Topic	Outcome / Comments
Esra Mobasher	AUB	Gastro-intestinal structure and performance of broiler strains fed plant or animal protein diets	MSc
Majid A. Sabri	AUB	Performance and carcass Quality of three different broiler strains fed animal or plant protein diets	PhD
Diaa Ibrahim	ICARDA	using <i>Agrobacterium tumifaciens</i> strain to transfer salinity gene to chickpea	Finished his PhD Cross-college collaboration
Lora B. Bashir	ICARDA	Analytical study of affected variables on wheat prices instability in the world market for period (1970-2000)	MSc
Moafaq Y. El-Edwany	ICARDA	Effect of chemical fertilizer and bio-fertilizer on growth of lentil using (DRIS, Leaf deficiency analysis?)	PhD
.Mohammed J. Mohammed	ICARDA	Selecting Resistant Iraqi and Syrian Local Cultivars for Fungal Growth and Mycotoxins Production	MSc
Ali H. Thanoun	UJ	Die-back disease and fruit rot of citrus caused by <i>Diplodia natalensis</i>	MSc
Abdelrahman S. Hussein	UJ	Potassium adsorption-desorption phenomena in some calcareous soils of North Iraq	PhD
Hazim M. Ahmed	UJ	Solubility of calcium carbonate in calcareous soils and its relation to carbonate phases and water quantity	PhD

Table 3. List of Mini-RFP Awards to the Department of Animal Resources at CAF/UM

Name	Topic	Outcome
Abdulmonem M. Salih	The performance of awasi sheep given high level protein of reduced ruminal degradability	PhD
Amera S. Abdey	Productive performance of ewes fed on non grain rations	MSc
Muthana A. Mohammed	Effect of restricted feeding on digestion, metabolism & carcass characteristics of Iraqi sheep	PhD
Nabeel A. Al-Masri	Study the effect of the stress resulting from using hard wells water on physiological blood parameters and some reproductive traits of Awassi Ewes	MSc
Omer D. Mohammed	Effect of different levels of protein in formaldehyde treated or untreated rations on digestion, metabolism and production	PhD
Sameem Al-Dabagh	Sheep genetics and breeding wool science. Study of genetic parameters of wool traits	PhD

Activity 1.c. Visiting Scholars (VSP)

Sixteen faculty members from CAF/UM and CA/UD, with varying seniority, were supported by “mini-sabbatical” VSP grants. This number also exceeded that intended in the POW (12) because of anticipated cost savings due to engaging the majority of them (12) at collaborating institutions in the region rather than at the University of Hawaii. Details are provided in Table 4.

Table 4. VSP Awardees by Research Topic and the Host Institution

Faculty Name	Host Institution	Topic	Outcome / Comments
Ihsan T. Tayeb	AUB	Effect of Keshek and Yogurt on trans-ovarian <i>Salmomella Enteritidis</i> (SE) transmission, egg production and yolk cholesterol	Published article
Imad Al-Deen Dahal	AUB	Effect of dried medicinal crops on the performance and carcass flavor of broilers	Published article
Nazar Thanoon	AUB	Comparative study of thigh muscles and bones conformation of local vs. imported turkey strain	Published article
Shaker H. Ibrahim	AUB	Nutritional value and digestibility of olive pulp ensiled with different feed supplements	Published article
Ahmad Salih Khalaf	ICARDA	Comparison of grain quality characteristics of some Iraqi and selected CWANA bread wheat cultivars	Submitted report
Anmar Abdul Aziz	ICARDA	Rationale of Deficit Irrigation Planning and Management	Published article
Aziz I. Hassan	ICARDA	Study the effect of planting medic instead of nitrogen fertilizers on production of wheat at north of Iraq as crop rotation	Submitted report
Jassim Ahmed	ICARDA	Introduction of new biotypes, <i>Trichoderma</i> resistant to fungicides	Submitted report
Salim Younis	ICARDA	The economic effect of supplementary irrigation on wheat producers	Submitted report
Khaleda Omer	UJ	Effect of the organic and inorganic fertilizer on the yield and nitrate content in Red Cabbage	Published article
Nabil Amin	UJ	Study the effects of growth regulators on the biochemistry developments of grape seeds under stratification states on germination	Submitted report
Namir Fadhel	UJ	Effect of postharvest dip of apple fruits in CaCl ₂ solution on storage characteristics and incidence with physiology disorders	Submitted report
Waleed A Mohmood	UJ	Bioconversion of date paste into high-fructose syrup	Submitted report
Abdullah Thannoun	UH	Prevalence of diabetes mellitus among community living under stress and consuming restricted food ration Available nutrients intake of certain groups of Iraqi community consuming restricted food ration	Submitted report
Mosleh Duhoky	UH	<i>in vitro</i> culture of <i>Eugenia uniflora</i> seeds	Submitted report
Sulaimnan Ami	UH	Effect of root exudates of some antagonistic plants on eggs and juveniles of root-knot nematodes <i>Meloidogyne</i> spp.	Submitted report
Walid Kasir	UH	Study of the termite resistance of Iraqi wood species with commercial potential	

Activity 1.d. Professional Conference Travel (PCT)

This activity was intended to allow selected Iraqi faculty to reconnect with their regional and global peers after the long isolation period they endured under the former regime and imposed sanctions. This activity was not originally proposed; it was later requested by the Deans of our partner colleges as crucial for the professional development of their faculty. However, only 2 PCT awards have been made, primarily due to the selective procedure which was designed to ensure the scholarly benefits of travel. Five additional professional travels were carried out by RFP and VSP awardees in the context of their respective work plans.

Activity 1.e. Professional Development and Strategic Planning Workshops

Nearly 275 professionals were involved in 11 AHEAD workshops, including 226 Iraqi faculty, administrators, and representatives of other major agricultural institutions; and 49 trainers/facilitators from UH, UJ, ICARDA, AUB, University of California at Davis, and the Institute of Forestry in Rabat, Morocco Table 5). The workshops began in August 2004 and continued throughout February 2005. The successful planning and completion of these workshops was unprecedented in Iraqi higher educational history and has proved to be the most effective short-term component of AHEAD's Plan of Work. Participant evaluations were highly positive. Highlights of the workshops have been detailed in our previously submitted special, monthly and quarterly reports.

Follow-up activities and reports by trained faculty represent an important additional outcome of these workshops. We have asked that faculty in each discipline, under the leadership of their department head and Dean, prepare and submit post-workshop reports outlining the benefits they gained and how they might be used in the future upgrading of teaching, research and extension programs in their respective departments. These reports were received and show the strong commitment of departments in both colleges to move vigorously toward programmatic revitalization.

The "capstone" workshop intended for high level leaders and administrators of our partner universities was scheduled for August 2005 at the University of Hawaii. Unfortunately, it had to be cancelled after being twice postponed to allow the Iraqi administrators to fulfill emerging academic year obligations. There is a continuing need to provide these leaders with the tools necessary to facilitate the completion and implementation of long range strategic plans developed subsequent to AHEAD's earlier workshops, and to aid them in their roles as decision makers and priority setters for shaping the development of agricultural higher education in Iraq. These ideals are embodied in the U.S.-based "Land-Grant" concept advocating integrated planning and network building.

Table 5. Summary Statistics for AHEAD's Professional Development Workshops

Host Institute	Workshop Topic/Theme	No of Iraqi Trainees	Trainers/Facilitators	Trainers Affiliations
AUB	Agricultural Engineering	16	Dr. Fadi Fathalla Dr. Moatasim Sidahmed Dr. Musa Nimah Dr. Abduljabbar Salman Dr. Catherine Chan-Halbrendt	UC Davis AUB AUB UH UH
	Animal Sciences	22	Dr. Elie Barbour Dr. Fawwak Sleiman Dr. Shadi Hamadeh Dr. Brent Buckley Dr. Halina Zaleski Dr. Sahar Zaghloul	AUB AUB AUB UH UH UH
	Forestry	19	Dr. Elsa Sattout Dr. Jala Makhzoumi Dr. Mohamad Sabir Dr. Travis Idol Dr. Richard Bowen Dr. Samir El-Swaify Dr. Ekhllass Jarjees	AUB AUB NSFE (Morocco) UH UH UH UH
ICARDA	Field Crops	16	Dr. Rajinder S. Malhotra Dr. Samir A. El-Sebae Dr. Magdy Madkour Dr. Duane Bartholomew Dr. Paul Singleton Dr. Abduljabbar Salman	ICARDA ICARDA ICARDA UH UH UH
	Soil and Water Management	22	Dr. Theib Oweis Dr. Richard Thomas Dr. Carl Evensen Dr. James Silva Dr. Richard Bowen Dr. Catherine Chan-Halbrendt	ICARDA ICARDA UH UH UH UH
	Statistics and Exp Design	19	Dr. Murari Singh Dr. Zaid Abdul-Hadi Dr. Halina Zaleski Dr. James Silva	ICARDA ICARDA UH UH
	Technology Transfer	24	Dr. Samir A. El-Sebae Dr. Abdulbari Salkini Dr. Kamel Shideed Dr. Mustafa Pala Dr. Aden Aw-Hassan Dr. Ahmed Mazid Dr. Samir El-Swaify Dr. Richard Bowen Dr. Barry Brennan Dr. Catherine Chan-Halbrendt Dr. Ekhllass Jarjees	ICARDA ICARDA ICARDA ICARDA ICARDA UH UH UH UH UH UH

UJ	Economics	20	Dr. Ahmad S. Al-Rimawi Dr. Mahmoud Ali Salem Dr. Richard Bowen Dr. Catherine Chan-Halbrendt	UJ UJ UH UH
	Food Technology	21	Dr. Mohammed Yamani Dr. Ayed Shakir Dr. Ali K. Al-Saed Dr. Samir El-Swaify	UJ UJ UJ UH
	Horticulture	24	Dr. Jamal S. Sawwan Dr. Mahmud Duwayri Dr. Nazir A. Al-Hadidi Dr. Mostafa M. Qrunfleh Dr. Mahmoud A. Kasrawi Dr. Abdul-Jabbar Salman	UJ UJ UJ UJ UJ UH
	Plant Protection	23	Dr. Walid Abu-Gharbieh Dr. Ibrahim K. Nazer Dr. Barakat. E. Abu-Irmaileh Dr. Thabet F. Allawi Dr. Ekhlass Jarjees	UJ UJ UJ UJ UH
TOTAL	11	226	49	6

Activity 1.f. Research Mini-Grant Program (RFP)

Eighteen faculty, staff and their advanced students were awarded RFP research grants to revitalize their expertise and, at the same time, enhance their universities' research capabilities in a diverse range of agricultural sciences. Over \$200K was awarded and major accomplishments of the recipients have been reported periodically in AHEAD's regular and special reports to the USAID mission in Baghdad. Recipients reported on their work in publication venues, at locally organized symposia, and at AHEAD's workshops. Tables 6 and 7 provide a summary of all approved RFP awards for UM and UD, as well as the University of Hawaii faculty who acted as counterparts and advisors to our Iraqi colleagues as they carried out their scientific investigations.

Several technical and journal publications have resulted from RFP research. When requested, University of Hawaii faculty counterparts assisted with the reviews of these publications before submission.

Table 6. Research Grant Awards (RFP) at CAF/UM

RFP Recipients	Project Title / Topic	Allocation/ UH- Conterpart
Shamil Y. Hassan Caser G. Abdel	Evaluation of some fava bean cultivars for drought Resistance and Water Consumption use	\$30,000 approved for the 4 related projects, reviewed as a team activity and cooperative research.
Amer A. Hussien Caser G. Abdel	Response of different onion cutirars grown under Rainfalls to polyethylene mulching	
Taha Z. Sarhan Caiser G. Andel	Improvement of tomato fruit-set under high Temp. conditions	
Caser G. Abdel N.N. Fadhil	Improving Yield and its Biochemical Quality of Irrigated and non-Irrigated faba bean by somatic hybridization	Ali Fares Bernanrd Kratky
Mohamed A. Alnoori Ahmad S. Khalf	Effect of nitrogen fertilizer, supplementary irrigation on growth, yield and grain criteria of four bread wheat varieties	\$10,000 Ali Fares
Younis M. Qassim	Effect of diameter and stump age on the quantitative and qualitative characters of growing forage on stumps of some forage trees	\$5,000 John Yanagida
Ekhlass D. Sulaiman Adel Youkhana	Impact of pollarding treatment on Biomass productions and Nitrogen fixation in poor soils and bad locations	\$10,000 Travis Idol
Salim Y. Sultan Kays Nadhaim Ghazal	Cash Crops Cases and their development Horizon in Iraq (cotton as a model)	\$10,000 Cathy Chan-Halbrendt
Moneeb Tahir Walid A. Kasir	Utilization of Pinus brutia and Quercus aegilops bark extracts as an adhesives for particle-boards production	\$10,000 Harry Ako
Muzaham S. Younis	Modeling of thinning effects profile Populus Nigra	\$10,000 J. B. Friday
Rabee Khalaf (S) Ismail N. AL- Maroof	Ecological and biological studies on populus bud psyllid in mosul region.	\$10,000 Mark Wright & Ekhlass Jarjees
Gada A. Faris Banan Kh. Al- Baggou Fouad K. Mohammad	The use of an electrometric Method for measurement of blood cholinesterase activities in cattle, sheep and goats	\$10,000 Sahar Zaghloul & Yoo-Soo Kim Cross College Coll/Vet/UM
Mohammed Y. Al- Allaf Nazar M.S. Numan Dept of Geology/C Science	The use of geographic information system (GIS) in the optimum location of new forests in Northern Iraq	\$15,000 Tomoaky Miura Cross College Collaboration

Table 7. Research Grant Awardees (RFP) at CA/UD

RFP Recipients	Project Title / Topic	Allocation/ UH Counterpart
Abdul-jabbar I. Marie	Study the effect of planting method, topping and some growth regulators on fruits and seeds yield of okra cv. Mosullia	\$10,000 Joe De Frank
Azad A. Maye Jassim M. Alwan	The Effect of Leaf Spray with Iron and GA3 on the Vegetative Growth, Concentration of Nutrients, Yield and Some Storing Qualities of Apple Fruits	\$15,000 Mike Nagao & Robert Paull
Rabea A. S. Al-Oramary	Genetic Evaluation of Karadi Ewes Using Milk Yield, its Composition and Somatic Cells Count	\$10,000 Sahar Zaghoul Brent Buckley, C. N. Lee
Talal T. Mahmoud	Integrated Pest Management on Stone Fruit Trees in Dohuk (Kurdistan) Iraq.	\$10,000 Russell Messing Ekhlass Jarjees
Hassan N. Mohamed and Colleagues	Irrigated Plantations of Fast Growing Species	\$15,500 Cathy Chan-Halbrendt
Saleem E. Shahbaz	Phenotypic variation and early growth of natural stands of <i>Quercus aegilops</i> , <i>Q. infectoria</i> , and <i>Q. libani</i> in kurdistan region of Iraq.	\$5,000 J. B. Friday
Salih T. Wali	Effects of reproductive sources, spacing, fertilization and seasons of application on the growth of two local cultivars of <i>Populus nigra</i> in short rotation plantation.	\$10,000 J. B. Friday
Akram A. Khalaf Jafer M. Tuher	Identity critical areas of soil erosion and designing soil & water conservation projects to prevent erosion in Bajlor subwatershed/Dohuk	\$5,000 Samir A. El-Swaify

Activity1.g. Increasing English, Computer and Internet Use Proficiency among Iraqi Faculty

Intensive programs designed to improve the English language, basic computer and internet skills of faculty, staff and students were implemented at both CAF/UM and CA/UD. An Intensive English Language center (Institute) was established and equipped with AHEAD funds. These intensive courses have been most distinctive for engaging female faculty and staff from our partner universities. Several of our earlier monthly and special reports provided details on these activities.

However, while significant for both male and female professionals, the improvement in the participants' English has not been as effective as needed for passing the Test of English as a Foreign Language (TOEFL). Despite being well-qualified academically; all Iraqi students at UH started their enrollment under conditional admission and all had to take TOEFL several times before gaining admissible scores. This challenge may best be met by designing special courses that are modeled on predatory activities for the standardized TOEFL which is required for regular admission of all foreign non-English speaking nationals to graduate schools in the U.S.A.

Activity 1.h. Women development

An over-arching fact in the AHEAD project is that three of the five key staff (Co-Instigators) are women. Gender equity was discussed and monitored frequently during our weekly planning meetings ever since the project began. We have been, and remain highly cognizant of the various barriers against gender equity in regional cultures and consistently addressed them at every opportunity. We have also been fully supportive of the overall guidance by which USAID is obliged to report on the objective of 'improving the status of women'. Nevertheless, cultural realities and other circumstances have impeded our efforts in stimulating a sizable increase in women's participation in AHEAD programs, especially those that require long absences from home and family.

In response to an inquiry by the USAID Mission in Baghdad, we submitted a report to gender advisor, Brenda Oppermann, on whether due attention has been paid to the status of women in the HEAD programs. Her initial review concerned Hawaii's AHEAD program. The report is reproduced in the following box.

SPECIAL REPORT ON THE STATUS OF WOMEN IN THE AHEAD PROJECT

A. Answers to General Questions

- Does training include a gender mainstreaming component or a gender focus? *We focused our early efforts on the widest possible scale for announcing participation opportunities in the project, and identifying the most qualified candidates for engaging in project activities. There was no specific targeting of genders.*
- Is all collected data sex disaggregated? *We did not consciously segregate project activity data by gender. However, we did monitor that information and are able to document and report such data from available records. See Table 8*

B. Answers to Specific Questions

- Does your agricultural program involve the training of agricultural extension workers? *No*
- If so, are efforts made to recruit women to serve in these positions? Are extension workers trained on how to conduct outreach to female farmers, i.e., are they providing the same sort assistance and opportunities to female farmers as to male farmers? *Not applicable*
- Does the training of university faculty and students include a gender component? *No, not specifically for Iraqi trainees. However, several of our courses deal with the human elements of managing agricultural systems and natural resources. In this context, gender issues are addressed as a requirement for addressing technology transfer barriers efficiently and realistically.*

C. For the Future

- Keep in mind the gender issue and build this into future activities, where appropriate. *Please see the above introductory section. We are confident that women faculty and students will be more encouraged to apply and participate in future activities if the project is extended as they have witnessed several successful facets of the present project first hand.*
- For each monthly report, add a brief comment on what the program has achieved that month on 'improving the status of women' and relevant data, if appropriate. *We'll make a sincere effort to include gender issues in future reports.*

Table 8. Women Participation in the AHEAD activities

Program	Location	Iraqi Institutes	Total Applicants	Women Applicants	Total Selectees	Women Selectees	Comments
Graduate Standing at University of Hawaii, PhD degree Same for MS degrees	UH	CAF/UM	16	3	3	0	
		CA/UD	10	0	3	0	
		CAF/UM	5	4	1	1	Admitted but declined scholarship due to family pressure/companion insistence
		CA/UD	0	0	0	0	
Graduate Research Fellowships (GRF Program)	Univ Jordan	CAF/UM	5	0	3	0	
		CA/UD	0	0	0	0	
	ICARDA	CAF/UM	4	1	2	1	
		CA/UD	0	0	0	0	
	AUB	CAF/UM	4	1	2	1	
		CA/UD	0	0	0	0	
	UH	CAF/UM	1	0	1	0	
		CA/UD	0	0	0	0	
	Iraq	CAF/UM	8	1	8	1	
		CA/UD	0	0	0	0	
Research Grant Program (RFP)	Iraq	CAF/UM	20	3	13	2	
		CA/UD	12	0	8	0	
Visiting Scholar program (VSP)	Univ Jordan	CAF/UM	7	1	5	1	
		CA/UD	3	0	3	0	All withdrew
	ICARDA	CAF/UM	4	0	2	0	
		CA/UD	2	0	2	0	
	AUB	CAF/UM	3	0	2	0	
		CA/UD	0	0	0	0	
	UH	CAF/UM	5	0	4	0	One withdrew
		CA/UD	2	0	2	0	
Professional Conference Travel	CAF/UM	11	1	3	0	0	Incomplete Applications
	CA/UD	0	0	0	0	0	
Professional and Strategic Planning Workshop held	Univ Jordan	CAF/UM	45	5	40	4	One female didn't show up
		CA/UD	19	3	19	3	
		CA/Sul	9	0	9	0	
		CA/Sal	6	2	6	2	
		Others	11	1	11	1	Selected, but didn't show up

Notes for table 8:

- i. To evaluate such data objectively, one needs to keep in mind the number of existing women faculty, number of women applications received, number of women selected, and number of women who declined the scholarship.
- ii. Extra efforts were made when scholarships were declined by a woman. The Project Director and COP communicated directly with the candidate and her parents. However their efforts were not successful.
- iii. When financial support was requested for the candidate's spouse/relative/sibling as a condition for accepting a scholarship; we were unable to accommodate such requests in view of standing policy, fairness to male applicants, and budgetary considerations.
- iv. Women participation in our faculty workshops was quite prominent and representative of overall faculty structure.

5.5. Accomplishments for Objective 2

Activity 2.a. Enhancing Communication Capabilities

Two communication and computing centers, each with 25 workstations were established at UM and UD. Between them, the centers are capable of providing internet access to a total of 2600 students, faculty and staff, 800 of whom are female. AHEAD assumed responsibility for all internet service charges. At their request, and with the endorsement of our primary partners, additional internet communication and computing capabilities were provided to faculty and students in the UD colleges of Veterinary Medicine (158 students, 47 female), Engineering, Irrigation & Drainage (171 total, 69 female) and Education and Biology (97 total, 54 female). The work station are equipped with computers, scanners, and the necessary furniture. Computing centers are equipped with computers, scanners, color printers, black and white printers. Our headquarter and field staff, and involved faculty and administrative representatives of partner universities were equipped with wireless telephones; initially satellite phones and later multi-band mobiles. A pool of laptop computers was provided to each college for assignment and use by faculty and students upon request.

Activity 2.b. Rehabilitating Teaching, Research Laboratories and Field Facilities

Over a half a million dollars were invested in scientific equipment, supplies and animals to replenish and upgrade teaching and research facilities at our partner institutions. Materials reported in section are intended for common use facilities, and are in addition to the specialized equipment and supplies procured from allocations in support of carrying out Objective 1 by graduate student, GRF, RFP and VSP programs. Purchased equipment are state-of-the art models; and include phytotrons, microscopes, scales, centrifuges, water baths, a tractor, computers, printers, and scanners. Purchased chemicals and laboratory supplies serve the needs of faculty as they carry out instructional practicums and research. Teaching and scientific presentation capabilities of both partner institutions have been greatly improved by the procurement of projectors, teaching computers, cameras, copiers, and other tools that significantly enhance the classroom experience. Animals purchased have substantially augmented both teaching and research capabilities at our partner institutions. The two Phytotron-style climate controlled greenhouses were custom constructed and shipped (1 each) to UD and UM to enhance their crop/soil quality and eco-physiology teaching and research capabilities. As seen in Table 9, substantially more material was provided to CAF/UM whose scientific facilities were nearly eliminated due to recent circumstances.

Table 9. Material procurement for activity 2b.

9.a. Non-Expendable Property Acquired for CAF/UM with Current Market More than \$5,000

Description of Equipment	Qua.	Serial/ Control Number	Acquisition cost	Current Value	Condition	Location of Property	Notes
Phytotron/ Greenhouse	1	21-1111-1	\$54,135.75	\$54,135.75	New	CAF/UM	Shipping cost is: \$20,603.44
Atomic Absorption	1	287812	\$11,000	\$11,000	GOOD	Soil Dept	
Growth chamber	1	7J52664	\$5,450	\$6,000	GOOD	Horticulture Dept	
TEEAL	426 CDs	Nil	\$20,250.00	\$20,250.00	New	CAF/UM	
Refrigerated Centrifuge (NUVE)	1	NF800R020210	\$5,572	\$5,572	Excellent	Food tech. Dept	
Tractor with re-fender	1	Motor:duvh4753 Chice:88105050 112	\$5,000	\$5,000	GOOD	CAF/UM GARAGE	
Autoclave large (Webco)	1	47791	\$8,500	\$8,770	GOOD	Food Tech. Dept	

**9.b. Non-Expendable Property Acquired for CA/UD with
Current Market More than \$5,000**

Description of Equipment	Qua.	Serial/ Control Number	Acquisition cost	Current Value	Condition	Location of	Notes
Vehicle Ford Explorer/ Model 2003/ Blue	1	VIN:1FMZU72E43ZB14401	Received from USAID	Received from USAID	Excellent	CA/UD	
Greenhouse	1	21-1111-1	\$54,135.75	\$54,135.75	New	CA/UD	Shipping cost is \$20,399.44
TEEAL	427 CDs	Nil	\$10,000.00	\$10,000.00	New	CA/UD	
Growth Chamber, Cold-Hot-Humidity-Light, Model 563 250L, Germany Made	1 pc.	1242W	\$5,000.00	\$5,000.00	New	Central Laboratory	
Growth Chamber, Cold-Hot-Humidity-Light, Model 563 250L, Germany Made	1 pc.	1240W	\$5,000.00	\$5,000.00	New	Central Laboratory	

Activity 2.c. Enhancing Library and Literature Availability and Retrieval Capabilities

Providing Iraqi scientists and students with access to modern literature was determined as a high priority immediately upon AHEAD's implementation. Pending the procurement of necessary material for replenishing their libraries, AHEAD provided literature search and retrieval services through the reference desk of the UHM Hamilton library. Ms. Patricia Brandes was appointed on a part-time basis to provide these services and served in that role until July, 2005. In response to individual requests, she performed over 450 searches and provided over 1400 articles electronically to Iraqi faculty and scholars. Figure 1 shows the high demand early and tapering of in later months reflecting a positive outcome of AHEAD's investments for procuring library materials, including the TEEAL systems described below.

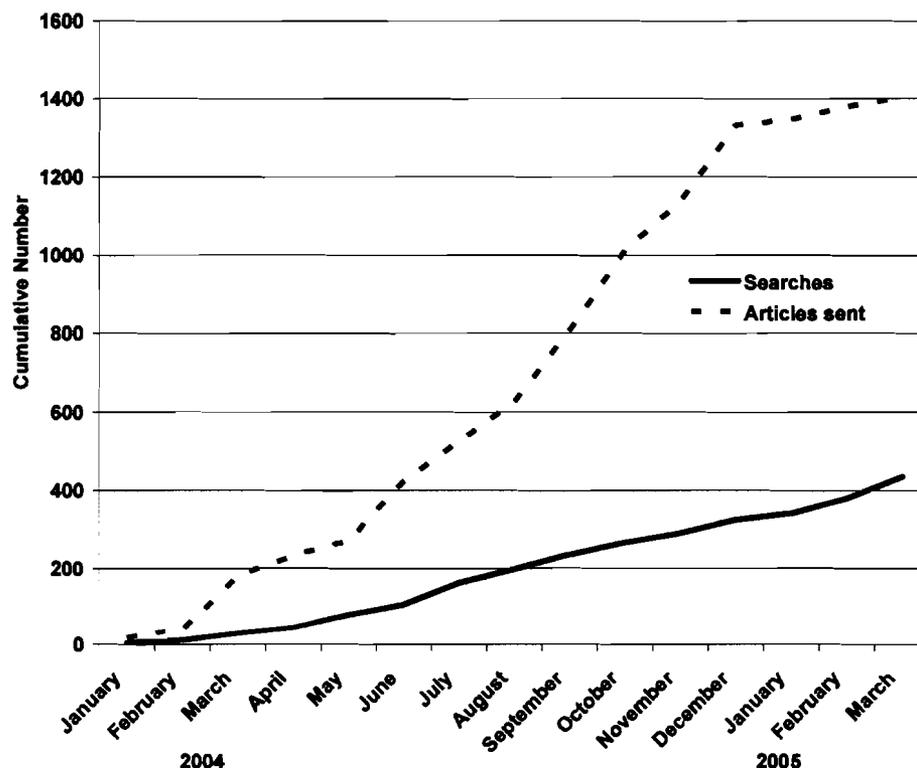


Figure 1. Library searches and articles supplied to Iraqi scientists by AHEAD-sponsored library services through March, 2005

Procurement of The Essential Electronic Agricultural Library (TEEAL) was a breakthrough in addressing our partners' needs for published scientific information. TEEAL is a CD-ROM library that contains all articles and images in over 140 journals between the years 1993-2004. The AHEAD project has procured two copies of this library for UM and UD and has leveraged the purchase of two more by ARDI/DAI for the Colleges of Agriculture at the Universities of Sulaimaniya and Salahiddin. TEEAL Updates for 2005 were provided to all four universities. A recent release and procurement of a less expensive Local Area Network version (LAN TEEAL), made it possible to expand the capacity of UM and UD by acquiring one system for each. In addition, we were able to respond positively to requests from the UM College of

Veterinary Medicine and Universities of Baghdad, Basrah, Diyala, Koya and Tikrit; a LAN TEEAL system waqs provided to each.

These electronic acquisitions were augmented by the procurement and donation of hard copies of textbooks and reference materials for the libraries of both partners, worth approximately \$24,000.00. Additional significant efforts continue in this direction even if the AHEAD project has expired.

We estimate that more than 5,000 students, faculty and staff are directly benefiting from these comprehensive library enhancements. When these numbers are expanded to include farmers/land users who have access to the information within the system through researchers ,extension workers and advisors; it is estimated that 2 million Iraqi citizens will ultimately benefit from this activity.

Activity 2.e. Reactivating Publication of the Mesopotamia Journal of Agricultural Science

The Iraqi-based Journal was once among the premier publications of its kind in the region. It published research articles in both Arabic and English. It had been defunct since the first gulf war, but has now been reactivated by sponsorship from the AHEAD Project. To date, we have sponsored the following under the Iraq journal of Agriculture:

- Vol. 5, No. 2, 2004 / funded by the AHEAD Project,
- Vol. 5, No. 3, 2004 / funded by the AHEAD Project,
- Vol. 5, No. 4, 2004 / funded by the AHEAD Project.

The following citation is for the subsequently published volume which resumed using “Mesopotamia” instead of “Iraq” and was thus numbered to follow that journal’s early sequence. It too was sponsored by the HEAD Project: “*Volume 33, No.1, 2005 / Funded by the AHEAD Project*”

It is instructive to note that some of the allocated AHEAD funding was to obtain new ISSN numbers for the Journal and allow its distribution worldwide.

Publishing this journal has inspired the interest of our partners at CA/UD to start another Journal of to be called “Dasinya Journal of Agricultural Sciences.” That initiative is currently under evaluation by their decision makers.

5.6. Scheduling and Timeliness of Accomplishments

The initial USAID funding of the AHEAD Project was for one year, intended to begin on October 1, 2003 and end on September 30, 2004. It became clear from the onset that a completion date in February 2005 is a more realistic target. However, in view of academic year deadlines, we asked for an extension to June 30, 2005. As summarized in Sections 4.2 and 4.3, AHEAD’s full scale implementation began on April 1st, 2004, following the development, negotiation and approval of a formal Plan of Work (POW) by the USAID. USAID later granted a second no-cost extension which allowed the project to continue until December 31, 2005.

Immediately after the Orientation Meeting for HEAD grantees held by the USAID in Amman, Jordan in mid- December 2003, Drs Samir A. El-Swaify (Project Director) and Ekhlass Jarjees (Manager) undertook a fact-finding trip to Mosul and Dohuk. There, we conducted a comprehensive walk-through

of CAF/UM and CA/UD facilities with the college Deans, department heads, and designated faculty to inspect their facilities and infrastructure. Follow-up meetings with these institutional representatives, advisory committees, and selected students provided a foundation for assessing the specific needs and priorities to be addressed in program implementation. Pending a national search and recruitment of a Chief of Party (COP), Dr. Jarjees was assigned as an interim COP, a task she assumed until January 14, 2004. Preparation and USAID Mission review of AHEAD's Plan of Work (POW) took place during February and March, 2004. It was approved on April 1st, 2004.

In the interim period, an international search was conducted for an on-site Chief of Party. Dr. Abduljabbar Salman was selected after consultation with the USAID Mission and Iraqi partners. He was appointed as COP for posting at AHEAD's Headquarters in Dohuk beginning April 1st, 2004 just after POW approval.

Direct negotiations of formal Partnership Agreements were conducted during April, 2004 with the University of Jordan, the International Center for Agricultural Research in Dry Areas (ICARDA), and the American University of Beirut, respectively. The following steps were then taken to implement the various activities of our two objectives:

- All competitive activities related to Objective 1 were initiated by inviting applications for PhD support at UH, visiting scholar program (VSP), graduate research fellowships (GRF), research grants (RFP), and professional conference travel (PCT) in early 2004.
- Professional Development and Strategic Planning Workshops were planned and carried out in August, 2004 at the University of Jordan, in early February 2005 at ICARDA, and in late February, 2005 at the American University of Beirut.
- The Project Director and Manager participated in the International Conference on Health and Environment in Iraq sponsored by the Stony Brook University/USAID Environmental Health HEAD Program (Amman, September 19-22, 2005), contributed a co-authored presentation on the progress of the AHEAD project and interrelationship between agricultural development and environmental health, met with the USAID Project Officer, Ms. Ann Vitale who was also at the conference, and went on to Iraq to carry out a final project review and evaluation through October 15, 2005. This latest visit allowed an orderly notification of on-site employees concerning the required staff reductions ahead of the December 31, 2006 program close-out.
- Regular reporting on project progress and activities was performed weekly (employment and casualties), monthly (narrative and financial), quarterly (narrative and financial), and for special occasions. We launched a project Website that archives program reports, press releases, and other public relations materials. See <http://www.hawaii.edu/ahead>.

5.7. Budget Performance and Disposition of Assets

The University of Hawaii will submit the required final financial report in a companion, but separate document. Considering the well-known uncertainties in Iraq during this period of time, we are pleased to have accomplished so much of what was committed under the POW as described above. This was possible because of the judicious use of allocated funds over 27 months, instead of the intended one year.

The cost-sharing provision for the AHEAD project started at 15%. As part of the POW approval in April 2004, the rate was reduced to 6% in view of the negotiated reduced emphasis on the training of graduate students and graduate research fellows at the University of Hawaii.

We have been highly cognizant of the Buy-Iraq Policy that was instituted early in the project's life. As a result we have urged our field Team to examine every opportunity for procuring the project's needs from within Iraq, before we procured them from U.S. sources. These efforts have been successful as indicated by wired funds and the tabulated lists of equipment and supplies.

Disposition of acquired assets has been made according to USAID policy, as stated in the Award documents. All material procured in or delivered to Iraq will remain with our partner universities; USAID's permission has been requested for equipment with values over \$5,000.00. All material procured for University of Hawaii's use in support of AHEAD will remain at UH, in anticipation of further use in support of new Iraq-based activities.

It is instructive to indicate here that considerable difficulty was encountered for transferring funds to Iraq early in the project period. We were pleased to discover and establish a legal link with Emerald bank whose charges for accepting wire transfers were 1%, far less than we have been quoted by other questionable sources.

Adjustments in the budget were needed because of:

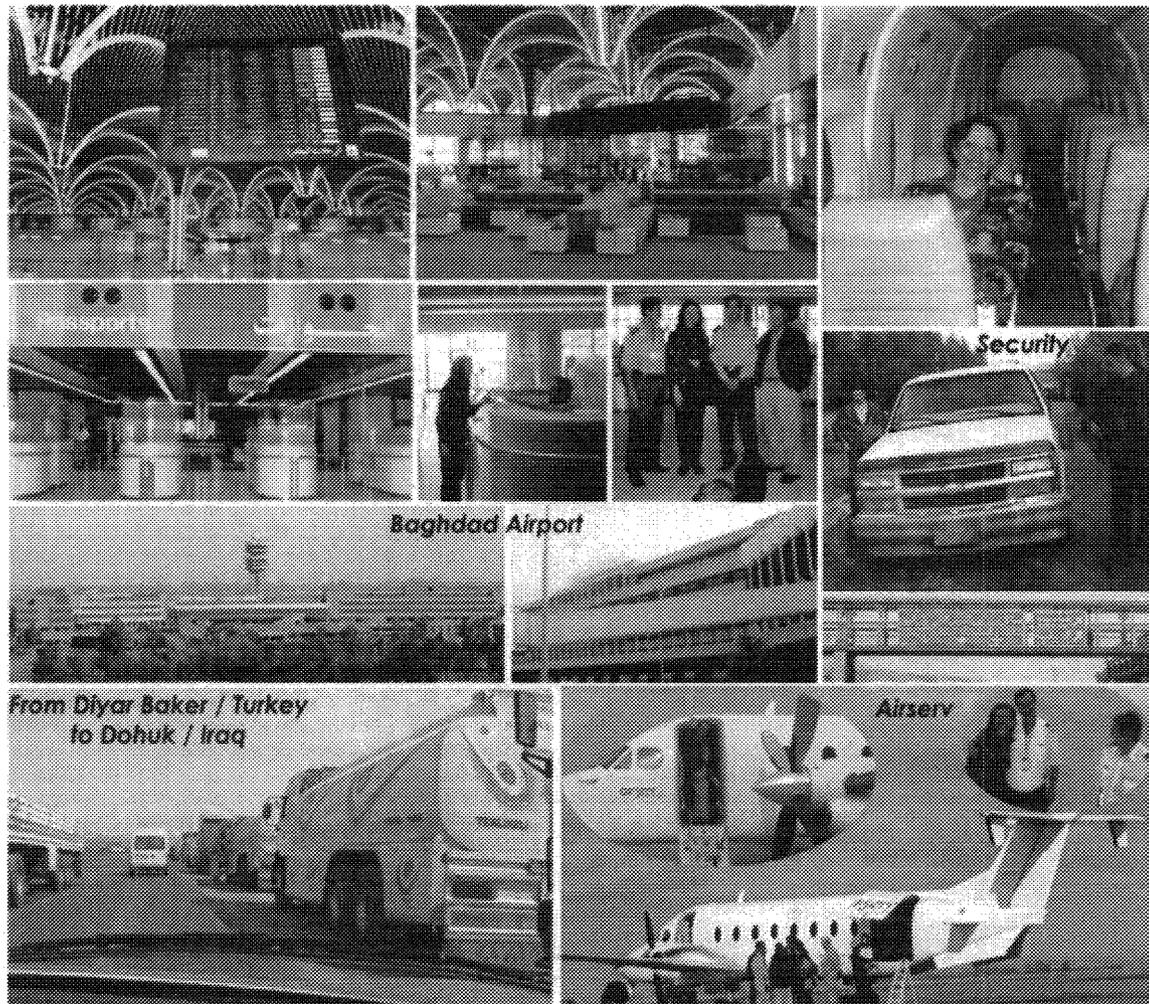
- under-estimating the costs of Professional Development and Strategic Planning workshops since we had to hold them outside Iraq, and needed to accommodate many more Iraqi trainees than originally estimated due to the large demand, and
-
- higher costs of Partnership Agreements with our regional partners whose training fees and/or faculty compensations for hosting Iraqi trainees were higher than anticipated. This is indirect contrast with University of Hawaii faculty whose regular salaries are the only ones covered by the university regardless of their student or visiting scholar workload.

The realized extra costs for these high priority activities were necessarily compensated by underspending in other budget categories.

6. OBSERVATIONS AND RECOMMENDATIONS

6.1. Travel Procedures to and from Iraq

The most reliable procedure was to use Amman, Jordan as the primary destination from overseas and the point of departure for the teams' intended visits to Iraq. After providing evidence that the University of Hawaii is a non-commercial / nonprofit organization, we qualified for flight services offered by an NGO group (AIRSERV). Our Iraq destination in Iraq was Erbil, with a stop in Baghdad. All ensuing travel from Erbil within Iraq was by surface transportation in vehicles provided by our partner universities or private cars. Our last trip to Iraq was designed avoid the Baghdad stopover by entering through Turkey. Flights are available to Diyar Bakir from which we rented a taxi across the border directly to Dohuk.



Bringing the large numbers of Iraqi trainees out of Iraq, and back, was also necessarily done by surface transportation. There were considerable uncertainties encountered in these movements

because of frequent closures of Iraqi borders with neighboring countries. The Professional Development Workshops at ICARDA were directly affected by this problem. These workshops were cut short of the intended duration in order to allow crossing the border to Lebanon ahead of an announced border closure that would have forced the cancellation of subsequent workshops at AUB. Immigration formalities at border crossings were extremely difficult and time consuming.

From these experiences, we learned that crossing borders by road is considerably less efficient than within airports. Whenever budget provisions allow, arrival and departure by air is highly advantageous.

6.2. Security and Insurance

In compliance with initial instructions from the USAID mission, we arranged for protected surface transportation in our first trip to Iraq with a highly recommended professional security agent. He provided an SUV and body guards at a substantial cost. We were then strongly advised by our trusted Iraqi collaborators that such a high-profile arrangement is not a safe one, and that it is safer to blend during our moves within the local community by using commonly popular vehicles. An older vehicle was then purchased for use by our COP, the field team and UH visitors.

Body armours were purchased and used in certain situations, particularly during visits to the University of Mosul. As a caution, importing and holding these devices is counter to regulations of some countries in the region, including Jordan, and is subject to customs in other countries, including Turkey.

Special life, health and emergency evacuation insurance was secured for every UH Team travel into Iraq. Portions of these costs were paid by UH funds when not allowed from grant funds. The COP's insurance needs were covered as a fringe benefit by the University of Hawaii Research Corporation (RCUH) which was the official locus of his appointment.

6.3. Money Transfers

With the assistance of trusted Iraqi collaborators, Emerald Bank was identified as a legal recipient of project funds. Periodic wire transfers to the Dohuk branch provided the required funds for field operations. Bank charges were 1%, considerably lower than other investigated commercial options of dubious standing.

6.4. Networking and Alliances within USAID funded projects

No formal collaborative arrangements could be made with other U.S. recipients of HEAD grants, despite some meetings and communications intended to establish some cooperation. There is a certain need for such arrangements to increase the efficiency of program functions.

We were pleased to receive an invitation from our colleagues at Stoney Brook to participate in their sponsored International Conference on Environmental Health Amman, Jordan, September 2005.) We used this opportunity to present a synthesis of the accomplishments of the AHEAD Project and the inter-relationship between Agricultural Development and Environmental health.

6.5. Regional Partnerships

Following approval from the USAID Mission in Baghdad, and negotiations with prospective partners in the region; three formal Memoranda of Partnership Agreement were established with the University of Jordan, ICARDA and American University of Beirut. These Cooperative Agreements were very instrumental in the successful completion of human capacity activities under Objective 1 (see Section 5, above). All formalized agreements followed the format shown in the box below for ICARDA.:

**MEMORANDUM OF PARTNERSHIP AGREEMENT
BETWEEN
THE AGRICULTURAL HIGHER EDUCATION AND DEVELOPMENT PROJECT (AHEAD), COLLEGE OF TROPICAL AGRICULTURE AND HUMAN
RESOURCES, UNIVERSITY OF HAWAII AT MANOA
AND
THE INTERNATIONAL CENTER FOR AGRICULTURAL RESEARCH IN DRY AREAS (ICARDA)**

I. WHEREAS

- a. The AHEAD Project has been funded by a grant from the U.S. Agency for International Development in order to
 - 1. Strengthen academic programs and extension training in agricultural sciences at the University of Mosul (UM) College of Agriculture and Forestry (CAF) and the University of Dohuk (UD) College of Agriculture (CA), and
 - 2. Rehabilitate the research infrastructure and agricultural research programs at both colleges.
- b. ICARDA was supportive of the proposal that led to the above grant because it has been actively and consistently engaged in agricultural research on important Iraq crops and training of Iraq professionals for several decades
- c. Both UM/CAF and UD/CA are supportive of enhancing scientific cooperation within the Middle East region
- d. An April 2004 consultation visit to ICARDA by the AHEAD Project Director and Project Manager resulted in a positive understanding between them and ICARDA's leadership on the value and importance of instituting a formal partnership agreement toward the successful implementation of the AHEAD Project as described in following section.

II. SCOPE

- a. The two parties agree to collaborate in jointly carrying out appropriately defined activities and tasks designed to implement both the above stated AHEAD Project objectives.
- b. Special emphasis will be on the following professional development and training activities:
 - 1. Graduate Research Fellowships. The purpose of this activity is to assist selected ongoing graduate students at UM/CAF and UD/CA in conducting and completing the research required for earning their degrees at the two colleges. *These students will earn their degrees at UM or UD.* The selected applicants will have already finished their course requirements but their thesis and dissertation plans cannot proceed for lack of necessary facilities, instruments, and/or supplies. Depending on the focus of proposed thesis or dissertation research, ICARDA may host some of the selected Fellows.
 - 2. Visiting Faculty Scholars. The Visiting Scholar Program (VSP) for UM/CAF and UD/CA faculty members is intended to provide opportunities for undertaking short term "retooling" leaves. Depending on the awardee's proposed plan, the leaves will range from two to six months. ICARDA is well poised to host several such scholars.
 - 3. Scholarly, Curricular, and Extension/Outreach Workshops. This project component is intended as a fast-track effort to address felt needs for enhancing the overall quality of agricultural administration, instruction, research and extension programs at UM and UD. As the opportunity arises, faculty and professionals from other major institutions will be also be invited. The topics and schedules for the workshops to be hosted by ICARDA will be determined by mutual agreement. Resource personnel will be both University of Hawaii and ICARDA scientists. Participants in the workshops will be introduced to fundamental concepts and applied scientific research focusing on sound approaches to research, integrated production and enterprise management, optimized quantity and quality of food crops, maximized profits, and minimized negative impacts on natural resources.
 - 4.
- c. For individual tasks carried out under the GRF, VSP, Workshops, or other pertinent activities, specific agreements will be articulated between the AHEAD Project and ICARDA to describe the details necessary for task implementation.

III. COSTS

- a. The specific agreements developed under II.c above, will include the budget required for implementation and will be subject to the rules and regulations of the AHEAD Project, the University of Hawaii, and ICARDA.
- b. AHEAD Project implementation expenses that cannot be reasonably met by ICARDA will be provided by the AHEAD project.

IV. EFFECTIVE DATES

The last date of signing this MOA by AHEAD and ICARDA representatives will be the effective date for Agreement implementation. The MOA will expire with the current ending date for the AHEAD Project and grant funds on June 30, 2005. In the event that the Project is extended past this date, the parties may extend the effective MOA by mutual agreement.

V. AUTHORIZED SIGNATORIES

University of Hawaii

ICARDA

Director, AHEAD Project
Date

Director, Research/International Cooperation
Date

Dean CTAHR/UHM
Date

Director General
Date

Project knowledge has been captured in the frequent reporting required by the USAID mission, the documents that backstop these reports, the power point presentations that are archived following training workshops and briefings to stakeholders, the strategic planning documents prepared by each department in our partner colleges, and by the various categories of personnel trained in the AHEAD project.

6.7. Lessons Learned, Experiences, and Challenges

a. Language – Although several University of Hawaii Team members are fluent in Arabic, English was declared as the formal language of Iraqi personnel training for obvious reasons. That done, language preparation proved to be a significant impediment to human capital capacity building. This despite the fact that the AHEAD project sponsored a steady stream of intensive courses designed to enhance English comprehension and conversational ability. These courses proved inadequate for meeting the admission requirements of graduate schools in the U.S., (certainly of the University of Hawaii), and had limited success in preparing most participants in professional development workshops for engaging effectively in debates and discussions. We were under constant pressure to allow both presentations and discussions in Arabic, a fact that dictated volunteer translations for the benefit of non-Arabic speaking resource faculty, when able volunteers were present. Still, we believe that the beneficial impact of training was unsurpassed for our Iraqi colleagues, having been deprived of state-of-the-science knowledge and state-of-the-art scientific tools for nearly two decades. Future language training must include effective immersion of trainees into English programs without distractions from familiar languages.

b. Selection of Beneficiaries and Trainees – Despite our design of competitive procedures for selecting the most qualified personnel and sound projects for funding, and our intent to widen these competitions to the maximum extent possible; we have received complaints that certain worthy people and ideas may have been overlooked or bypassed altogether.

c. Logistical arrangements -- Considerably longer lead time is required for planning ambitious higher education activities in Iraq than was anticipated. Personnel movement in large numbers, visa requirements and border crossings under unpredictable political circumstances, hiring competent support staff, absence of reliable banking systems for systematic financial transactions, procurement of equipment and supplies with reliable documentation of purchases. Fortunately, we were able to design an internal receipt system and our fiscal and support staff proved to be sensitive to these issues. They made every effort to secure and provide reliable documentation and fiscal accountability for meeting University of Hawaii requirements.

6.8. Communications with Authorized Personnel at the USAID Mission

Mission personnel are living under difficult circumstances, a fact that has hampered their ability to travel as often as they wished to review field activity and advise field staff. However, electronic methods served us very well in maintaining effective communicating with Mission staff as often as needed. Frequent changes in Mission personnel have caused some uncertainty in who may be serving as our primary contact. However, back-up personnel have generally provided the requested information or services in a timely manner as needed for smooth project operations.

7. AHEAD'S SHORT AND LONG TERM IMPACTS

7.1. Short Term Impacts

Written evaluations of all AHEAD's activities, as provided by all University of Mosul and University of Dohuk beneficiaries and administrators, are used as basis for quantifying the short term outcomes and impact of the project. Detailed narratives are provided in Appendix B. Where the number of received evaluations is significant, data on success rates are summarized in Figures 2 to 6 for Objective 1 and Figures 7 to 8 for Objective 2. It is evident that the planned activities and accomplished tasks of the AHEAD project have successfully and significantly impacted the human resources and the infrastructures of recipient institutions.

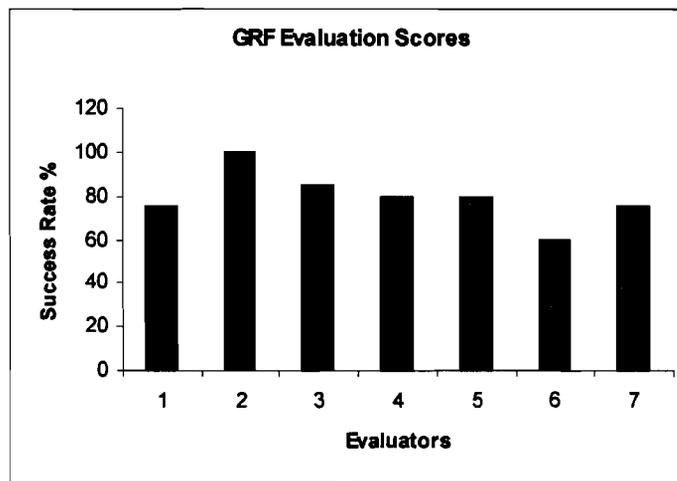


Figure 2. Stakeholder evaluation of the Graduate Research Fellowship Program

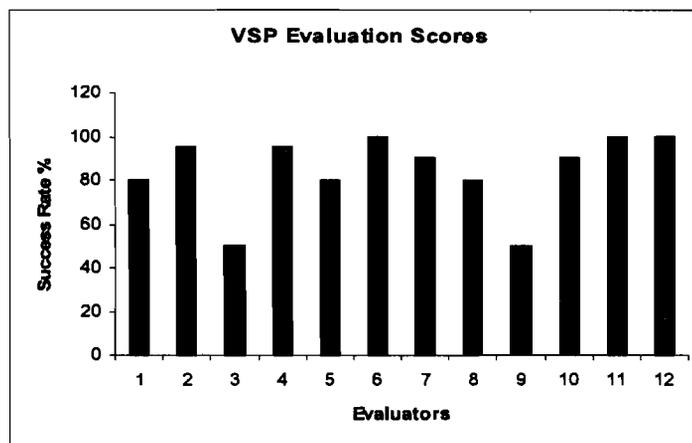


Figure 3. Stakeholder evaluation of the Visiting Scholar Program

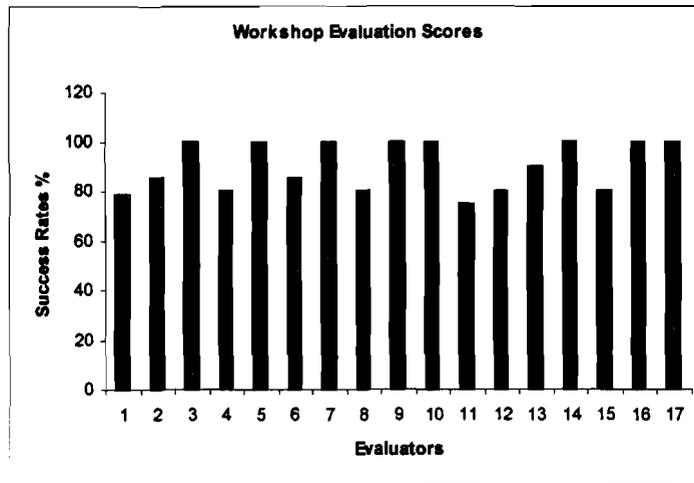


Figure 4. Stakeholder evaluation of Professional Development and Strategic Planning Workshops

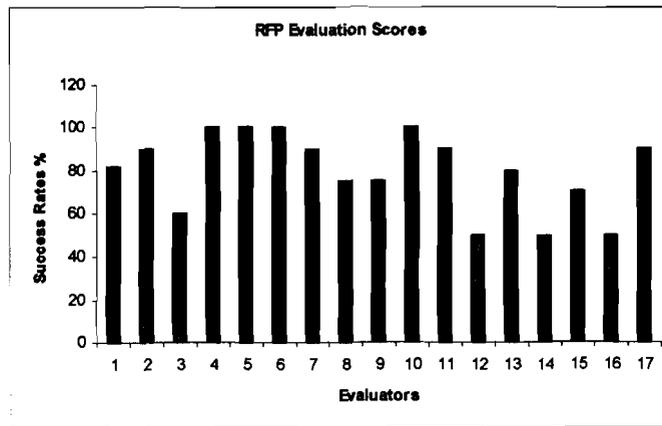


Figure 5. Stakeholder evaluation of the Mini- Research-Grant

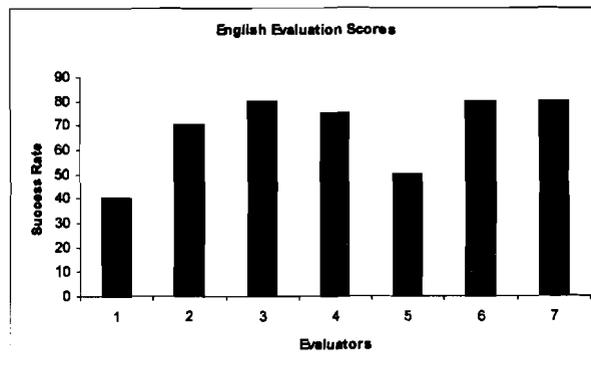


Figure 6. Stakeholder evaluation of the English language Proficiency Program

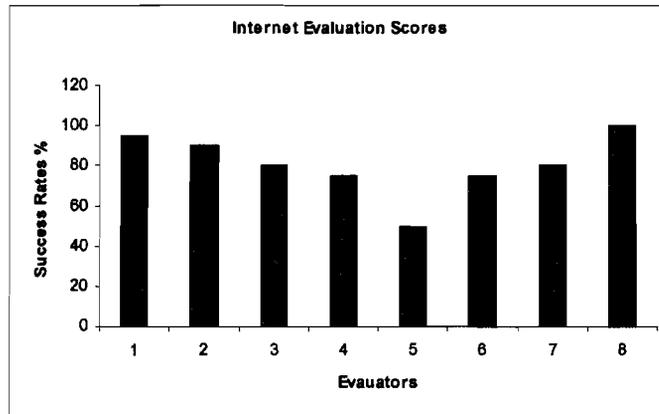


Figure 7. Stakeholder evaluation of the communications enhancement Program

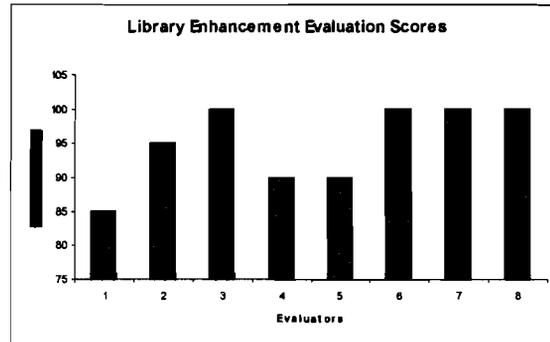


Figure 8. Stakeholder evaluation of the library services and enhancement Program

7.2. Long Term Impacts

The short life span of the AHEAD project does not allow a true long-term assessment of its impacts on agricultural higher education in our partner universities, or Iraq in general. Nevertheless, the capacity building accomplishments as reported for both of our objectives will have impacts that will last for years to come.

The Professional Development and Strategic Planning Workshops provided each of the departments / disciplines in our cooperating universities with the tools necessary to engage in their own long-term planning. Each group was asked to convene upon their return to Iraq, and develop a follow-up statement of mission, goals, and objectives. Although they have been traditionally accustomed to top-down management and following detailed mandates originating from the Ministry of Higher Education and Research; most departments / disciplines were convinced of the necessity of this step and followed through with our request. Fourteen (14) such reports were submitted. Excerpts from received reports are shown in the following boxes for Soil and Water Sciences, Field Drops, and Animal Sciences, respectively.

Representative Quoted Statements on Mission, Goals and Objectives
Departments of Soil and Water Sciences

University of Mosul

1. The department is always aim to provide a professional graduates in all aspect in the field of soil and water sciences.
2. Enhancing the capabilities of its graduates and assisting them to achieve the local and international standards of well-trained in the field of soil and water sciences.
3. The department is always enthusiastic to adopt up dated educational program and to offer survives of the highest level of quality and there is continuing efforts to make these activities even better.
4. The department believes that soil and water sciences are very important fields of specialization, which help to enhance community welfare.
5. The department provides graduate and under graduate students with theoretical knowledge, analytical and practical skills in the field of soil and water sciences.
6. The department established a good links with other departments, other colleges, and with ministry of Agriculture and industrials enterprises and research centers.
7. The department is always aim to establish a good links and partnerships with national, regional, and international institutes and organization with objective of exchanging experts.

University of Dohuk

The mission of this department is to provide graduates professionals in Soil and Water Sciences, well educated regarding problems facing the region and how to solve them. It also aims at furnishing them with the knowledge of how to utilize these resources to meet the best interest of coming generations. The department aims to contribute in soil conservation to reduce the amount of eroded soil which is a chronicle problem in Iraq. This will help in improving soil fertility and reduce the risk of flooding and regulate water flow. It seeks keeping good links with farmers to help them in using practices that improve the production on sustainable basis without jeopardizing the quality of the environment. To achieve this mission, the following objectives must be performed:

- 1- Excellent trained staff members through:
 - Selection of qualified staff member
 - Sending our staff members to do their Ph.D. degree at distinguish universities.
- 2- Well balanced curriculum in both undergraduate and graduate programs.
- 3- Dynamic curriculum.
- 4- Utilization of available resources.

Representative Quoted Statements on Mission, Goals and Objectives Departments of Field Crops

University of Mosul

Mission, Goals and Objectives

- The department is always aim to provide a professional graduates in all aspect in the field crops
- Enhancing the capabilities of its graduates and assisting them to achieve the local and international standards of well-trained in field crops (production or breeding)
- The department believe that crop production and crop breeding are very important field of specialization which help to enhance community welfare be cause the Mosul province is especilized in field crop production especially with the cereal and legume crops
- The department provides , graduate and under graduate students with the oretical knowledge or new techeue and practical skills in the field crop production
- The department established a good links with other college and with the ministry of Agric , and industrials enterprises and research centers
- The departmental researches divided into:
 - a. Academic researches in the area of legumes crops, cereal crops , industrial crops., breeding, forage crop, weed control .
 - b. Applied researches in all areas dealing with the problems in the dry land farming including crop rotation and fertilizer recommendation, breeding for resislant some pest and diseas , high quality , high yield , and resistant far drought, weed control in dry land area especilly with the cereals or legums crops, enhance or development of cotton crop production .

University of Dohuk

- Mission:**
1. Provide service through extension technical assistance and training
 2. Create knowledge through teaching and researches

Goals and Objectives

1. Short term: Prepare well trained professionals in differnr areasof crop science for both graduate and undergraduate levels, and idenrify problems facing frames such as epidemio;logy of certain diseases, parts, or weeds and to control the problem,
2. Long term: Transfer new technology to the region to reach sustainable agriculture, improve crop production and management, and create sound human capital

Representative Quoted Statements on Mission, Goals and Objectives Departments of Animal Sciences

University of Mosul

1. **Experiment Station:** The department now doesn't have experiment station which is very necessary to train students, conducting research of faculty and conducting research of graduate student. The necessary buildings are: for dairy cattle barn capacity 50 dairy cows, poultry houses specially design for scientific purposes for both broilers and egg production, processing plant for poultry (500 bird/yr) and large animals, feed mill, sheep houses, vet clinic unit and feed storage. with some area for green forage and pastures.
2. **Graduate studies:** These are important for developing any department. therefore we have to give a great emphasis on graduate study. Degree requirements should be revised and new regulation and requirements should be given strength the graduate studies in the department.
3. **Curricula:** Undergraduate and graduate curricula should be revised to incorporate team teaching, reflect a vertical not horizontal expansion, and require on-farm hands-on training and experience.
4. **Research:** Plans should allow for both short term and long term research. Quantitative tools for identifying and ranking research priorities should be used. Team work should be taken in consideration. A central research lab should be established. And be furnished with the most sophisticated equipment.

University of Dohuk

Mission Statement: To provide continued excellence in teaching, research and technology transfer in all aspects of animal science and production., also utilize results of researches to enhance production quality and quantity.

Goals and Objectives:

1. Prepare graduate and undergraduate professionals in the different area of animal production.
2. Send faculty to do (Ph.D) degree in different specialties at local and international universities.
3. Improve the scholarly qualifications of the Dept. members.
4. Balance curriculum in both graduate and undergraduate program.
5. Improve the animal production and management through transferring new technologies.
6. Utilize the available resources.
7. Provide advice and consultancy to the animal producers in our region.
8. Establish good links with other colleges and the Regional ministry of agriculture and research centers.
9. Provide continuous and excellent knowledge and experience through teaching, solving problems and providing consultation in animal production.

7.3. Specific Future Plans to Capitalize on AHEAD's Successes

Perhaps the most meaningful compliment for a project's accomplishments is for stakeholders to request its continuation and for new stakeholders to ask that they be included, especially with use of their own funding sources. Two such initiatives have commenced:

The University of Hawaii Team was requested to develop a follow-up proposal for revitalizing agriculture in the Kurdistan Region, to involve the Ministry of Agriculture and Irrigation in partnership with the region's universities. The *Hawaii-Kurdistan Partnership for Revitalizing Agricultural Higher Education And Development (KAHEAD)* was the outcome of this effort and the four-year project is now near reality.

A broader proposal involving all of Iraq has also been prepared and is under discussion. The *Hawaii-Iraq Partnership for Revitalizing National Agricultural Higher Education and Development*

(NAHEAD) encompasses all agricultural colleges in Iraq and is under discussion with the central government.

We are quite confident that AHEAD's accomplishments have not only rectified many immediate deficiencies but that they have also inspired long term ambitions for restoring sustainability to agricultural higher educational systems and to Iraq's total agricultural enterprise as well.

APPENDICES

APPENDIX A

APPENDIX A - I

Procured Equipment and Supplies with Less Than \$5,000 of Value for CAF/UM

SI	Item	Qty	Serial number	Acquisition cost(\$)	Current value	Condition	LOCATION OF PROPERTY
1	Balance, 2digits (Germany)	1	N/A	\$750	\$1,000	Good	Ag. Mach. Dept
2	Compressor (Italy)	1	4170204	\$375	\$375	Excellent	Ag. Mach. Dept
3	Balance(India)	1	N/A	\$54	\$60	Excellent	Ag. Mach. Dept
4	Balance (Kern)	1	WC03170227	\$325	\$500	Excellent	Ag. Mach. Dept
5	Chain saw(China)	1	N/A	\$200	\$200	Excellent	Ag. Mach. Dept
6	Forceps	5	N/A	\$10	\$10	Excellent	Ag. Mach. Dept
7	Oven (Thermosi, Germany)	1	119	\$425	\$450	Good	Ag. Mach. Dept
8	Caliper (digital vernier)	1	N/A	\$48	\$48	Excellent	Ag. Mach. Dept
9	Iron cutter	1	N/A	\$140	\$140	Excellent	Ag. Mach. Dept
10	Grinder (Germany)	1	N/A	\$153	\$153	Excellent	Ag. Mach. Dept
11	Battery charger, 20 A	1	N/A	\$40	\$40	Excellent	Ag. Mach. Dept
12	Welding instrument (Italy)	1	50060	\$85	\$85	Excellent	Ag. Mach. Dept
13	Paint Spraying gun	1	N/A	\$30	\$30	Excellent	Ag. Mach. Dept
14	Water-bath (Jordan)	1	O1400729	\$400	\$500	Excellent	Animal Res. Dept
15	Oven (Jordan)	1	N/A	\$390	\$450	Excellent	Animal Res. Dept
16	Water still (India)	1	N/A	\$300	\$500	Excellent	Animal Res. Dept
17	Incubator (Fisher, USA)	1	80911051	\$350	\$350	Good	Animal Res. Dept
18	Balance for animals	1	N/A	\$135	\$140	Excellent	Animal Res. Dept
19	Balance	2	N/A	\$108	\$60	Excellent	Animal Res. Dept
20	Oven (Heraeus), small	1	S10265	\$400	\$400	Good	Animal Res. Dept
21	Centrifuge (Korea)	1	N/A	\$160	\$175	Excellent	Animal Res. Dept
22	Balance (Kern, Germany)	1	WC03188042	\$325	\$500	Excellent	Animal Res. Dept
23	Gas burner (Bunzen)	8	N/A	\$80	\$80	Excellent	Animal Res. Dept
24	Forceps	5	N/A	\$10	\$25	Excellent	Animal Res. Dept
25	Scalpel hand	4	N/A	\$8	\$8	Excellent	Animal Res. Dept
26	Water-bath (Electro-magnetic)	1	O41007209	\$400	\$500	Excellent	Animal Res. Dept
27	Oven (MLW)	1	H- 33712B	\$360	\$360	Good	Animal Res. Dept
28	Microscope Tri-nocular (China)	1	261865	400	400	New	Animal Res. Dept

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29	Microscope Tri-nocular (China)	1	261858	400	400	New	Animal Res. Dept
30	Microscope China (XSZ- N107)	1	N/A	400	400	New	Animal Res. Dept
31	Water-bath (Jordan)	1	2240104	\$400	\$500	Excellent	Basic Sc. Dept
32	Oven (Jordan)	1	N/A	\$390	\$450	Excellent	Basic Sc. Dept
33	Water still (India)	1	N/A	\$385	\$500	Excellent	Basic Sc. Dept
34	pH meter (Hanna, Portug)	1	249304	\$425	\$500	Excellent	Basic Sc. Dept
35	Centrifuge (India)	2	N/A	\$260	\$150	Excellent	Basic Sc. Dept
36	Gas burner	10	N/A	\$100	\$100	Excellent	Basic Sc. Dept
37	Centrifuge tube glass	30	N/A	\$10.20	\$10.20	Excellent	Basic Sc. Dept
38	Water-bath (Electro-magnetic)	1	O4400726	\$400	\$500	Excellent	Basic Sc. Dept
39	Forceps	5	N/A	\$10	\$10	Excellent	Basic sc. Dept
40	Filter paper (50 packs)	50	N/A	\$150	\$150	Excellent	Basic Sc. Dept
41	Schimidzu, Spectrophotometer	1	11015	\$2,300	\$2,300	Good	Basic Sc. Dept
42	Balance, Kern	1	WC03170228	\$325	\$500	Excellent	Basic Sc. Dept
43	Test tube rack Plastic	2	N/A	\$10	\$10	Excellent	Basic Sc. Dept
44	Test tube rack metal	2	N/A	\$10	\$10	Good	Basic Sc. Dept
45	Centrifuge tube, glass	144	N/A	\$48.96	\$48.96	Excellent	Basic Sc. Dept
46	Oven (Heraeus)	1	NM- 7561	\$490	\$490	Good	Basic Sc. Dept
47	Microscope (Lomo, Russia)	1	N/A	\$300	\$300	Good	Basic Sc. Dept
48	Microscope (Motic)	4	N/A	1,700	1,700	New	Basic Sc. Dept
49	Microscope China (XSZ- N107)	1	N/A	400	400	New	Basic Sc. Dept
50	Balance, 2digits (Germany)	1	124065285	\$750	\$1,000	Good	Field Crops Dept
51	Oven (Jordan)	1	N/A	\$390	\$450	Excellent	Field Crops Dept
52	Incubator (JRAD, Syria)	1	N/A	\$480	\$550	Excellent	Field Crops Dept
53	Oven; large (Mommert)	1	698.0149	\$1,090	\$1,250	Good	Field Crops Dept
54	Balance	1	N/A	\$54	\$60	Excellent	Field Crops Dept
55	Centrifuge (Korea)	1	N/A	\$160	\$175	Excellent	Field Crops Dept
56	Centrifuge tube	25	N/A	\$8.50	\$8.50	Excellent	Field Crops Dept
57	Centrifuge tube, glass	20	N/A	\$6.80	\$6.80	Excellent	Field Crops Dept
58	Gas Burner (Bunzen)	7	N/A	\$70	\$70	Excellent	Field Crops Dept
59	Forceps	8	N/A	\$16	\$16	Excellent	Field Crops Dept
60	Scalpel handle	3	N/A	\$6	\$6	Excellent	Field Crops Dept
61	Balance (Kern)	1	WC03183041	\$325	\$500	Excellent	Field Crops Dept
62	Microscope(Motic)	2	N/A	850	850	New	Field Crops Dept
63	Microscope Tri-nocular(China)	1	261860	400	400	New	Field Crops Dept
64	Microscope China (XSZ- N107)	1	N/A	400	400	New	Field Crops Dept
65	Oven (Binder, Germany)	1	N/A	\$990	\$1,100	Excellent	Food Tech. Dept
66	Water still (GFL)	1	10592300f	\$700	\$900	Good	Food Tech Dept
67	Cooled Incubator (Japan) 110L	1	118028	\$1,800	\$2,000	Good	Food Tech. Dept
68	Co2 cold incubator, used	1	65006	\$2,500	\$2,700	Good	Food Tech. Dept
69	Co2 incubator, used	1	64765	\$1,800	\$2,000	Good	Food Tech. Dept

70	Vac. Oven, used	1	12749	\$400	\$500	Good	Food Tech. Dept
71	Autoclave, large (Webco)	1	47791	\$8,500	\$8,770	Good	Food Tech. Dept
72	Oven (Memmert), used	1	800613	\$400	\$550	Good	Food Tech. Dept
73	Water-bath sonicator	1	5680	\$350	\$350	Good	Food Tech. Dept
74	Cooled Incubator(Haryiama)	1	890588623	\$980	\$1,000	Good	Food Tech. Dept
75	Incubator Small (Memmert)	1	874235	\$335	\$400	Good	Food Tech. Dept
76	Water-bath (Karl Kobl)	1	N/A	\$400	\$400	Good	Food Tech. Dept
77	Chilling water-bath	1	822525	\$600	\$600	Good	Food Tech. Dept
78	Laminar flow cabinet	1	N/A	\$788	\$900	Excellent	Food Tech. Dept
79	Balance	1	N/A	\$54	\$60	Excellent	Food Tech. Dept
80	Oven, large digit (Heraeus)	1	5100099	\$850	\$850	Good	Food Tech. Dept
81	Incubator (Gallenkamp) UK	1	OC4499	\$550	\$600	Good	Food Tech. Dept
82	Water-bath (Karl Kobl)	1	N/A	\$400	\$400	Good	Food Tech. Dept
83	Chilling water-bath	1	822525	\$600	\$600	Good	Food Tech. Dept
84	Laminar flow cabinet	1	N/A	\$788	\$900	Excellent	Food Tech. Dept
85	Flask shaker	1	00324	\$520	\$520	Good	Food Tech. Dept
86	Freeze dryer	1	1182440082	\$4,000	\$4,000	Good	Food Tech. Dept
87	Water-bath-(Thermomix)	1	N/A	\$250	\$250	Good	Food Tech. Dept
88	Balance	1	N/A	\$54	\$60	Excellent	Food Tech. Dept
89	Oven, large digit (Heraeus)	1	5100099	\$850	\$850	Good	Food Tech. Dept
90	Incubator (Gallenkamp) UK	1	OC4499	\$550	\$600	Good	Food Tech. Dept
91	Water-bath chiller, HaakeK	1	79923	\$500	\$500	Good	Food Tech. Dept
92	Test tube-water-bath shaker	1	7307747	\$600	\$600	Good	Food Tech. Dept
93	Magnetic stirrer, digit thermo	1	N/A	\$400	\$400	Good	Food Tech. Dept
94	Centrifuge (Korea)	1	N/A	\$160	\$175	Excellent	Food Tech. Dept
95	Balance (India)	1	N/A	\$54	\$60	Excellent	Food Tech. Dept
96	Balance (Kern, Germany)	1	WC03170235	\$325	\$500	Excellent	Food Tech. Dept
97	Gas Burner	6	N/A	\$60	\$10	Excellent	Food Tech. Dept
98	Compound Microscope Binocular (Motic)	4	N/A	\$6,800	\$7,600	Excellent	Food Tech. Dept
99	Cooled incubator (NUVE)	1	11012	\$2,229	\$2,500	Excellent	Food Tech. Dept
100	water still (kotterman) 10-15L	1	SW-1204	\$730	\$730	Good	Food Tech. Dept
101	Water still (kotterman) 20-25 L	1	SW1322	\$970	\$1,000	Good	Food Tech. Dept
102	Centrifuge tube, glass	35	NA	\$11.90	\$11.90	Excellent	Food Tech. Dept
103	Microscope(Motic)	3	N/A	1275	1275	New	Food Tech. Dept
104	Microscope Trinocular(China)	1	261856	400	400	New	Food Tech. Dept
105	Microscope China (XSZ- N107)	1	N/A	400	400	New	Food Tech. Dept
106	Microscope China (XSZ- N107)	1	N/A	400	400	New	Food Tech. Dept
107	Autoclave (china)	1	N/A	\$350	\$400	Excellent	Forestry Dept
108	Oven (Jordan)	1	N/A	\$390	\$450	Excellent	Forestry Dept
109	Water still (India)	1	N/A	\$385	\$500	Excellent	Forestry Dept

110	Balance	1	N/A	\$54	\$60	Excellent	Forestry Dept
111	Compound Microscope Binocular (Motic)	4	N/A	\$6,800	\$6,800	Excellent	Forestry Dept
112	Water-bath (Electro-magnetic)	1	O4100727	\$400	\$500	Excellent	Forestry Dept
113	Centrifuge tube, glass	30	N/A	\$10.20	\$10.20	Excellent	Forestry Dept
114	Gas burner	4	N/A	\$40	\$40	Excellent	Forestry Dept
115	Forceps	5	N/A	\$10	\$10	Excellent	Forestry Dept
116	Scalpel hand	2	N/A	\$4	\$4	Excellent	Forestry Dept
117	Balance (kern) capacity 200g	1	WC03170970	\$325	\$500	Excellent	Forestry Dept
118	Level With Tripod, Ruler	1	L30461	\$476	\$500	Excellent	Forestry Dept
119	Level With Tripod, Ruler	1	L31718	\$476	\$500	Excellent	Forestry Dept
120	Level With Tripod, Ruler	1	L31188	\$476	\$500	Excellent	Forestry Dept
121	Level With Tripod, Ruler	1	L32447	\$476	\$500	Excellent	Forestry Dept
122	Hage Altimeter	3	N/A	3150	3150	New	Forestry Dept
123	Digital Thermometer	2	N/A	180	180	New	Forestry Dept
124	Soil Sampling set	2	N/A	452.4	452.4	New	Forestry Dept
125	Soil pH & moisture meter	1	N/A	635	635	New	Forestry Dept
126	Tree pruner	2	N/A	300	300	New	Forestry Dept
127	Incre meter borer	2	N/A	640	640	New	Forestry Dept
128	Aluminum caliper	3	N/A	660	660	New	Forestry Dept
129	Compensating polar planimeter	1	N/A	520	520	New	Forestry Dept
130	Pocket altimeter	4	N/A	600	600	New	Forestry Dept
131	Student insect collecting	6	N/A	480	480	New	Forestry Dept
132	Microscope (Motic)	4	N/A	1700	1700	New	Forestry Dept
133	Balance Keren	1	WC0419791	325	325	New	Forestry Dept
134	Autoclave (china)	1	N/A	\$350	\$400	Excellent	Horticulture Dept
135	Water-bath (Jordan)	1	1220104	\$400	\$500	Excellent	Horticulture Dept
136	Balance, 4digits (Japan)	1	12307075	\$950	\$2,000	Good	Horticulture Dept
137	Oven (Jordan)	1	N/A	\$390	\$450	Excellent	Horticulture Dept
138	pH meter (Hanna, Portug)	1	249306	\$425	\$500	Excellent	Horticulture Dept
139	Incubator (Memmert), used	1	851220	\$435	\$500	Good	Horticulture Dept
140	Cooled Incubator, Memmert	1	770021	\$1,400	\$1,500	Good	Horticulture Dept
141	Balance	1	N/A	\$54	\$60	Excellent	Horticulture Dept
142	Compound Microscope Binocular (Motic)	4	N/A	\$6,800	\$7,600	Excellent	Horticulture Dept
143	Balance (kern)	1	WC03170230	\$325	\$500	Excellent	Horticulture Dept
144	Centrifuge tube glass	30	N/A	\$10.20	\$10.20	Excellent	Horticulture Dept
145	Gas burner	4	N/A	\$40	\$40	Excellent	Horticulture Dept
146	Forceps	5	N/A	\$10	\$10	Excellent	Horticulture Dept
147	Olympus Microscope, used	1	N/A	\$350	\$350	Good	Horticulture Dept
148	Oven (MLW)	1	76371	\$430	\$430	Good	Horticulture Dept

149	Microscope (Motic)	3	N/A	1275	1275	New	Horticulture Dept
150	Microscope Tri-nocular(China)	1	261857	400	400	New	Horticulture Dept
151	Microscope China (XSZ- N107)	1	N/A	400	400	New	Horticulture Dept
152	Incubator (Memert. Germany)	1	89450	\$900	\$1,000	Good	Plant Prot. Dept
153	Water-bath (Jordan)	1	14280104	\$400	\$500	Excellent	Plant Prot. Dept
154	Water-bath Shaker	1	N/A	\$300	\$300	Good	Plant Prot. Dept
155	Plastic Petri Plates	500	Nil	\$1,700	\$1,700	Excellent	Plant Prot. Dept
156	Oven (Memmert), used	1	810675	\$400	\$500	Good	Plant Prot. Dept
157	Circulation water-bath	1	8021025	\$250	\$300	Good	Plant Prot. Dept
158	Cooling Incubator (Gallenkamp)	1	OB1212C	\$975	\$1,000	Excellent	Plant Prot. Dept
159	Cooled Incubator (Haryiama)	1	890598616	\$980	\$1,000	Good	Plant Prot. Dept
160	Cooled incubator (Haryiama)	1	8905812	\$980	\$1,000	Good	Plant Prot. Dept
161	Autoclave, portable (UK)	1	N/A	\$400	\$400	Good	Plant Prot. Dept
162	Laminar flow cabinet	1	N/A	\$788	\$900	Excellent	Plant Prot. Dept
163	pH meter (Hanna)	1	249783	\$400	\$450	Excellent	Plant Prot. Dept
164	Balance	1	N/A	\$54	\$60	Excellent	Plant Prot. Dept
165	Centrifuge (Korea)	1	N/A	\$160	\$175	Excellent	Plant Prot. Dept
166	Centrifuge, (UNICO)	1	18005889776	\$450	\$500	Excellent	Plant Prot. Dept
167	Oven (Mettler), small	1	7811106	\$500	\$500	Good	Plant Prot. Dept
168	Balance (Kern, Germany)	1	wc03170222	\$325	\$500	Excellent	Plant Prot. Dept
169	Gas burner	10	N/A	\$100	\$10	Excellent	Plant Prot. Dept
170	Spirit lamp	6	N/A	\$36	\$6	Excellent	Plant Prot. Dept
171	Compound Microscope Binocular (Motic)	4	N/A	\$6,800	\$7,600	Excellent	Plant Prot. Dept
172	Forceps	15	N/A	\$30	\$30	Excellent	Plant Prot. Dept
173	Scalpel hand	7	N/A	\$14	\$14	Excellent	Plant Prot. Dept
174	Incubator (Mettler)	1	N/A	\$150	\$150	Excellent	Plant Prot. Dept
175	Compound Microscope (Tafesa)	1	30314438	\$400	\$400	Excellent	Plant Prot. Dept
176	Microscope (Lomo, Russia)	1	N981947pl	\$340	\$340	Good	Plant Prot. Dept
177	Wire basket	1	N/A	\$24	\$24	Good	Plant Prot. Dept
178	Test tube rack plastic	1	N/A	\$5	\$5	Excellent	Plant Prot. Dept
179	Water still (GFL)	1	IEC -158-1	\$810	\$810	Good	Plant Prot. Dept
180	Centrifuge (MSE)	1	88/5443	\$350	\$500	Good	Plant Prot. Dept
181	Microscope (Lomo, Russia)	1	N980380	\$300	\$300	Good	Plant Prot. Dept
182	Microscope (Altay)	1	8200106	\$250	\$250	Good	Plant Prot. Dept
183	Microscope (Wards)	1	18009620 2660	\$280	\$280	Good	Plant Prot. Dept
184	Microscope (MoHAN)	1	N/A	\$260	\$260	Good	Plant Prot. Dept
185	Heating Mantel	1	N/A	\$50	\$50	Good	Plant Prot. Dept
186	pH meter (Indian)	1	8087	\$150	\$150	Good	Plant Prot. Dept
187	Incubator (Mettler)	1	N/A	\$150	\$150	Excellent	Plant Prot. Dept
188	Centrifuge tube, glass	35	NA	\$11.90	\$11.90	Excellent	Plant Prot. Dept

189	Microscope(Motic)	4	N/A	1700	1700	New	Plant Prot. Dept
190	Microscope Trinocular(China)	1	261861	400	400	New	Plant Prot. Dept
191	Microscope Trinocular(China)	1	261863	400	400	New	Plant Prot. Dept
192	Microscope China (XSZ- N107)	1	N/A	400	400	New	Plant Prot. Dept
193	Microscope China (XSZ- N107)	1	N/A	400	400	New	Plant Prot. Dept
194	Microscope China (XSZ- N107)	1	N/A	400	400	New	Plant Prot. Dept
195	Research Micro. (DISTAR)	1	0356-9	850	850	New	Plant Prot. Dept
196	Compressor (Italy)	1	4170204	\$375	\$375	Excellent	Soil Sc. Dept
197	Spectrophotometer, Vis.	1	CS0404089	\$1,050	\$1,050	Excellent	Soil Sc. Dept
198	Water-bath (Jordan)	1	1250104	\$400	\$500	Excellent	Soil Sc. Dept
199	Incubator (JRAD, Syria)	1	N/A	\$480	\$550	Excellent	Soil Sc. Dept
200	pH meter (Hanna)	1	263046	\$400	\$450	Excellent	Soil Sc. Dept
201	Balance	1	N/A	\$54	\$60	Excellent	Soil Sc. Dept
202	Water-bath (Haake S)	1	77642	\$250	\$250	Good	Soil Sc. Dept
203	Centrifuge (Korea)	1	N/A	\$160	\$175	Excellent	Soil Sc. Dept
204	Balance (Kern),Cap.1000g	1	WC03183043	\$325	\$500	Excellent	Soil Sc. Dept
205	Centrifuge tube, glass	25	N/A	\$8.50	\$8.50	Excellent	Soil Sc. Dept
206	Gas burner (Bunzen)	5	N/A	\$50	\$50	Excellent	Soil Sc. Dept
207	Balance(kern),capacity200g	1	WC03170229	\$325	\$500	Excellent	Soil Sc. Dept
208	pH meter (Hanna)	1	263046	\$400	\$450	Excellent	Soil Sc. Dept
209	Forceps	4	N/A	\$8	\$8	Excellent	Soil Sc. Dept
210	Scalpel hand	4	N/A	\$8	\$8	Excellent	Soil Sc. Dept
211	EC meter (Hanna)	1	327807	\$450	\$500	Excellent	Soil Sc. Dept
212	Microscope (Motic)	4	N/A	1700	1700	New	Soil Sc. Dept
213	Balance Keren	1	WC0419739	325	325	New	Soil Sc. Dept
214	Microscope Trinocular(China)	1	261864	400	400	New	Soil Sc. Dept
215	Microscop China (XSZ- N107)	1	N/A	400	400	New	Soil Sc. Dept
216	Water-bath (Haake L)	1	1116	\$250	\$250	Good	Central Lab
217	Incubator (Memmert)	1	B30792167	\$600	\$700	Good	Central Lab
218	Oven (Memmert)	1	722113	\$500	\$600	Good	Central Lab
219	Water-bath (Jurgens)	1	860885	\$350	\$500	Good	Central Lab
220	Water-bath, Sonicator	1	N/A	\$225	\$250	Good	Central Lab
221	Spirit lamp	5	N/A	\$30	\$30	Excellent	Central Lab
222	Test tube shaker	1	NA	\$175	\$175	Good	Central Lab
223	Balance, Capacity 30kg	1	NA	\$54	\$60	Excellent	Central Lab
224	cooled incubator Electro-mag Model M7040R	1	5032101	1800	1800	New	Central Lab
225	cooled incubator Electro-mag Model M7040R	1	5032105	1800	1800	New	Central Lab
226	cooled incubator Heraeus model D-6450 Hanau	1	8805676	1600	1600	New	Central Lab

227	cooled incubator Heraeus model D-6450 Hanau	2	8805112	1600	1600	New	Central Lab
228	Scanner (Genx)	1	571242 022695	\$47	\$35	Excellent	Internet
229	Scanner (Genx)	1	571242 022221	\$47	\$35	Excellent	Internet
230	Scanner (Genx)	1	571242 022212	\$47	\$35	Excellent	Internet
231	Scanner (Genx)	1	571242 022249	\$47	\$35	Excellent	Internet
232	Scanner (Genx)	1	571242 022258	\$47	\$35	Excellent	Internet
233	Scanner (Genx)	1	571242 022230	\$47	\$35	Excellent	Internet
234	Scanner (Genx)	1	571242 022555	\$47	\$35	Excellent	Internet
235	Scanner (Genx)	1	571242 022546	\$47	\$35	Excellent	Internet
236	Scanner (Genx)	1	571242 022519	\$47	\$35	Excellent	Internet
237	Scanner (Genx)	1	571242 022537	\$47	\$35	Excellent	Internet
238	Scanner (Genx)	1	571242 022195	\$47	\$35	Excellent	Internet
239	Scanner (Genx)	1	571242 022537	\$47	\$35	Excellent	Internet
240	Scanner (Genx)	1	571242 022195	\$47	\$35	Excellent	Internet
241	Scanner (Genx)	1	571242 022708	\$47	\$35	Excellent	Internet
242	Scanner (Genx)	1	571242 022753	\$47	\$35	Excellent	Internet
243	Scanner (Genx)	1	571242 022663	\$47	\$35	Excellent	Internet
244	Scanner (Genx)	1	571242 022726	\$47	\$35	Excellent	Internet
245	Scanner (Genx)	1	571242 022681	\$47	\$35	Excellent	Internet
246	Scanner (Genx)	1	571242 022519	\$47	\$35	Excellent	Internet
247	Scanner (Genx)	1	571242 0220110	\$47	\$35	Excellent	Internet
248	Scanner (Genx)	1	N/A	\$47	\$35	Damaged	Internet
249	Scanner (Genx)	1	N/A	\$47	\$35	Damaged	Internet
250	Scanner (Genx)	1	N/A	\$47	\$35	Damaged	Internet
251	Scanner (Genx)	1	N/A	\$47	\$35	Damaged	Internet
252	Scanner (Genx)	1	N/A	\$47	\$35	Damaged	Internet
253	Ups Touchmate	1	7312	\$50	\$37	Excellent	Internet
254	Ups Touchmate	1	63312	\$50	\$37	Excellent	Internet
255	Ups Touchmate	1	700312	\$50	\$37	Excellent	Internet
256	Ups Touchmate	1	770312	\$50	\$37	Excellent	Internet
257	Ups Touchmate	1	350312	\$50	\$37	Excellent	Internet
258	Ups Touchmate	1	80312	\$50	\$37	Excellent	Internet
259	Ups Touchmate	1	300312	\$50	\$37	Excellent	Internet
260	Ups Touchmate	1	70312	\$50	\$37	Excellent	Internet
261	Ups Touchmate	1	75312	\$50	\$37	Excellent	Internet
262	Ups Mercury	1	4648	\$47	\$37	Excellent	Internet
263	Ups Mercury	1	5449	\$47	\$37	Excellent	Internet
264	Ups Mercury	1	5922	\$47	\$37	Excellent	Internet
265	Ups Mercury	1	4604	\$47	\$37	Excellent	Internet
266	Ups Mercury	1	5450	\$47	\$37	Excellent	Internet

267	Ups New Vision	1	174	\$50	\$37	Excellent	Internet
268	Ups New Vision	1	173	\$50	\$37	Excellent	Internet
269	Ups Atomic	1	7896	\$50	\$37	Excellent	Internet
270	Ups Atomic	1	7906	\$50	\$37	Excellent	Internet
271	Ups Atomic	1	63	\$50	\$37	Excellent	Internet
272	Ups Atomic	1	7905	\$50	\$37	Excellent	Internet
273	Printer Canon 1120	3	N/A	\$510	\$450	Damaged	Internet
274	Computer desks	6	N/A	\$204	\$204	Excellent	Internet
275	Computer Chairs	6	N/A	\$108	\$108	1damaged	Internet
276	Computer desks Mo.118, Maly	10	N/A	\$280	\$280	Excellent	Internet
277	Web com	2	N/A	\$24	\$24	Excellent	Internet
278	Computer with Accessories	1	HBX0403011243	\$690	\$920	Excellent	Internet
279	Computer with Accessories	1	HBX0403011223	\$690	\$920	Excellent	Internet
280	Computer with Accessories	1	HBX0403011240	\$690	\$920	Excellent	Internet
281	Computer with Accessories	1	HBX0403011248	\$690	\$920	Excellent	Internet
282	Computer with Accessories	1	HBX0403011231	\$690	\$920	Excellent	Internet
283	Computer with Accessories	1	HBX0403011241	\$690	\$920	Excellent	Internet
284	Computer with Accessories	1	HBX0403011215	\$690	\$920	Excellent	Internet
285	Computer with Accessories	1	HBX0403011222	\$690	\$920	Excellent	Internet
286	Computer with Accessories	1	HBX0403011099	\$690	\$920	Excellent	Internet
287	Computer with Accessories	1	HBX0403011100	\$690	\$920	Excellent	Internet
288	Computer with Accessories	1	HBX0403011061	\$690	\$920	Excellent	Internet
289	Computer with Accessories	1	HBX0403011093	\$690	\$920	Excellent	Internet
290	Computer with Accessories	1	HBX0403011224	\$690	\$920	Excellent	Internet
291	Computer with Accessories	1	HBX0403011094	\$690	\$920	Excellent	Internet
292	Computer with Accessories	1	HGX04022808938	\$690	\$920	Excellent	Internet
293	Computer with Accessories	1	HGX04022808952	\$690	\$920	Excellent	Internet
294	Computer with Accessories	1	HGX04022808948	\$690	\$920	Excellent	Internet
295	Computer with Accessories	1	HGX04022808951	\$690	\$920	Excellent	Internet
296	Computer with Accessories	1	HGX04022808938	\$690	\$920	Excellent	Internet
297	Computer with Accessories	1	HGX04022808936	\$690	\$920	Excellent	Internet
298	Computer with Accessories	1	HGX04022808914	\$690	\$920	Excellent	Internet
299	Computer with Accessories	1	HGX04022808974	\$690	\$920	Excellent	Internet
300	Locker Model 910	3	N/A	\$180	\$180	Excellent	Internet+ TEEAL
301	Ups Touchmate	1	40312	\$50	\$37	Excellent	TEEAL
302	Ups Touchmate	1	20312	\$50	\$37	Excellent	TEEAL

303	Ups Touchmate	1	30312	\$50	\$37	Excellent	TEEAL
304	Ups Touchmate	1	90312	\$50	\$37	Excellent	TEEAL
305	Ups Touchmate	1	312	\$50	\$37	Excellent	TEEAL
306	Ups Touchmate	1	10312	\$50	\$37	Excellent	TEEAL
307	Ups Touchmate	1	321	\$50	\$37	Excellent	TEEAL
308	Ups Touchmate	1	80312	\$50	\$37	Excellent	TEEAL
309	Ups Touchmate	1	100312	\$50	\$37	Excellent	TEEAL
310	Ups Touchmate	1	920312	\$50	\$37	Excellent	TEEAL
311	Ups Touchmate	1	130312	\$50	\$37	Excellent	TEEAL
312	Ups Touchmate	1	730312	\$50	\$37	Excellent	TEEAL
313	Ups Touchmate	1	61312	\$50	\$37	Excellent	TEEAL
314	Ups Touchmate	1	71312	\$50	\$37	Excellent	TEEAL
315	Hp Color Printer 2500	1	Cnhr71161	\$1,000	\$1,000	Excellent	TEEAL
316	Hp Color Printer 2500	1	N/A	\$1,000	\$1,000	Damaged	TEEAL
317	Canon Printer 1120	7	N/A	\$1,190	\$259	Excellent	TEEAL
318	Samsung Printer 1710	1	Badw702367	\$165	\$150	Excellent	TEEAL
319	Samsung Printer 1710	1	Badx303813	\$165	\$150	Excellent	TEEAL
320	Color Ink Hp	12	N/A	\$1,200	\$1,200	Excellent	TEEAL
321	Advertising 60*150,40*30	2	N/A	\$100	\$100	Excellent	TEEAL
322	Computer desks modell20, Mal	5	N/A	\$195	\$195	Excellent	TEEAL
323	Computer Chair Chinese	10	N/A	\$180	\$180	Excellent	TEEAL
324	Computer desks Mo.120,Maly	25	N/A	\$975	\$975	Excellent	TEEAL
325	Computer Chair Chinese	30	N/A	\$540	\$540	Excellent	TEEAL
326	Computer with Accessories	1	12248974 1061109	\$690	\$920	Excellent	TEEAL
327	Computer with Accessories	1	894210998 951109	\$690	\$920	Excellent	TEEAL
328	Computer with Accessories	1	89481223 1231124	\$690	\$920	Excellent	TEEAL
329	Computer with Accessories	1	89369140 1240110	\$690	\$920	Excellent	TEEAL
330	Computer with Accessories	1	12151086 1222295	\$690	\$920	Excellent	TEEAL
331	Computer with Accessories	1	630961 876279	\$690	\$920	Excellent	TEEAL
332	Computer with Accessories	1	150b145n364A	\$690	\$920	Excellent	TEEAL
333	Computer with Accessories	1	122912 398938	\$690	\$920	Excellent	TEEAL
334	Computer with Accessories	1	3943764t363v	\$690	\$920	Excellent	TEEAL
335	Computer with Accessories	1	AH17HMBWA06309	\$690	\$920	Excellent	TEEAL
336	Computer with Accessories	1	7002D3CE30210171	\$690	\$920	Excellent	TEEAL
337	Computer with Accessories	1	AN17HMBWA06187	\$690	\$920	Excellent	TEEAL
338	Computer with Accessories	1	NA	\$690	\$920	Damaged	TEEAL
339	Computer with Accessories	1	7002D39E1052022755P	\$690	\$920	Damaged	TEEAL
340	Toshiba Laptop Tecram2V-S330	1	94081418H	\$1,390	\$1,000	Good	TEEAL
341	Toshiba Laptop Tecram2V-S330	1	94081185H	\$1,390	\$1,000	Good	TEEAL
342	Toshiba Laptop Tecram2V-S330	1	94078752H	\$1,390	\$1,000	Good	TEEAL

343	Pictures	8	NA	from Dohuk	from Dohuk	NEW; ONE lost	TEEAL
344	LanTEEAL with 2004 update	1	NA	\$3,400	\$3,400	Excellent	TEEAL
345	Text books and	145	NA	from Hawaii	from Hawaii	Good	library
346	References	19	NA	from Hawaii	from Hawaii	Good	library
347	Periodicals	205	NA	from Hawaii	from Hawaii	Good	library
348	Photocopy Canon	1	Ujv51270	\$1,400	\$1,300	Excellent	Magazine Room
349	Hp Color Printer 2500	1	Cnhh671168	\$1,000	\$1,000	Excellent	Magazine Room
350	Scanner Express A3	1	8810401013b	\$175	\$175	Excellent	Magazine Room
351	Refrigerator 6 FOOT ARGELIG	1	247950	\$143	\$143	Excellent	Magazine Room
352	Computer with Accessories	1	7002D41E30157F	\$690	\$920	Excellent	Magazine room
353	Data show (Canon)	1	S412488C	\$1,400	\$1,400	Excellent	Dean's office
354	Data show (Canon)	1	S516555C	\$1,400	\$1,400	Excellent	Dean's office
355	Chest for money (Big)	1	N/A	\$700	\$700	Excellent	Dean's office
356	Hp Color Printer 2500	1	Cnhrd62255	\$1,000	\$1,000	Excellent	Dean's Office
357	Chair, Hydrolic	2	N/A	\$110	\$110	Damaged	Dean's Office
358	Big Table With Two Added	1	N/A	\$600	\$600	Excellent	Dean's Office
359	Sony Digital Camera Model: DSC-F717	1	1500484	1,397.9	\$1,000	Excellent	Dean's office
360	Sony Digital Handy Cam Model: DCR-VX2000	1	1075192	2,247.4	\$2,000	Excellent	Dean's office
361	Sony Laptop Model:PCG-8NIL	1	434887 60895	\$2,634	\$1,000	Excellent	Dean's office
362	Samsung Cell Phone V200	1	R2XX263625M	\$375	\$250	Excellent	Dean's office
363	Nokia Cell Phone 6610	1	508810	\$250	\$150	Excellent	M. Al-Bakree
364	Laptop Fujitsu Siemens	1	YBKS006856	from USAID	from USAID	Good	M. Al-Bakree project's office
365	Photocopy Canon	1	Ujv51301	\$1,400	\$1,300	Excellent	Project's Office
366	Color Printer Hp 2500	1	Cnhrg71289	\$1,000	\$1,000	Excellent	Project's Office
367	Medium table with two added	2	N/A	\$750	\$750	Damaged	Project's Office
368	Table 3 Meter For Meeting	1	N/A	\$300	\$300	Excellent	Project's Office
369	Rotary Chair	10	N/A	\$320	\$320	Damaged	Project's Office
370	Big Hydrolic chair	1	N/A	\$110	\$110	Excellent	Project's Office
371	Refrigerator 6 ft ARGELIG	1	148028	\$143	\$143	Excellent	Project's Office
372	Reception Room (SIRAY)	1	N/A	\$1,300	\$1,300	Excellent	Project's Office
373	Bookcase	1	N/A	\$215	\$215	Excellent	Project's Office
374	Fax Canon 20110	1	H12250	\$1,050	\$1,050	Excellent	Project's Office
375	Computer Discovery: Atomic, 14 colors with accessories, Printer	1 set	HCX0309303921, CNCKP4087,	\$1,072	\$1,000	Excellent	Project's Office

	Laser Shot/ HP-1300, UPS Mercury & Scanner Benq		9950861WZ34700				
376	File Cabinets	4	N/A	\$320	\$320	Excellent	Project+Magazine Rm
377	Split Unit	2	N/A	\$1,300	\$1,300	Excellent	Project+Magazine Rm
378	Spirit Lamp	24	N/A	\$144	\$6	Excellent	Distributed
379	Water Bath Small	1	77342	\$100	\$100	Good	RFP Vet /Dr. Fouad
380	Water Still	1	N/A	\$300	\$300	Excellent	RFP Vet /Dr. Fouad
381	Ph Meter (Hanna)	1	252294	\$400	\$500	Good	RFP Vet /Dr. Fouad
382	Oven (Syrian)	1	N/A	\$350	\$350	Excellent	RFP Vet /Dr. Fouad
383	Centrifuge bench top,8 tube	1	N/A	\$130	\$200	Excellent	RFP Vet /Dr. Fouad
384	Water-bath (Electro-mag)	1	4100730	\$400	\$500	Excellent	RFP Vet /Dr. Fouad
385	Micropipette	1	N/A	\$55	\$55	Excellent	RFP Vet /Dr. Fouad
386	Balance and Gulf M/GI-300	1	N/A	\$200	\$250	Excellent	RFP Vet /Dr. Fouad
387	Electrode for pH meter	1	N/A	\$75	\$75	Excellent	RFP Vet /Dr. Fouad
388	Spectrophotometer	1	SC0404079	\$1,050	\$1,050	Good	RFP Forestry / Adel
389	PH-meter	1	263052	\$400	\$500	Good	RFP Forestry / Adel
390	Oven Syria	1	N/A	\$350	\$350	Excellent	RFP Forestry / Adel
391	Micro-keldahe, Soxholet, Reflex condenser	1,2, 2	N/A	\$143	\$143	Excellent	RFP Forestry / Adel
392	Hot plate TURKEY	1	N/A	\$10	\$10	Excellent	RFP Forestry / Younis
393	Micro-keldahe, Soxholet, Reflex condenser	1,2, 2	N/A	\$143	\$143	Excellent	RFP Forestry / Younis
394	Laboratory mill	1	N/A	\$31	\$31	Excellent	RFP Forestry /Younis
395	Hot-plate TURKEY	10	N/A	\$170	\$170	Excellent	RFP Forestry / Younis
396	Dissecting set	1	N/A	\$17	\$17	Excellent	RFP Forestry / Ismail
397	Microscope USB	1	N/A	\$140	\$140	Good	RFP Forestry / Ismail
398	Canon Camera Ekit M: MU5701	1	7559A001	\$750	\$750	Excellent	RFP Forestry /Muzam
399	Oven (Heraeus)	1	N/A	\$400	\$400	Excellent	RFP Forestry / Nabil
400	Spectrophotometer Vis. (Unico)	1	CS0404006	\$950	\$1,000	Good	RFP Forestry / Nabil
401	GPS	1	N/A	\$400	\$400	Excellent	RFP Forestry /Younis
402	GPS	1	N/A	\$400	\$400	Excellent	RFPForestry /Muzam
403	Centrifuge	1	3020383	\$160	\$200	Excellent	RFP Hort / Caser G.
404	Water-bath Electromagn Turkey	1	N/A	\$400	\$500	Excellent	RFP Hort./ Caser G.
405	EC meter	1	327808	\$540	\$500	Good	RFP Hort/ Caser G.
406	Oven Chirana	1	892829	\$320	\$320	Excellent	RFP Hort. / Caser G.
407	Cooled incubator	1	N/A	\$960	\$1,000	Good	RFP Hort. / Caser G.
408	Computer with Accessories	1	LG505DIBP V205	\$628	\$628	Excellent	RFP Econ / Dr Saleem
409	UPS Mercury	1	KOB200800813357	\$33	\$33	Excellent	RFP Econ / Dr Saleem
410	Cell Phone Nokia 6600	1	5146261	from	from	Excellent	Dr. Jasim

				Hawaii	Hawaii		
411	Cell Phone Samsung V200	1	R2xx263454f	\$375	\$250	Damage	Dr. Waleed
412	Microscope Tri-nocular (China)	1	N/A	400	400	New	
413	Microscope Tri-nocular (China)	1	N/A	400	400	New	
414	Balance Denver 2000g /0.1	1	17952192	390	390	New	
415	Balance Denver 600g / 0.1	1	17952209	340	340	New	
416	Balance Denver 600g / 0.1	1	17952595	340	340	New	
417	Balance Denver 600g / 0.1	1	17952208	340	340	New	
418	Balance Denver 600g / 0.1	1	17954643	340	340	New	
419	Balance Analytical (Sartorus/0.0001)	1	NA	800	800	Used	
420	Balance Analytical (Sartorus/0.0001)	1	NA	800	800	Used	
421	Balance Denver 4800g /0.1	1	050XCG018D	460	460	New	
422	Balance Denver 4800g /0.1	1	050XCG003D	460	460	New	

APPENDIX A - 2

Procured Equipment and Supplies with Less Than \$5000 of Value for CA/UD

SI	Item	Qua.	Serial/ Control Number	Acquisition cost	Current Value	Condition	Location of Property
1	Centrifuge	1 pc.	4100103	\$200.00	\$200.00	Good	Animal Sci Dept
2	Balance	1 pc.	GM 212, 16210614	\$750.00	\$750.00	Good	Animal Sci Dept
3	Data Show	1 pc.	412658 C	\$1,400.00	\$1,400.00	Good	Animal Sci Dept
4	Tubes	20 pc.	Nil	\$6.7/1pc.	\$6.7/1pc.	New	Animal Sci Dept
5	Balance (0.01-150g)	1 pc.	Sartor 15708763	\$525.00	\$525.00	New	Forestry Dept
6	Water Bath	1 pc.	11280104	\$400.00	\$400.00	Good	Forestry Dept
7	Data Show	1 pc.	412805 C	\$1,400.00	\$1,400.00	New	Forestry Dept
8	JPS, Germany Made	1 pc.	89923920	\$400.00	\$400.00	Excellent	Forestry Dept
9	Oven	1 pc.	Les 320 C	\$390.00	\$390.00	New	Forestry Dept
10	Laminar Flow Vertical	1 pc.	104917862	\$787.67	\$787.67	Good	Horticulture Dept
11	Laminar Flow Horiz	1 pc.	104917863	\$787.67	\$787.67	Good	Horticulture Dept
12	Centrifuge	1 pc.	03020383 03.79067_09	\$200.00	\$200.00	Good	Horticulture Dept
13	Balance	1 pc.	Model GL 200/ 200- 0.01gm	\$750.00	\$750.00	Good	Horticulture Dept
14	Auto Clave	1 pc.	YX280 B	\$350.00	\$350.00	Good	Horticulture Dept

15	Vertical Auto Clave, electrical Heating Tape, Daikyo, Tokyo, Japan, Capacity 105L.	1 pc.	AV570080	\$2,200.00	\$2,200.00	New	Horticulture Dept
16	Compressor	1 pc.	Nil	\$300.00	\$300.00	Good	Soil & Water Dept
17	JPS, Germany Made	1 pc.	89923933	\$400.00	\$400.00	Excellent	Soil & Water Dept
18	Centrifuge	1 pc.	03020383 03.79067_09	\$450.00	\$450.00	New	Soil & Water Dept
19	Autoclave	1 pc.	YX282 B	\$350.00	\$350.00	Good	Soil & Water Dept
20	EC- Meter	1 pc.	511875	\$600.00	\$600.00	New	Soil & Water Dept
21	Electrical Motor 5.5hp, 1500 rpm.	1 pc.	Nil	\$150.00	\$145.00	Excellent	Animal Project
22	Base for Crushing Crude Materials/ Local Made	1 pc.	Nil	\$500.00	\$430.00	Excellent	Animal Project
23	Base for fixing the Sieve/ Local Made	1 pc.	Nil	\$150.00	\$143.00	Excellent	Animal Project
24	Base of Hammers/ Local made	1 pc.	Nil	\$200.00	\$194.00	Excellent	Animal Project
25	Silo for Packing the feed Stuff/ Local Made	1 pc.	Nil	\$450.00	\$420.00	Excellent	Animal Project
26	Condenser/ Local Made	1 pc.	Nil	\$150.00	\$130.00	Excellent	Animal Project
27	Electrical Starter No.2	1 pc.	Nil	\$250.00	\$230.00	Excellent	Animal Project
28	Crude Materials, Basin/ Local Made	1 pc.	Nil	\$200.00	\$190.00	Excellent	Animal Project
29	Electrical Motor 20 HP, 300rpm	1 pc.	Nil	\$450.00	\$430.00	Excellent	Animal Project
30	Mechanical Fan/ Local Made	1 pc.	Nil	\$150.00	\$145.00	Excellent	Animal Project
31	Sieve/ Local Made	1 pc.	Nil	\$100.00	\$98.00	Excellent	Animal Project
32	Adjustment/ Local Made	1 pc.	Nil	\$150.00	\$140.00	Excellent	Animal Project
33	Pipes	/	Nil	\$100.00	\$95.00	Excellent	Animal Project
34	Restaki & Heifers Cows	4	N/A	\$2,164.30	\$2,164.30	Excellent	Animal Project
35	Restaki, Heifers & Sharabi Cows	3	N/A	\$1,920.00	\$1,920.00	Excellent	Animal Project
36	Sharabi Cow	1	N/A	\$647.30	\$647.30	Excellent	Animal Project
37	Arabi Sheep	2	N/A	\$167.10	\$167.10	Excellent	Animal Project
38	Shami Goats	1	N/A	\$101.80	\$101.80	Excellent	Animal Project
39	Heifers & Sharabi Cows	3	N/A	\$1,942.00	\$1,942.00	Excellent	Animal Project
40	Heifers & Janobi Cows	6	N/A	\$3,057.00	\$3,057.00	Excellent	Animal Project

41	Arabi Sheeps	4	N/A	\$334.30	\$334.30	Excellent	Animal Project
42	Awasi Sheep	6	N/A	\$520.70	\$520.70	Excellent	Animal Project
43	Restaki & Heifers	1	N/A	\$450.00	\$450.00	Excellent	Animal Project
44	Karadi & Heifers Cows	6	N/A	\$3,246.40	\$3,246.40	Excellent	Animal Project
45	Angora Goats	6	N/A	\$428.60	\$428.60	Excellent	Animal Project
46	Shami Goats	5	N/A	\$508.90	\$508.90	Excellent	Animal Project
47	BRC	550m	Nil	\$2,062.50	\$2,000.00	Excellent	Poultry Halls
48	Pips/ Different Sizes	/	Nil	\$1,260.00	\$1,000.00	Excellent	Poultry Halls
49	UPS, Xcess USA	1 pc.	40377460102	\$50.00	\$40.00	Excellent	Laboratory 01
50	UPS, Xcess USA	1 pc.	40377690402	\$50.00	\$40.00	Excellent	Laboratory 01
51	UPS, Xcess USA	1 pc.	40361600402	\$50.00	\$40.00	Excellent	Laboratory 01
52	UPS, Xcess USA	1 pc.	40377680402	\$50.00	\$40.00	Excellent	Laboratory 01
53	UPS, Xcess USA	1 pc.	40380050402	\$50.00	\$40.00	Excellent	Laboratory 01
54	UPS, Xcess USA	1 pc.	40377970402	\$50.00	\$40.00	Excellent	Laboratory 01
55	UPS, Xcess USA	1 pc.	40377990402	\$50.00	\$40.00	Excellent	Laboratory 01
56	UPS, Xcess USA	1 pc.	40377470402	\$50.00	\$40.00	Excellent	Laboratory 01
57	UPS, Mercury, 650VA	1 pc.	PT2005001846	\$43.00	\$40.00	Excellent	Laboratory 01
58	UPS, Xcess USA	1 pc.	40377670402	\$50.00	\$40.00	Excellent	Laboratory 01
59	UPS, Xcess USA	1 pc.	40377411402	\$47.00	\$40.00	Excellent	Laboratory 01
60	UPS, Xcess USA	1 pc.	403779807102	\$50.00	\$40.00	Excellent	Laboratory 01
61	UPS, Xcess USA	1 pc.	40380040402	\$50.00	\$40.00	Excellent	Laboratory 01
62	Scanner Umax Astra 3600	1 pc.	CNHHRG55654	\$1,000.00	\$1,000.00	Excellent	Laboratory 01
63	Printer HP LaserJet 2500	1 pc.	060412030606	\$690.00	\$620.00	Excellent	Laboratory 01
64	PC, Ram 512Mb, CPU 2.8 GHz full cache, Monitor 17" Display driver 64 Mb, C.D.R/W:52x32x60	1 pc.	601412030754	\$690.00	\$620.00	Excellent	Laboratory 01
65	PC , same as above C.D.R/W:52x32x61	1 pc.	60412030600	\$690.00	\$620.00	Excellent	Laboratory 01
66	PC , same as above C.D.R/W:52x32x62	1 pc.	604120300635	\$690.00	\$620.00	Excellent	Laboratory 01

67	PC , same as above, C.D.R/W:52x32x63	1 pc.	060412030618	\$690.00	\$620.00	Excellent	Laboratory 01
68	PC , same as above, C.D.R/W:52x32x64	1 pc.	060412030614	\$690.00	\$620.00	Excellent	Laboratory 01
69	PC , same as above C.D.R/W:52x32x65	1 pc.	060412030616	\$690.00	\$620.00	Excellent	Laboratory 01
70	PC , same as above C.D.R/W:52x32x66	1 pc.	700203ce302193	\$690.00	\$620.00	Excellent	Laboratory 01
71	PC , same as above C.D.R/W:52x32x70	1 pc.	700203cd304402	\$690.00	\$620.00	Excellent	Laboratory 01
72	PC , same as above C.D.R/W:52x32x71	1 pc.	700203ce302102	\$690.00	\$620.00	Excellent	Laboratory 01
73	PC , same as above C.D.R/W:52x32x72	1 pc.	7002d3cd304402	\$690.00	\$620.00	Excellent	Laboratory 01
74	PC , same as above C.D.R/W:52x32x73	1 pc.	700203ce304022	\$690.00	\$620.00	Excellent	Laboratory 01
75	PC , same as above C.D.R/W:52x32x74	1 pc.	700203cd304402	\$690.00	\$620.00	Excellent	Laboratory 01
76	PC , same as above C.D.R/W:52x32x75	1 pc.	700203cd3044	\$690.00	\$620.00	Excellent	Laboratory 01
77	Electricity Wire	07 pcs.	PT20050018464	\$4.00/ 1m	\$4.00/ 1m	Excellent	Laboratory 01
78	Hab, D-Link, 24 ports	1 pc.	B223346000120	\$145.00	\$145.00	Excellent	Laboratory 01
79	Computer Disks, big size, 120cm.	1 pc.	Nil	\$52.00	\$52.00	Excellent	Laboratory 01
80	Computer Disks, small size 60cm	13pcs.	Nil	\$ 28/ 1pc.	\$ 28/ 1pc.	Excellent	Laboratory 01
81	Revolving Chairs Armed, Black	14 pcs.	Nil	\$392.00	\$385.00	Good	Laboratory 01
82	UPS, Xcess USA	1 pc.	4038161440	\$50.00	\$40.00	Excellent	Laboratory 02
83	UPS, Xcess USA	1 pc.	40378010402	\$50.00	\$40.00	Excellent	Laboratory 02
84	UPS, Xcess USA	1 pc.	40377480402	\$50.00	\$40.00	Excellent	Laboratory 02
85	UPS, Xcess USA	1 pc.	60612030801	\$50.00	\$40.00	Excellent	Laboratory 02
86	PC , Ram 265Mb, CPU 2.8 GHz full cache, Monitor 17" Display driver 64 Mb, C.D.R/W:52x32x76	1 pc.	4038140402	\$50.00	\$40.00	Excellent	Laboratory 02
87	PC , same as above C.D.R/W:52x32x52	1 pc.	60612030801	\$690.00	\$620.00	Excellent	Laboratory 02
88	PC , same as above C.D.R/W:52x32x53	1 pc.	60412030619	\$690.00	\$620.00	Excellent	Laboratory 02

89	PC , same as above, C.D.R/W:52x32x54	1 pc.	6041202526	\$690.00	\$620.00	Excellent	Laboratory 02
90	PC , same as above C.D.R/W:52x32x55	1 pc.	60412030639	\$690.00	\$620.00	Excellent	Laboratory 02
91	PC , same as above C.D.R/W:52x32x56	1 pc.	60412030711	\$690.00	\$620.00	Excellent	Laboratory 02
92	PC , same as above C.D.R/W:52x32x57	1 pc.	60412030773	\$690.00	\$620.00	Excellent	Laboratory 02
93	PC , same as above C.D.R/W:52x32x58	1 pc.	60412030632	\$690.00	\$620.00	Excellent	Laboratory 02
94	PC , same as above C.D.R/W:52x32x59	1 pc.	60412030600	\$47.00	\$40.00	Excellent	Laboratory 02
95	Scanner Umax Astra 3600	1 pc.	C11003AM001346	\$47.00	\$40.00	Excellent	Laboratory 02
96	Scanner Umax Astra 3600	1 pc.	C11003AM000313	\$47.00	\$40.00	Excellent	Laboratory 02
97	Scanner Umax Astra 3600	1 pc.	C11003AM000293	\$47.00	\$40.00	Excellent	Laboratory 02
98	Scanner Umax Astra 3600	1 pc.	C11003CM003983	\$47.00	\$40.00	Excellent	Laboratory 02
99	Scanner Umax Astra 3600	1 pc.	C11003CM001570	\$47.00	\$40.00	Excellent	Laboratory 02
100	Scanner Umax Astra 3600	1 pc.	C11003AM000291	\$47.00	\$40.00	Excellent	Laboratory 02
101	Scanner Umax Astra 3600	1 pc.	C11003AM000312	\$47.00	\$40.00	Excellent	Laboratory 02
102	Scanner Umax Astra 3600	1 pc.	C11003AM001537	\$47.00	\$40.00	Excellent	Laboratory 02
103	Electricity Wire	04 pcs.	Nil	\$4.00/ 1meter	\$4.00/ 1meter	Excellent	Laboratory 02
104	Splits , Plasm Gold, LG, 2.4 tones	1 pc.	N/A	\$702.50	\$700.00	Excellent	Laboratory 02
105	Computer Disks	08pcs.	Nil	\$226.00	\$226.00	Excellent	Laboratory 02
106	Curtains	21.2m ²	Nil	\$166.57	\$160.00	Excellent	Laboratory 1&2
107	Revolving Chairs Armed, Black	8 pcs.	Nil	\$224.00	\$220.00	Good	Laboratory 02
108	Computer GENX, with accessories	1 pc.	3ND7RE8041314	\$430.00	\$430.00	Excellent	College Library
109	Text Books, Different Types	43 pc.	Nil	Purchased in Hawaii	Purchased in Hawaii	Excellent	College Library
110	Text Books & Scientific Journals	20, 13 pc.	Nil	Purchased in Hawaii	Purchased in Hawaii	Excellent	College Library
111	Text Books, Different Types	20 pcs.	Nil	\$943.00	\$943.00	Excellent	College Library
112	UPS, Atlas	1 pc.	0409090290823	\$40.00	\$40.00	Excellent	College Library
113	Toner	1 pc.	Nil	\$30.00	\$30.00	Excellent	TEEAL

114	Photocopy, Canon, 7161	1 pc.	FA8-4393-00K	\$1,150.00	\$1,145.00	Excellent	TEEAL
115	Computer Type: Deawoo, 17 colors with Accessories	1 pc.	31C4L5020612	\$502.00	\$500.00	Excellent	TEEAL
116	Computer Type: Deawoo, 17 colors with Accessories	1 pc.	31C4L5020739	\$502.00	\$500.00	Excellent	TEEAL
117	Computer Type: Deawoo, 17 colors with Accessories	1 pc.	31C4L5020647	\$502.00	\$500.00	Excellent	TEEAL
118	Computer Type: Deawoo, 17 colors with Accessories	1 pc.	31C4L5020476	\$502.00	\$500.00	Excellent	TEEAL
119	Computer Type: Deawoo, 17 colors with Accessories	1 pc.	31C4L5020619	\$502.00	\$500.00	Excellent	TEEAL
120	UPS. Atlas	1 pc.	0409090290821	\$40.00	\$40.00	Excellent	TEEAL
121	UPS. Atlas	1 pc.	0409090290822	\$40.00	\$40.00	Excellent	TEEAL
122	UPS. Atlas	1 pc.	0409090290334	\$40.00	\$40.00	Excellent	TEEAL
123	UPS. Atlas	1 pc.	0409090290824	\$40.00	\$40.00	Excellent	TEEAL
124	UPS. Atlas	1 pc.	0409090290335	\$40.00	\$40.00	Excellent	TEEAL
125	Printer, Laser jet Cannon 1300	1 pc.	CNCKGZ1561	\$170.00	\$170.00	Excellent	TEEAL
126	Computer Disks,120 cm	5 pcs.	Nil	\$38/1pc.	\$38/1pc.	Excellent	TEEAL
127	Revolving Chairs, Armed, Black & Gray	05 pcs.	Nil	\$27/1pc.	\$27/1pc.	Excellent	TEEAL
128	Making Copy of 427 CDs for TEEAL (Back UP)	427 CDs	Nil	\$445.00	\$445.00	Excellent	TEEAL
129	Electrical Equipments(Plugs, Wire)	/	Nil	\$105.02	\$105.02	Excellent	TEEAL
130	Split, Plasm, Gold, 2.Tones	1 pc.	N/A	\$702.50	\$700.00	Excellent	TEEAL
131	LanTEEAL with 2004 update	1	N/A	\$3,400.00	\$3,400.00	Excellent	TEEAL
132	Local Phone Card for Exchange	1 pc.	N/A	\$400.00	\$400.00	Excellent	College Exchange Room
133	Satellite Dish, Star Bro	1 pc.	Nil	\$4,500.00	\$4,500.00	Excellent	College Roof
134	Wireless Connection for Internet Use	02pcs.	Nil	\$665.00	\$600.00	Excellent	College Roof
135	Computer (P4, CPU2.8GHZ, Full Cache, Ram256MB. HDD40GB	1 pc.	N/A	\$530.00	\$530.00	Excellent	English Language Center / UD
136	HP Printer Laser 1320	1 pc.	N/A	\$345.00	\$345.00	Excellent	Eng Lang Ctr/UD

137	UPS (700W)	1 pc.	N/A	\$40.00	\$40.00	Excellent	Eng Lang Ctr/UD
138	Education TV Toshiba 21'	1 pc.	N/A	\$250.00	\$250.00	Excellent	Eng Lang Ctr/UD
139	Education TV Hitachi 21'	1 pc.	N/A	\$245.00	\$245.00	Excellent	Eng Lang Ctr/UD
140	(VCR) Video Panasonic	2 pc.	N/A	\$630.00	\$630.00	Excellent	Eng Lang Ctr/UD
141	Scanner/ discovery1200UB	1 pc.	N/A	\$35.00	\$35.00	Excellent	Eng Lang Ctr/UD
142	Photocopy Machine Canon IR 1600	1 pc.	N/A	\$1,520.00	\$1,520.00	Excellent	Eng Lang Ctr/UD
143	Wireless Connection (Access Point)	2 pcs.	Nil	\$1,800.00	\$1,800.00	Excellent	Engineering College(Internet Connection)
144	Switch Hub & Internal Net Accessories	1 pc.	N/A	\$144.90	\$144.90	Excellent	Vet College at UD
145	3 Seam Cards	05 pcs.	Nil	\$100/ 1pc.	\$100/ 1pc.	Excellent	Headquarter Staff/ Dean & his Assistant
146	Scanner Umax Astra 3600	1 pc.	C11003CM0002	\$47.00	\$40.00	Excellent	Dean's Office
147	Sony Laptop, , Chinese	1 pc.	4-697-390-11	\$2,633.15	\$1,000	Excellent	Dean's Office
148	HP Printer LaserJet 2500	1 pc.	CNHH655652	\$1,000.00	\$1,000.00	Excellent	Dean's Office
149	Sony Digital Camera model :DSC-F717	1	???	1,397.91	\$1,000	Excellent	Dean's office
150	Sony Digital Handy Cam Model: DCR-VX2000	1	???	2,247.39	\$2,000	Excellent	Dean's office
151	Sony Laptop Model:PCG-8NIL	1	434887 60895	\$2,633.15	\$1,000	Excellent	Dean's office
152	Toshiba Tecra laptop M2-V-S330	1	???	\$1,389.43	\$1,000	Excellent	Dean's office
153	Toshiba Tecra laptop M2-V-S330	1	???	\$1,389.43	\$1,000	Excellent	Raid Haleem
154	Toshiba Tecra laptop M2-V-S330	1	???	\$1,389.43	\$1,000	Excellent	Khalid Besefky
155	Toshiba Tecra laptop M2-V-S330	1	???	\$1,389.43	\$1,000	Excellent	Rafail Toma
156	PC , Ram 512Mb, CPU 2.8 GHz full cache, Monitor 17" Display driver 64 Mb,	1 pc.	6041203624	\$690.00	\$620.00	Excellent	Assistant Dean's Office
157	Scanner Umax Astra 3600	1 pc.	C11003AM0015	\$47.00	\$40.00	Excellent	Assist Dean's Office
158	Sony Digital Video Camera	1 pc.	1352182	\$827.00	\$800.00	Excellent	COP's office

159	Canon Camera, DS6041, with Charger & 1 Battery	1 pc.	2060504174	\$1,041.87	\$500	Excellent	COP's office
160	Scanner Umax Astra 3600	2 pcs.	C11003AM000682, C11003CM000340	\$47/ 1pc	\$47/ 1pc	Excellent	COP's office
161	Computer Xcess, Type: Atomic, 14 colors with Accessories	1 pc.	060412030626	\$605.00	\$590.00	Excellent	COP's office
162	Computer Xcess, Type: Atomic, 14 colors with accessories	1 pc.	0404280568	\$500.00	\$480.00	Excellent	COP's office
163	UPS, Mercury, 650VA	2 pcs.	PT200500189238, KOB200200193774	\$ 43/1 pc.	\$ 40/1 pc.	Excellent	COP's office
164	Printer HP LaserJet 2500	2 pcs.	CNHH225611 & CNHH225605	\$ 1000/ 1pc.	\$ 1000/ 1pc.	Excellent	COP's office
165	Printer Epson CX3200	1 pc.	ENLK528874	\$50.00	\$50.00	Excellent	COP's office
166	Heater/ Type SY 2RC 2515 / 2500W	1 pc.	230V-50Hz	\$45.00	\$45.00	Excellent	COP's office
167	Bell Qusun (Office service)	1 pc.	542106	\$12.00	\$12.00	Excellent	COP's office
168	Photocopy, Canon, Chinese Made	1 pc.	UJV 51371	\$1,150.00	\$1,150.00	Excellent	COP's office
169	Water Cooler, Fridge Chinese Made	1 pc.	NWD 155902	\$95.00	\$95.00	Excellent	COP's office
170	Pictures/ Tableaus/ different sizes	/	Nil	\$486.10	\$486.10	Excellent	COP's office
171	Revolving Chairs Black, Armed	2 pc.	Nil	\$56.00	\$55.00	Excellent	COP's office
172	Computer Desk, 60 cm.	1 pc.	Nil	\$28.00	\$25.00	Excellent	COP's office
173	Notice Board	1 pc.	Nil	\$16.00	\$16.00	Excellent	COP's office
174	Office Desk, Brown, 1 set, (Revolving Chair, Black, Armed) COP	1 pc.	Nil	\$1,276.50	\$1,150.00	Excellent	COP's office
175	Laptop/ Fujitsu Siemens	1 pc.	3526611	from USAID	from USAID	Excellent	COP's office
176	Laptop/ Fujitsu Siemens	1 pc.	3527173	From USAID	from USAID	Excellent	COP's office

177	Laptop/ Fujitsu Siemens	1 pc.	3526500	from USAID	from USAID	Excellent	COP's office
178	Splits , General, two tones	03 pcs.	N/A	750/ 1 pc.	750/ 1 pc.	Excellent	COP's office
179	AHEAD Logos	18 pc.	Nil	\$532.00	\$532.00	Excellent	COP's office & CA/UD
180	██████████	██	██████████	██	██	██	██████████
181	Cell Phone/ Nokia, 6600	1 pc.	IC: 661AE-NH10	\$450.00	\$200.00	Excellent	COP
182	Fax Machine/ Canon L 290	1 pc.	EZW19651	\$1,050.00	\$1,050.00	New	COP's office
183	Water Filter	1 pc.	Nil	\$30.00	\$30.00	New	COP's office
184	Scanner Benq	1 pc.	99S08619VZ3380049SSM 000T	\$47.00	\$40.00	Excellent	COP Admin Asst.
185	Computer Discovery, Type: Atomic, 14 colors with Accessories, Printer Laser Shot/ LBP-1120 & UPS	1, 1 & 1	7002D39E105202652N,CS 8019N& 001-82292	\$1,072.00	\$1,000.00	Excellent	COP Admin Asst.
186	Laser jet Canon, 1120	1	020522-11	\$140.00	\$138.00	Excellent	COP Admin Asst.
187	Cell Phone/ Nokia/ 7250I	1 pc.	352545/00/56627512	\$315.00	\$200.00	Excellent	COP Admin Asst.
188	Cell Phone/ Nokia/ 6610	1 pc.	352961/00/418380/9	\$250.00	\$160.00	Excellent	COP's Driver & Procurement
189	Cell Phone/ Nokia/ 6610	1 pc.	352961004183833	\$250.00	\$160.00	Excellent	AHEAD Project/ Consultant-UD
190	Cell Phone/ Samsung with Seam Card	1 pc.	NH2X2046	\$470.00	\$300.00	Excellent	COP's office Secretary
191	Computer Xcess, Type: Atomic, 14 colors with accessories	1 pc.	060412030612	\$592.00	\$550.00	Excellent	COP's office Secretary
192	Cell Phone/ Samsung with Seam Card	1 pc.	R6XX203392L	\$470.00	\$300.00	Excellent	AHEAD Project/ Dean of CA/UD
193	PC, Ram 512Mb, CPU 2.8 GHz full cache, Monitor 17" Display driver 64 Mb, C.D.R/W:52x32x67	1 pc.	60402030784	\$690.00	\$650.00	Excellent	RFP Akram Khalaf
194	Field Boot	1 pc.	Nil	\$54.00	\$54.00	Excellent	RFP Akram Khalaf
195	Scanner Umax Astra 3600	1 pc.	C11003AM001526	\$47.00	\$40.00	Excellent	RFP Akram Khalaf

196	PC, Ram 512Mb, CPU 2.8 GHz full cache, Monitor 17" Display driver 64 Mb, C.D.R/W:52x32x68	1 pc.	6041206035	\$690.00	\$670.00	Excellent	RFP Forest A. Ihsan
197	Scanner Umax Astra 3600	1 pc.	C11003AM00	\$47.00	\$40.00	Excellent	RFP A. Marei
198	Water Bath	1 pc.	04100751	\$400.00	\$435.00	Excellent	RFP A. Marei
199	Cooling Incubator, M7040R	1 pc.	4100802	\$1,500.00	\$1,500.00	Excellent	RFP A. Marei
200	Cable 95 ml(width)	500m	Nil	\$1,810.34	\$1,810.34	Excellent	RFP A. Marei
201	Iron Bar, 12 mm	80 pcs.	Nil	\$75.00	\$75.00	Excellent	RFP A. Marei
202	Digital Camera Panasonic with its accessories	1 pc.	UA35515283	\$250.00	\$242.00	Excellent	RFP A. Marei
203	Barn Partitions	/	Nil	\$197.00	\$197.00	Excellent	RFP R. Al-Ormary
204	Air Pull Machine	1 pc.	Nil	\$24.00	\$24.00	Excellent	RFP R. Al-Ormary
205	Computer with accessories & UPS, Printer HP 3650	1set	HCX04042308894	\$4,75.00	\$460.00	Excellent	RFP Talal M.
206	HOLDERS/ Hand Sprayer	2 plus 2	Nil	\$854.00	\$854.00	Excellent	RFP Talal M.
207	Digital Video Camera with accessories/ Sony	1 pc.	352269	\$480.00	\$480.00	Excellent	RFP Talal M.
208	Equipments for Growth Chamber	/	Nil	\$45.00	\$45.00	Excellent	RFP Talal M.
209	Wood 12*20*40, Wood Plates4*8*4, for Growth Chamber	12, 30 pcs.	Nil	\$299.30	\$299.30	Excellent	RFP Talal M.
210	UPS Discovery	1 pc.	202250820	\$35.00	\$35.00	Excellent	RFP M. Khalid
211	Printer Canon, Laserjet, LBP1120	1 pc.	L10577	\$145.00	\$145.00	Excellent	RFP M. Khalid
212	Computer,HDD.80GB, Monitor 17, RAM256MB	1 pc.	702FD10-54A3002-02545T	\$560.00	\$560.00	Excellent	RFP M. Khalid
213	Pipes	2 pcs.	Nil	\$68.72	\$60.00	Excellent	RFP M. Khalid
214	Cutter, Rob, Water Cooler, Role of Cord, Hose	1 pc./ each	Nil	\$133.56	\$130.00	Excellent	RFP M. Khalid
215	Metallic Sign for the Research	1 pc.	Nil	\$100.00	\$95.00	Excellent	RFP M. Khalid

216	Cable & Electrical Requirement for Well	100m	Nil	\$307.73	\$300.00	Excellent	RFP M. Khalid
217	Iron Bar	16 pcs.	Nil	\$280.00	\$260.00	Excellent	RFP Salih Wali
218	Metallic Sign	1 pc.	Nil	\$71.00	\$71.00	Excellent	RFP Salih Wali
219	Iron Pin	80 pcs.	Nil	\$200.00	\$180.00	Excellent	RFP Salih Wali
220	Agricultural scissors and Measure Tape	1 pc.	Nil	\$88.00	\$80.00	Excellent	RFP Salih Wali
221	Iron Hammer	1 pc.	Nil	\$56.00	\$53.00	Excellent	RFP Salih Wali/
222	Holder Machine for Insects Control	1 pc.	Nil	\$450.00	\$445.00	Excellent	RFP Jassim /Maie
223	Water Tank, Shears, Saw, Switch Plug, Wood Boxes, Plastic Bottles, Wood Plate	/	Nil	\$438.43	\$430.00	Excellent	RFP Jassim /Maie

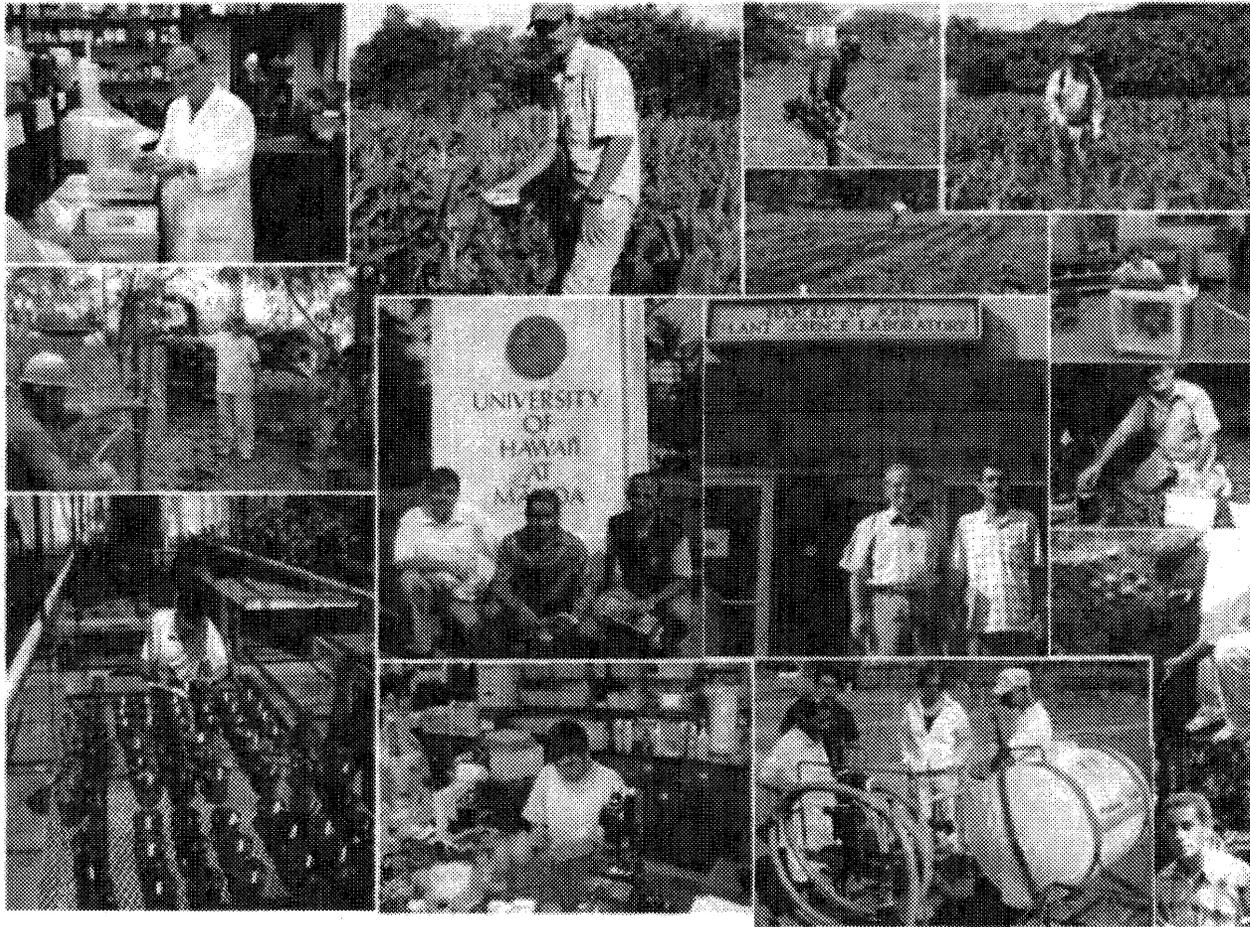
APPENDIX B

Photographic Gallery by Project Objective and Activity

Objective 1



Interviewed Candidates from CAF/UM for Graduate Degrees



Admitted and Enrolled Iraqi Graduate Students Conducting Research



Graduate Research Fellow (GRF) Awardees at ICARDA, University of Jordan, and American University of Beirut



Visiting Scholar Awardees (VSP) at ICARDA, University of Jordan, and American University of Beirut



Selected Field Research Conducted by Recipients of AHEAD Mini-Grants (RFP)



AHEAD Professional Development and Strategic Planning Workshops Hosted at the University of Jordan



AHEAD Professional Development and Strategic Planning Workshops Hosted at ICARDA



AHEAD Professional Development and Strategic Planning Workshops Hosted at the American University of Beirut

Objective 2

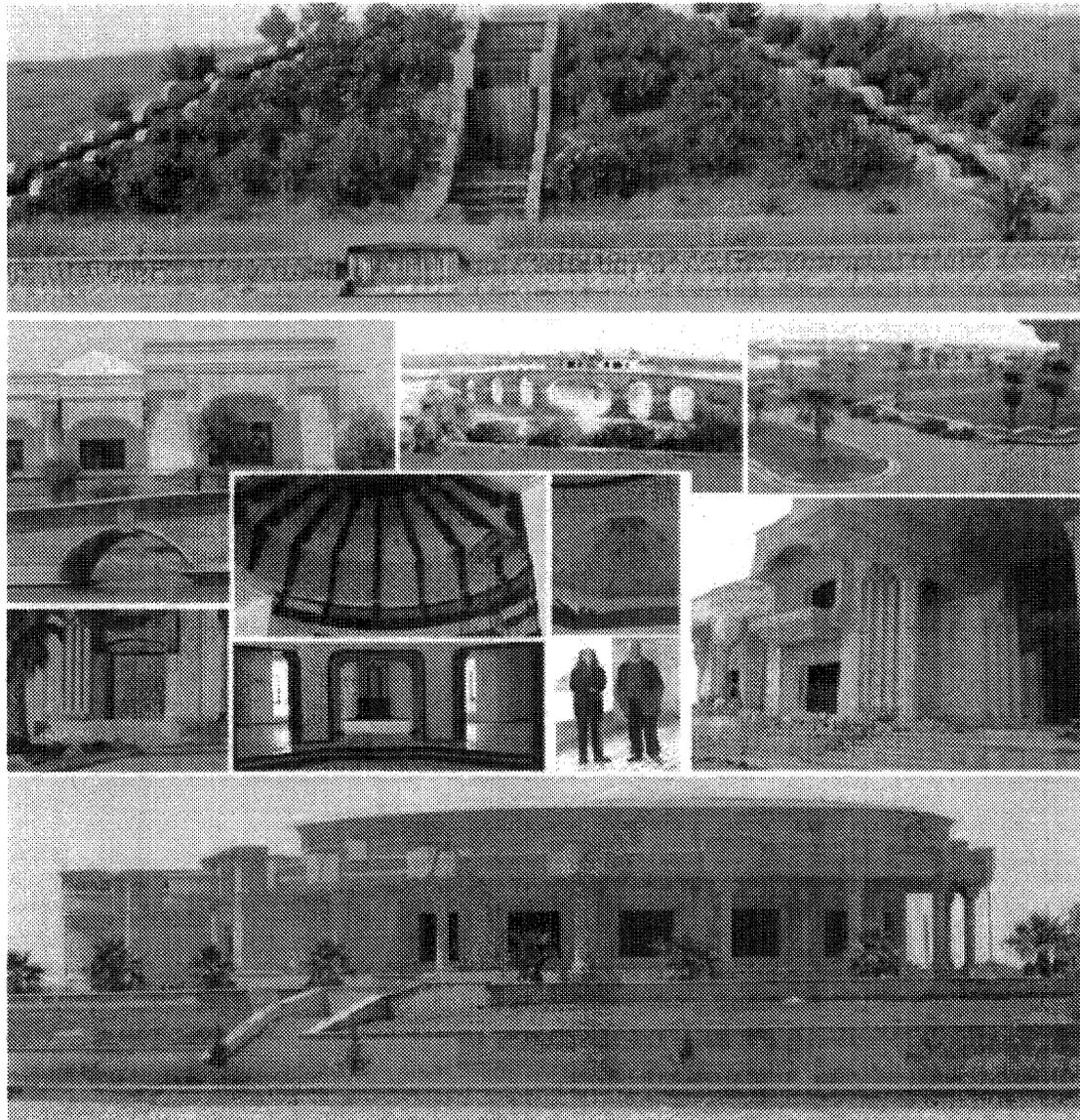


University of Mosul CAF Offices and Administration Facilities before AHEAD Partnership

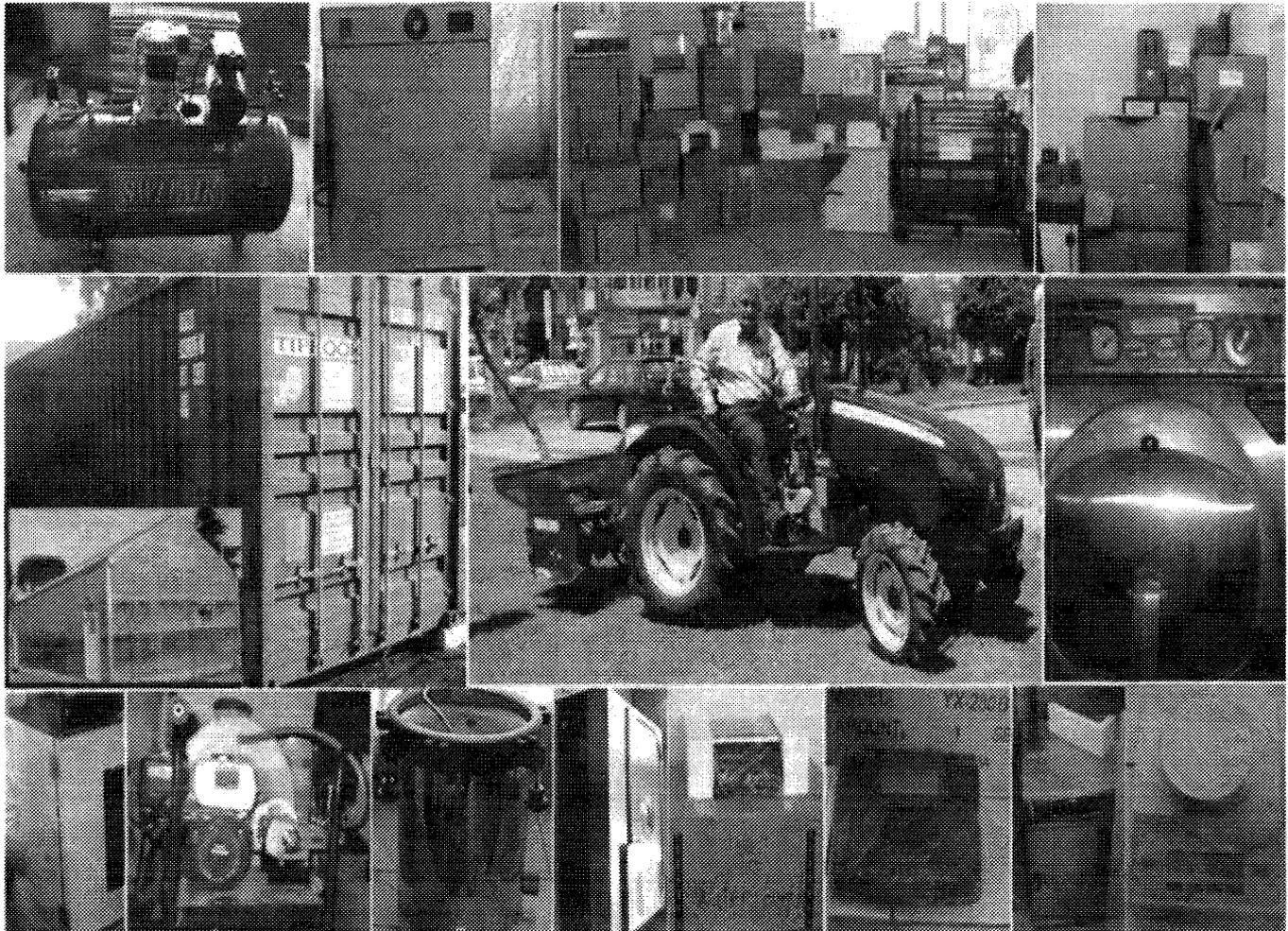
BEST AVAILABLE COPY



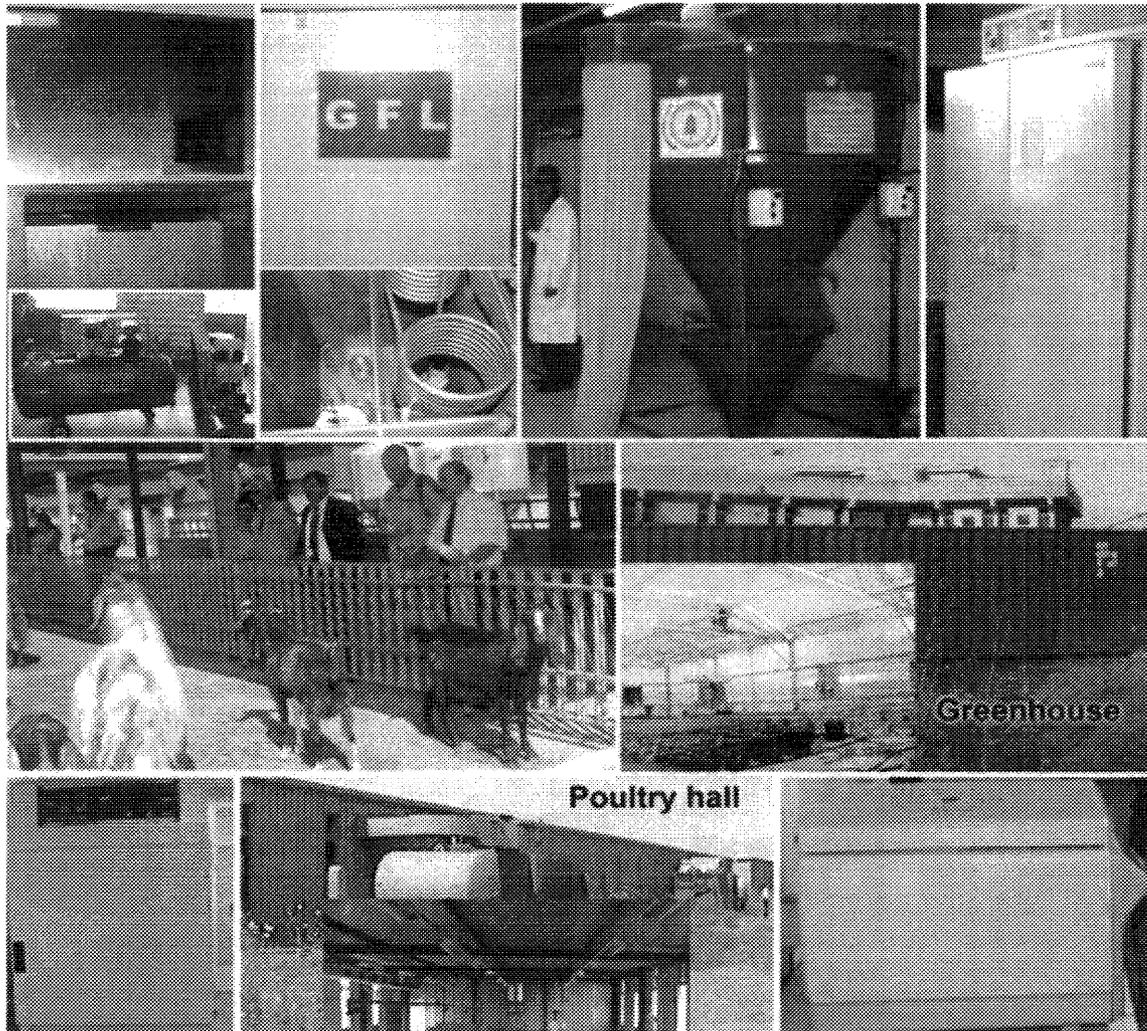
University of Mosul CAF Classrooms and Laboratoty Facilities before AHEAD Patnership



**Former Presidential Palace Renovated as a Learning Center for the University of Mosul
CAF after AHEAD Partnership with Supplemental Funding from CPA**



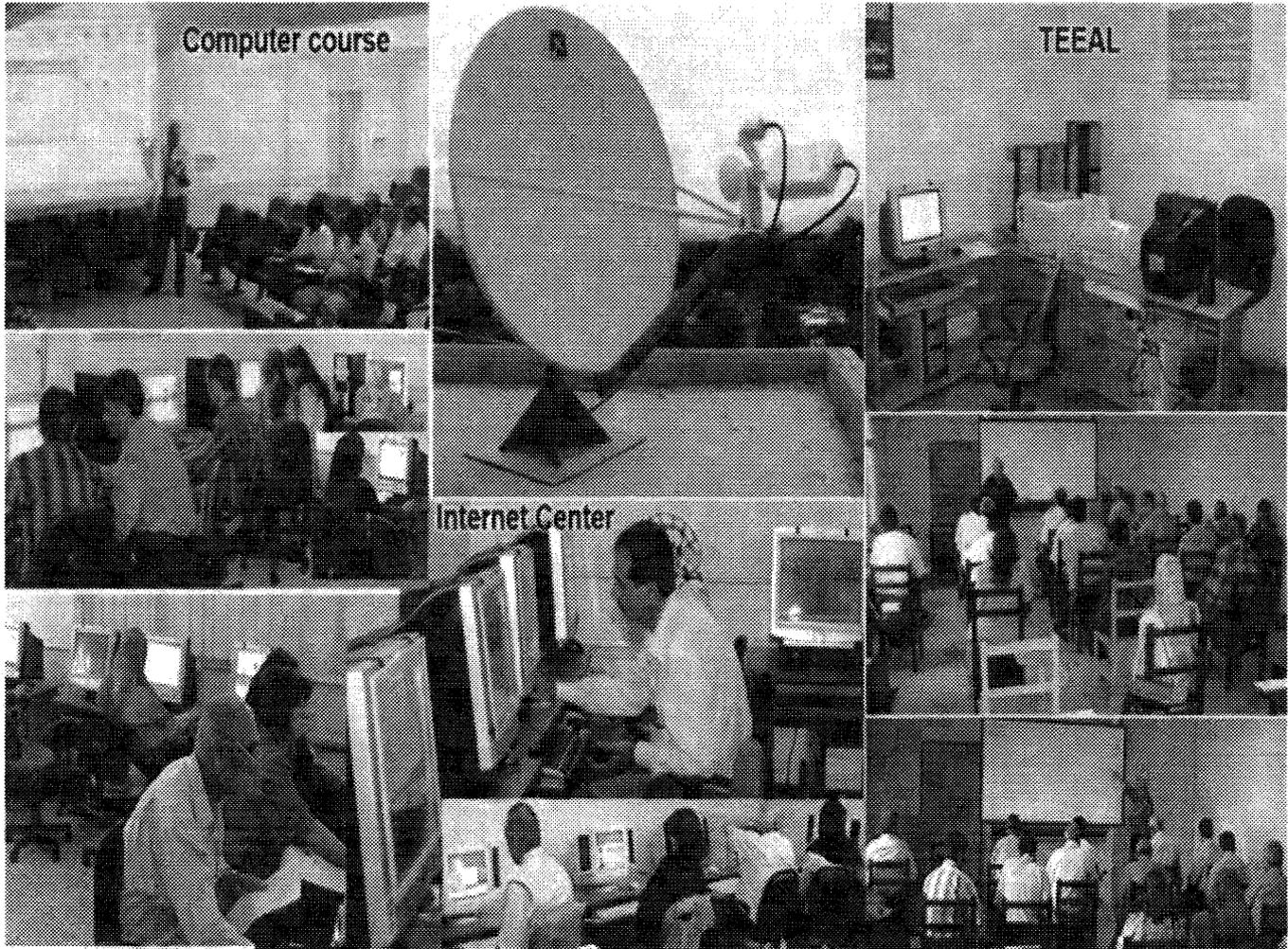
**Some of the Field, Laboratory, and Greenhouse Teaching and Research Equipment
Provided to the University of Mosul CAF by AHEAD Grant Funds**



Some of the Field, Laboratory, and Greenhouse Teaching and Research Equipment Provided to the University of Dohuk CA by AHEAD Grant Funds



Some of the Electronic Library and Communication Equipment Provided to the University of Mosul CAF by AHEAD Grant Funds



**Some of the Electronic Library and Communication Equipment
Provided to the University of Dohuk CA by AHEAD Grant Funds**

APPENDIX C

Summary of Narrative stakeholder Evaluations and Comments by Project Objective and Activity

Based on Written Survey of Iraqi Participants. Evaluators were asked to provide scores on the success rates based on Performance Indicators as stated in the project's Plan of Work (POW). Narrative comments were also urged for each activity and for the project as a whole, addressing both the management and financial aspects of the project. The data shown reflects each respondent's score or comment.

See Report Text for Data on Success Rates)

OBJECTIVE 1 (Strengthen academic programs and training in agricultural sciences and technologies at UM/CAF and UD/CA)

Activity a: Train six new graduate students in high priority agricultural sciences and technologies

- Narrative on Fiscal. OK, OK
- Narrative on Management. Delay in Osama's Visa

Activity b. Assist six UM/CAF and UD/CA ongoing graduate students in completing the research required for their degrees at their two colleges

- Narrative on Fiscal: Insufficient for UJ because they managed all aspects based on money consideration. Sufficient for ICARDA/Syria. The Financial allowance in Jordan was insufficient where cost of living is expensive.. Financing was very sufficient.. Good. Good. No Problem
- Narrative on Management: Fair, Very good. Good. AUB provided Excellent management support, scientific supervision, analytical capabilities and field support at the experiment stations. Good. Everything was managed in a very good way at AUB. Well Organized

Activity c: Visiting Scholar Program (VSP)

- Narrative on Fiscal: Financing was good but personal allowances were not large enough. Researching financing was good and there were no limitations in finding chemicals or instruments although they were not as modern as I expected at UJ. No Fiscal Problems. Financing was at the bare minimum for meeting my expenses. Fair. Very good. Good. Fair. Personal money was less than needed. Other than that was good. Financial support was not enough because living expenses in Jordan are high comparing to ICARDA/ Syria. Very sufficient. No problem
- Narrative on Management: Management was good except for the late arrival of computers and insufficient of availability of photocopying machine. I especially enjoyed working with my UJ counterpart and we have 2 publications in writing stages. Management was very good and allowed us to complete our work efficiently. Management was excellent and had a big part in the successful completion of my work. Fair. Very good. Good. Very good. Good. My host at UJ was very busy, so he didn't give me enough time. Excellent at AUB. Very well organized, Well Organized

Activity d. Professional Conference Travel (PCT) for Iraqi faculty

- Narrative on Fiscal: Good. Funding was adequate. No problem
- Narrative on Management: Very good. Last minute decision was frightening. Very Well Organized

Activity e. Administrative and scholarly workshops

- Narrative on Fiscal: Good, transportation quality was less than desired (would have preferred flying). Travel allowance was insufficient. The hotel in Lebanon was very good but the lunch at AUB was bad. I believe that fiscal affairs were well organized although some felt that the provided travel allowance were insufficient. Good. Allowances were not enough because it equated students and their professors. Very good. Provided allowances were not sufficient for meeting expenses in Lebanon. Thank you very much was very good.
Not enough. Low. Somehow good. Low. Low. Very good. Low. No problem, OK
- Narrative on Management: Very good, the timing of all session was well kept. The organization of travel and conference was very good. Management affairs were good and organized. However, I noted that some participants in workshops were not specialized in the subjects of these workshops, while others who were not selected although they were qualified. I suggest addressing this issue in the future. Good. These workshops were very good and must be continued because of the importance of the developing human capital intellectually and scientifically. Very good. Very positive (AUB workshops) Very good (workshop of statistics in ICARDA). Good. Good. Good but wish that the sessions were given more time. Wish that we had more time to share our presentations as well. Very successful Excellent Very well managed, thank you for your sincerity. Very good. Transportation was not well Organized

Activity f. Research Grant Program (RFP)

- Narrative on Fiscal: Inadequate funding. Financing was barely sufficient to cover the costs of attending a conference in the UK. Fiscal management was very good and I did not see any financial obstacles. Very low. Very low. Very low. Was not enough to finish my research. Delay and difficulty in providing money. Very low. Not sufficient. Not enough to complete my research. Low and delay of wire transfer. Slow because of the delay in wire transfers. Not sufficient and slow because of the delay in wire transfers. Shortage. Poor. Very poor. Low
- Narrative on Management: I was not allowed to participate in workshops because I have RFP. Flexibility was needed. Management was very good in general as far as the Hawaii side was concerned. There was a problem with the buying on the internet of satellite imagery. It was solved by buying older imagery. Management was very good but there were obstacles in obtaining the required research materials due to the unavailability of chemicals and instruments at the local market. Good. Good. Very good. Dr. Salman's management was very strict. We were able to buy the cheap equipments only. Very good. Good. I suggest increase the number of local employee. Good. Poor. Poor. Bad

Activity g. Mini RFP

- Narrative on Fiscal. Not sufficient Low and slow
- Narrative on Management. Very good. We didn't see the COP at all and not the Hawaiian team even.

Activity h. Increasing English proficiency

- Narrative on Fiscal. N.A.
- Narrative on Management: Very good, Good, Very good, Was good but the timing was at 2:00 pm which is not convenient besides such English courses has to last for longer period of time not only few

moths. Time was inconvenient and short. I suggest to have it in every college so all the faculty will have a chance to benefit. I suggest hiring native English-speakers

General Comments on Objective 1

- Graduate students

Increase the number of graduates at UH and other American Universities. Increase the number of graduates at UH or other American universities especially to be specialized in Animal Production

- GRF

First I offer my sincere thanks and respect to UH as represented by the COP and UJ coordinator and faculty supervisors. However, financial dealing with UJ was oriented toward financial gain. I felt that the allowance was not sufficient for Jordan's high living expenses, something to be considered in the future. I suggest introducing a strong component of English language teaching for future orientation of International program participants preferably at an overseas institution. All required provision were provided for my PhD in ICARDA including library, computers and management. I suggest sending Iraqi graduates especially PhD candidates overseas for English language learning. My sincere thanks for all the efforts which help me accomplish my research mission. Many thanks to project personnel. The study period was not long enough partly because of unavailability of research instruments and chemicals. I had some difficulties obtaining X-ray diffraction data. The delay in receiving imports from overseas caused slow progress in my work. Library and internet facilities at UJ were very good. I needed one more month to complete my PhD research. I suggest sending Iraqi graduates especially PhD candidates overseas for English language learning. This program was extremely beneficial and timely in view of the difficult conditions in which we now live. Unfortunately I am now facing a serious problem for not being able to replicate the experiment which I performed at AUB. I have the feeling that my work there can't be defended as sufficient for a PhD dissertation and hope that a future opportunity will be opened for me to replicate my experiment at AUB. I appreciated the opportunity to complete 85% of my research at ICARDA. Unfortunately, I have serious difficulty in completing my research because of time and equipment (HPLC) problems.

- VSP

In general I am very satisfied and grateful to the AHEAD project and UJ whose efforts were magnificent. However, there were shortcomings in the unavailability of modern equipment, computers and photocopying machines. The allowed time also was relatively too short. The allowed period of time was not sufficient for completing my work in the lab or the field. Time was too short for completing the planned activity. Funding was very low. The problem of border closure affected the progress of the work because of excessive delays in travel. Participants should be provided English language training at the UH to be more effective.

Three months were too short for completing the planned activity at ICARDA. For Iraqi Universities PhD graduates there was an English language difficulty, therefore I suggest some strong English language training at English speaking institutes. My experience in ICARDA was very successful due to availability of required research capability. I wish the same capabilities will be some day available at Iraqi universities. I appreciated the

opportunity of working with ICARDA colleagues and enjoyed their well-equipped facilities and their helpful attitudes toward trainees. I suggest that researchers from our colleges of agriculture engage in long-term collaborative research with their Scientists. I am grateful for the UH and UJ. However, the time was not enough to achieve what I wanted to do. Inancial support was not enough, and the administrators at UJ were slow in releasing money. I did complete the 2nd part of my work at UM. It was useful to get literatures from the UH library. Wish that the AHEAD project will continue but we suggest to send the VSPs from now on to the English-speaking countries and we suggest also to keep our TEEAL updated. I prefer to have my VSP in foreign country to be exposed to the new technology and experience English conversations. I didn't find big difference in terms of technology between UJ and what we used to have at UM so, was nothing new. Wish you can increase the number of VSPs because is the only way to conduct research using very advanced equipments in a short period of time. I am very grateful for including me among AUB VSP everything was wonderful.

- RFP

Every participant in the AHEAD program should have been participated in workshop in one way or another. Unfortunately a lot of impetus for the project was taken away by the decision of not making monthly payments for the researchers as was promised in the beginning. Before the raises the University staff got in their regular salaries they were in need of the monthly payment by Hawaii as an incentive that would have made it easier for smooth progression and follow up for the project as a whole. However, overall the project was a very big success brought a very large number of people in contact with recent development in Agriculture Sciences. This program was very timely in view of previous circumstances that had a drastic effect on our universities. We are grateful to have such programs and wish to thank the AHEAD program managements for their efforts. English improvement. Need more financial support. Need for hands-on training on new equipment used for scientific research. Socio-economic research activities do not require instrumentation and laboratories as for technical research. However, it requires communications with farmers, international agencies and literature searches to retrieve data which will be subjected to organization and statistical analysis before publication. Unfortunately even the modest expenses that we requested we were not fully provided. One of the main problems was the poor management of COP and his "silly" way in dealing with us as graduate students. He was strict and used to delay payments. He also used to look down at us, therefore we ask the Hawaiian team to replace him. COP did not give us a chance to participate in workshops, English courses, computer courses and VSP because we are graduates. We think graduate students are more in need for these things. I also think that increasing English courses is very important especially if it will be outside Iraq (abroad). One of our main obstacles was the "routine" by writing to the head of the department, will send it to the dean and then to the COP who may agree or not. The program was very successful and beneficial but faced difficulties with cashing necessary funds. My kind of work (Animal Husbandry) requires long term activities to collect meaningful information especially since our college lost former records. It is a very useful project since it helps the graduates. However, I suggest considering the availability of chemicals and chemical analysis techniques.

- Workshops

As in the tradition of US Land-Grant Institutions, I was expecting a much stronger component of extension in the AHEAD project. Also I was disappointed that some of the participants addressing or representing extension were not really active in this area. This has to change for instance by including the overseas scholarship opportunities in the extension area. The agricultural education policy that prevailed for the last half century was completely unsuitable for Iraq's future agriculture development. The workshops were very

well-organized but I suggest that they be open to more participants in the future instead of favoring certain individuals. Suggest holding workshops in all specialties in English-speaking countries. The Management was not fair in selecting the participants, some did participate twice or more while others (especially graduates) were not given a chance to participate. Some participants has nothing to do with the workshop themes. Was my name listed among the statistical workshop participants then was deleted and no body explains other than lists have been changed. I am Lazgeen Ahmad a graduate at UD and was listed as a participant for soil workshop in ICARDA but then replaced by a faculty from the college of Engineering (Zeerak). I strongly criticize sending a faculty from College of Engineering at UD for ICARDA workshop to discuss curriculum of soil department /CA. Need more of these workshops especially in Animal Sciences. Wish it was longer. Personal money (perdiem) was not sufficient. Personal money (perdiem) was not sufficient. Themes were really important and useful. The AHEAD workshops were very helpful to train Iraqi faculty.

OBJECTIVE 2 (Create or rehabilitate the infrastructure necessary for revitalizing instructional and scholarly programs at UM/CAF and UD/CA)

Activity a. Enhancing communication capabilities

- Narrative on Fiscal: Good. Good. Good. Good. Need more computers. Low. Some technical problems results in many interruptions.
- Narrative on Management: Good, Good, Need more training of how to use computers, Very good, Some obstacles

Activity b. Rehabilitating research and instructional laboratories and facilities

- Narrative on Fiscal: Good, Very good, Low, Low
- Narrative on Management: Good, Some obstacles, Procurement committee failed to do its job, was not efficient. I suggest giving the responsibility to the head of each department.

Activity c. Enhancing library and literature availability and retrieval capabilities

- Narrative on Fiscal: Good. Excellent. Good Not any. Not any. Very Good
- Narrative on Management: Very good. Excellent. Need more training of how to use the electronic library. Besides, it did cover all subjects though. Thanks for Ms. Patricia. Thanks for Ms. Patricia. Thanks for Ms. Patricia. Very Good

General Comments on Objective 2

- Library Enhancement: As a graduate at UD I did benefit a lot from TEEAL. I am grateful for providing TEEAL, it was very useful. Wish that every institution has one of those. Wish Patricia's employment was extended until we finish our research. TEEAL was very helpful. Need more "English" books. We need to be updated by subscribing to scientific magazines and journals in addition to TEEAL's journals.
- Equipment: Provide more equipment to perform our researches Establish a committee for equipment procurement to avoid corruption. I suggest purchasing equipments from the US or other developed country rather than buying it from the local market.

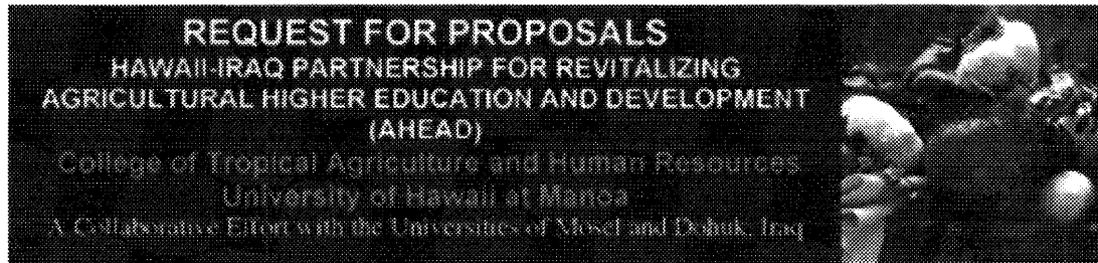
- English Suggest sending participants overseas to the English speaking countries for 4-6 months. Need more of intense English language programs abroad (for 6 months). Suggest sending faculty to English-speaking countries at least during summer holiday to improve their language skills because 90% of our faculty are struggling with the lack of English skills. Suggest having English training sessions overseas. We lack the language skills that is why we were unable to understand most of the workshop lectures and handouts. Therefore we suggest sending us abroad to learn English.
- Computer and communication: Need more of training

General Non-Specific Comments

- The idea of having poultry hall at CA/UD was a very good one. However, the line-item budget for the AHEAD project limited our ability to complete this project successfully. We suggest providing more flexibility in the future. I wished that the offered programs added more focus on educating farmers on post-harvest handling, marketing, crop protection environmental pollution by pesticides and fertilizers, reforestation, range-land management and wild-life. We hope that this program will be extended to cover all agricultural specialties. Wish that in the future you concentrate more on providing equipments and chemicals. Not being informed about the project activities except of the TEEAL which is very helpful. COP needs to be more open about the AHEAD activities to inform everyone about the announcements. No clarity, need to announce project's activities in advance at UD. Lack of clarity, about 50-60% of faculty had no clue about what UH is doing. We suggest to have meeting like this to be informed about the AHEAD activities. I suggest giving priority for faculties with MSc. to study abroad. Get subscription for the Journals not covered by TEEAL. I am grateful for Drs. Samir Elswaify, Ekhlash Jarjees and Abduljabbar Salman. The University of Jordan was very helpful. We need to understand the detailed procedure of how to publish our articles in international journals. We need also more support for our agricultural researches. Also, we need to be linked with counterparts of international universities since some of them are not answering our questions when we try to write for them. Thank you for the Hawaiian team for directing us to the online journals which was very useful. Thank you for the help when it was really needed, but wish the project was extended so we could have been finished our projects and get our degree (moneeb al mufti). I suggest having summer training session for forestry department in one of the developed countries. I suggest sending our faculty who get their degree in Iraq abroad (to the US or UK) to learn English. Suggest help in remote sensing at CA/UD. Discrimination in treating faculty by the COP. We need assistance in publishing our articles internationally. Wish that this project can be extended because we are in need for this kind of help. Create "Award system" to stimulate competition in research. Transportations to neighbor countries were very bad. I suggest awarding successful researchers.

APPENDIX D

Project Announcements for Competitive Support Opportunities



The AHEAD project is inviting applications for the **Visiting Scholar Program (VSP)**.

Program goals:

1. Enhance applicants' competence as teachers and scholars upon their return to Iraq.
2. Provide opportunities for both US and Iraqi faculty to exchange educational/research and extension ideas utilizing special expertise of faculty in both programs.
3. Permit experiences that hold promise of developing new competencies and providing opportunities to test out alternative research interests.

VSP will support 6 scholars and professionals from MU/CAF for visits of a 3-month period to UH campus.

Eligibility: All UM/CAF faculty are eligible to apply.

Procedure: Individuals or departments are requested to submit proposals not exceeding three pages.

Include in the proposal:

- **OBJECTIVES:** Describe your proposed research/extension or educational project and its relationship to your current research interests and expertise.
- **PROFESSIONAL DEVELOPMENT:** Discuss the expected benefit of this award on your current research, teaching and student supervision activities.
- **NEEDS:** Include a brief narrative of educational, research or lab needs including student participation. Visiting scholars will be matched with a US faculty based on an interest in participating in the program, professional qualifications, and compatibility of interests.

Priority will be given to projects that benefit a large number of students and enhance the community environment.

The VSP grants will support air travel and per diem.

Deadline for submission is Wednesday December 31, 2003, 5:00 pm Hawaii Time.

Submit one original with signatures (please provide a copy to your Department Chair and Dean) plus **email the complete proposal (in English)** to:

Office of the AHEAD, Sherman Rm 101,, College of Tropical Agriculture & Human Resources, 1910 East-West Road, Honolulu, HI 96822.

For more information call 808-956-7530 or 8708 or fax 808-956-6539 or email at NREM@ctahr.hawaii.edu

Request for Applications

HAWAII-IRAQ PARTNERSHIP FOR REVITALIZING AGRICULTURAL HIGHER EDUCATION AND DEVELOPMENT (AHEAD)

College of Tropical Agriculture and Human Resources
University of Hawaii at Manoa

A Collaborative Effort with the Universities of Mosul and Dohuk, Iraq



The AHEAD project is inviting applications for the **Graduate Research Fellowship (GRF)**.

Program goals:

4. Provide opportunities to selected current graduate students in Agricultural Science Programs at University of Mosul and University of Dohuk for fulfilling their thesis or dissertation research requirements.
5. Offer opportunities for both Iraqi and US faculty to collaborate in joint graduate training of successful applicants.

GRF will award 6 Graduate Research Fellowships each with duration of 12 months at the University of Hawaii. GRF will support travel, stipend, and additional \$10,000 maximum for research expenses.

Eligibility: All ongoing UM/CAF and UD/CA graduate students who completed their course requirements and are prepared to undertake the research required for fulfilling their degree requirements are eligible to apply.

How to apply: Individuals are requested to submit applications via their Department Chairs and College Deans.

Proposal Selection Criteria: Proposals will be judged by a committee of university representatives and scientists based on:

1. Relevance, importance, timeliness, and usefulness of the proposed research
2. Scientific and technical quality of the proposed research and procedures.
3. Feasibility of attaining objectives during the 1 year Fellowship period, and with resources available (Probability of success).
4. Intent of collaboration with an appropriate CTAHR counterpart faculty.

Proposal Format: Proposal narrative must not exceed 5 single-spaced pages (**minimum 10 pt font**). Literature cited and C.V. should be appended. Proposal is for one year and must include the following sections:

1. **Name of Applicant** (must be current graduate student at the College of Agriculture and Forestry at Mosul or College of Agriculture at Dohuk), department affiliation, Faculty Advisor and Committee Members at the home College.
2. **Title:** Title should give brief description of research project.
3. **Abstract:** A brief abstract or summary of what is proposed for the research.
4. **Justification:** Clearly identify the Specific Research Area(s) addressed, justification, the relevance to the project goal, and economical impact to Iraq, including chances of success of proposed research. Describe previous work including review of relevant literature, any progress to date, and identify relationship to past and current research that is related to the proposal.
5. **Objectives:** Must be specific, achievable, and **measurable**.
6. **Approach/Procedures:** Must be itemized for each objective with details of experimental plans, statistical design, and required facilities or instruments.

Deadline for submission: 5:00 pm, Friday, January 30, 2004, Hawaii Time

Submit one original with signatures (please provide a copy to your Department Chair and Dean) plus email the complete proposal (in English) to:

Office of the AHEAD, Sherman Rm 101,, College of Tropical Agriculture & Human Resources, 1910 East-West Road, Honolulu, HI 96822.

For more information call 808-956-7530 or 8708 or fax 808-956-6539 or email at NREM@ctahr.hawaii.edu

REQUEST FOR PROPOSALS
HAWAII-IRAQ PARTNERSHIP FOR REVITALIZING
AGRICULTURAL HIGHER EDUCATION AND DEVELOPMENT
(AHEAD)
 College of Tropical Agriculture and Human Resources
 University of Hawaii at Manoa
 A Collaborative Effort with the Universities of Mosul and Dohuk, Iraq



Program Goals: The general goal of this program is to strengthen the agricultural research programs of the Universities of Mosul and Dohuk through basic and applied research on relevant issues using scientifically sound approaches. Program research and development efforts are to be accomplished within a framework of coordination and collaboration between the Universities of Mosul and Dohuk and the College of Tropical Agriculture and Human Resources, University of Hawaii at Manoa (CTAHR) to meet high priority agricultural needs of Iraq.

General Program Research Areas: General research areas are agricultural biotechnology, aquaculture, biotechnology risk assessment, economic and community systems, agricultural and biological engineering, natural resource and environmental management, forest management, crop production, integrated pest management, nutrition, food and animal sciences, organic farming, sustainable agriculture, agribusiness, marketing, irrigation management and salinity control, invasive species, water quality and land use, wildlife and fisheries and wood products.

Proposal Selection Criteria: Proposals will be judged by a committee of university representatives and scientists based on:

5. Relevance, importance, timeliness, and usefulness of the proposed research to the project goal.
6. Scientific and technical quality of the proposed research and procedures.
7. Feasibility of attaining objectives during life of project and with resources available (Probability of success).
8. Adequacy of professional research personnel and infrastructure including that proposed in the project.
9. Intent of collaborative coordination and effort with a CTAHR counterpart faculty.

Proposal Format: Proposal narrative must not exceed 5 single-spaced pages (**minimum 10 pt font**). Budgets and budget narrative, literature cited, C.V.(s), and list of current projects and funding should be appended. Proposal is for one year but may be for multiple years (1-3 years) depending on funding but objectives **must have** annual (quarterly preferred) **milestones** identified in time lines. Proposals must include the following sections:

7. **Title:** Title should give brief description of project. List P.I.(s) with Principal P.I. (must be from the College of Agricultural and Forestry Sciences of Mosul and Dohuk, tenured or tenure track faculty). All P. I.s and cooperators must sign adjacent to names. Principal P.I.'s immediate supervisor signature is required. Department Chairs and Dean must sign the title page but need not review the proposal.
8. **Abstract:** A brief abstract or summary of what is proposed for the research.
9. **Justification:** Clearly identify the Specific Research Area(s) addressed, background and literature review, the relevance to the project goal, and economical impact to Iraq, including chances of success of proposed research. Describe previous work including review of relevant literature, any progress to date, and identify relationship to past and current research that are related to the proposal.
10. **Objectives:** Must be specified in a **measurable** quantitative format.
11. **Procedures:** Must be specified for each objective with details of experimental plans and statistical analysis proposed.
12. **Time lines:** Must be specified for each objective clearly identifying specific semi-annual milestones (A milestone is a reference point marking a major event in the project, used to monitor the project's progress).
13. **Budget:** Must include categories of salaries and fringe (for each employment category), equipment (include justification for each item), materials and supplies (provide detail), domestic travel, foreign travel (include justification for each trip) and

publication by year and objective for length of proposal in columnar format including yearly and project totals. **Total budget not to exceed \$20,000 per year.**

14. **Mode of presentation** of results to deliver maximum long-term economic benefit to Iraq's agriculture and examples of past presentation of results.
15. One page **Curriculum Vita** for each P.I. with relevant publications.
16. List all current and pending research projects/grants, dates, time commitments (%), funding sources and amounts.

Deadline for submission: 5:00 pm, Wednesday, December 31, 2003, Hawaii Time

Submit one original with signatures (please provide a copy to your Department Chair and Dean) plus **email the complete proposal (in English)** to:

Office of the AHEAD, Sherman Rm 101,, College of Tropical Agriculture & Human Resources, 1910 East-West Road, Honolulu, HI 96822.
For more information call 808-956-7530 or 8708 or fax 808-956-6539 or email at NREM@ctahr.hawaii.edu

Submit typed application to: AHEAD PCT Program
University of Hawaii
1910 East West Road, Sherman 101
Honolulu, Hawaii USA 96822
or fax to: (808) 956-6539
or electronically to: jpoaha@hawaii.edu

Date of Submission: _____

SAMPLE AWARD LETTER FOR RESEARCH GRANT PROGRAM

June 11, 2004

MEMORANDUM

To: Shamil Y. Hassan, Caser G. Abdel
Amer A. Hussien, Caser G. Abdel
Caser G. Abdel, Taha Z. Sarhan
Caser G. Abdel, N.N. Fadhil

From: Samir A. El-Swaify *Samir A. El-Swaify*
AHEAD Project Director

Subject: Your Research Proposals on:

- Evaluation of some fava bean cultivars for drought Resistance and Water Consumption use,
- Response of different onion cultivars grown under rainfalls to polyethylene mulching,
- Improvement of tomato fruit-set under high temp conditions
- Improving Yield and its biochemical quality of irrigated and non-Irrigated fava bean by somatic hybridization

Thank you for submitting the above proposals for research grants under the RFP component of the AHEAD Project. I am pleased to inform you that your proposals have been approved with the following conditions:

1. Because the four proposed projects have significant elements in common, and deal with various aspects of stress tolerance or alleviation, the project should be conducted as an integrated study with all of you acting as a team of co-investigators for maximum efficiency, and optimal use of allocated funds.
2. We have approved a total of \$30,000 for this integrated study. Please prepare an itemized project budget based on this amount for consideration and approval by our Chief of Party.
3. The allocated funds will be provided incrementally as needed for the different phases of project implementation. Specific means of allocation will be administered through our Chief of Party.
4. Drs. Ali Fares and Bernard Kratky of our college can provide you with valuable information and are willing to serve as resource collaborators during the course of the study. We urge you to communicate with them. Our Project Manager can facilitate these contacts.
5. Please note that you are required to submit to us periodic reports on the project's progress as well as a final report.

Please accept my sincere congratulations on this wonderful achievement. We wish you success in conducting this important research and look forward to your reports during the study and after the work is completed.

Copies: Dean Moafak M. Ahmad
Dr. Ali Fares (NREM/CTAHR)
Dr. Bernard Kratky (TPSS/CTAHR)
Dr. Abduljabbar Salman (Chief of Party, COP)
Dr. Ekhllass Jarjees (Project Manager, PM)

PROFESSIONAL FACULTY TRAVEL (PCT) PROGRAM

APPLICATION FORM

Purpose

The AHEAD project provides funds to support professional travel to scientific conferences and/or workshops to full-time members of the faculty/staff of the College of Agriculture and Forestry, University of Mosul and the College of Agriculture, University of Dohuk. The purpose is to participate in relevant scientific or professional regional, national, or international conferences or workshops, and / or to present the results of research and scholarly work at such meetings when it can be demonstrated that such participation could potentially result in professional growth, collaboration, and overall benefits the applicant's institution.

Guidelines:

1. Priority will be given to full-time faculty/staff members who are presenting papers or other scholarly works.
2. When papers are co-authored, travel support will be available only to one author.
3. The required brief statement should describe your participation so that a reviewer of this request who is not familiar with your field can understand it. It should also provide the review team with an idea of the relative significance of the conference in your field and why it is important for you to attend.
1. Visiting and temporary faculty are not eligible.
5. Travel awards are limited to round-trip economy air transportation based on the minimum rates available, the conference registration fee, ground transportation, and per diem. **The total award will not exceed \$2,400.** Receipts are required for expenses other than per diem. Also, the project does not pay per diem for air travel time.
- 6.. Applications should be submitted to AHEAD PCT Program, Department of Natueal Resources and Environmental Management, University of Hawaii, 1910 East-West Road, Sherman 101, Honolulu, Hawaii, USA 96822, about two to three months before the anticipated travel. **Applications submitted less than 8 weeks before anticipated departure may not be accepted.**
7. For conferences outside Iraq, the applicant may request early consideration.

APPLICANT : Name _____ Rank _____
Office Phone _____ College _____
Department _____ Number of Full Years on as Faculty/Staff _____

Conference/Workshop /Meeting/ (Title, Sponsoring Society, etc.): _____

Dates _____ Location _____

Proposed Departure Date _____ Proposed Return Date _____

Title of Your Presentation at the Conference : _____

Reason for your PCT Request: (Check all that apply)

- Enhance your professional status.
- Promote ability to write and submit proposals.
- Benefit your research through interaction with colleagues at other institutions.
- Other benefits please attach description of these benefits.

FUNDS:

TOTAL REQUEST (Must not exceed \$2,400): _____, including
 Minimum Airfare _____, Conference Fee _____, Ground Transportation
 _____, & Per diem _____ Source of airfare quotation _____

Do you have or are you seeking funds from other sources for the proposed travel?

Yes () No () If yes, please explain _____

The following must be attached (as applicable):*

- (1) A copy of the conference or workshop announcement.
- (2) If you are presenting a paper, attach a copy of your submitted abstract and a brief statement describing your presentation and outlining why it is important that you present your paper at this conference.
- (3) A separate signed statement from your immediate supervisor (Department Chair or Dean) addressing the importance of the meeting and how it ranks among other conferences in this field.
- (4) A brief current C.V., including recent publications, creative activities, extramural grants and awards (include sources, amounts and dates and whether you are the principal or co-investigator) during the past five years, as well as any pending proposals.

**Please check the above boxes to ensure that all items are included. Application missing any of the items will not be considered.*

Signature of Applicant _____

Signature of Supervisor (Department Chairman/College Dean) _____

Do not write below: For PCT Committee use only

Recommended/Not Recommended by PCT Reviewer

Print Name	Signature	Date
------------	-----------	------

Action recommended by PCT Committee

Reported _____

PCT Committee

Date _____

APPENDIX E

AHEAD'S Community Networking, Public Information and Recognitions

University of Hawaii Campus-Wide Presentations, Reports and Bulletins

The AHEAD Project is now acknowledged as an exemplary model of the College of Tropical Agriculture and Human Resources, University of Hawai'i at Mānoa's international development efforts and Partnerships.



Audience to AHEAD 's Presentations and Exhibits on the University of Hawaii Manoa Campus

AHEAD's accomplishments were highlighted in CTAHR's and UHM's publications and news bulletins which emphasized the importance of invigorating and modernizing Iraq's resource-starved institutions of agricultural education for improving food security for Iraq's people and revitalizing a vital sector of its economy. Some quotes follow:

“Last month, Samir El-Swaify, Ekhlass Jarjees, Catherine-Chan-Halbrendt, and Richard Bowen led the first four professional development and strategic planning workshops for faculty from CTAHR’s partner institutions in Iraq. More than 100 Iraqi scientists and leaders from the two partner universities (University of Mosul’s College of Agriculture and Forestry, the University of Dohuk’s College of Agriculture), and guest leaders and faculty from several other Iraqi universities participated in the workshops, which were held at the University of Jordan. For most, the event was their first opportunity to attend a scientific forum outside Iraq. The concurrent workshops focused on the disciplines of agricultural economics, horticulture, plant protection, and food science, and featured a field trip to an agricultural research station near the Dead Sea. The final day brought all the participants together for a detailed discussion of the importance of designing academic programs that directly benefit farmers through agricultural extension. Formal evaluations were conducted and showed strong enthusiasm for what was accomplished.”

“The workshops are one component of the AHEAD (Agricultural Higher Education and Development) project funded by a \$3.8-million grant from the U.S. Agency for International Development to help rebuild the agricultural research and training programs that are key to promoting growth and sustainability in Iraq’s vital agricultural sector. Years of conflict, economic sanctions, and international isolation have devastated Iraqi institutions of higher learning. AHEAD provides resources to rehabilitate the educational infrastructure and support the professional development of Iraqi agricultural scientists previously cut off from the global academic community. Among the research tools that have been made available through the grants are a Learning Center in a former presidential palace, 140-journal electronic library of recent scholarly agricultural publications (coined commercially as The Essential Electronic Agricultural Library, TEEAL), research and teaching instruments and supplies, animals, computer labs offering Internet access, books, and modern farming machinery. The project also conducted a competition for research grants and awarded over \$200K in support of 21 successful proposals.”

Special Press Release, June 13, 2004

“\$205,500 IN RESEARCH GRANTS AWARDED TO AGRICULTURAL SCIENTISTS AT THE UNIVERSITIES OF MOSUL AND DOHUK”

“Following an announced competitive process followed by a thorough review and evaluation of submitted proposals; 18 awards for scientific research have been approved for Iraqi faculty at the College of Agriculture and Forestry, University of Mosul, and the College of Agriculture at the University of Dohuk. Grants range from \$5,000 to \$30,000, totaled \$205,500, and will allow scientists to acquire the necessary equipment, supplies, and support services that are not currently available. Research under these grants will address high priority needs in Iraqi agriculture and forestry. Projects will begin immediately, will move on a fast track, and will cover a wide spectrum of topics. Funding for these grants has been provided under the HEAD grant to the University of Hawaii.”



Composite of Press Releases and Published Information on AHEAD's Accomplishments for the benefit of the University of Hawaii and Community at Large

Report from Mosul by Spc. Blair Larson

“MOSUL, Iraq- The University of Hawaii, with funding from the U.S. Agency for International Development, is working with the University of Mosul and the University of Dahuk to strengthen agricultural academic programs and rebuild damaged learning facilities in northern Iraq. Through the Hawaii-Iraq Partnership for Revitalizing Agricultural Higher Education and Development, representatives from the University of Hawaii are in Dahuk and Mosul, working with the universities’ colleges of agriculture and forestry.

“Next to oil, agriculture is the second most important thing for Iraq’s economy,” said Dr. Abduljabbar Salman, the Chief of Party for the University of Hawaii who is working on this project in Dahuk. “

A \$3.8 million grant was received from USAID to improve higher education in Iraq. With this funding, the University of Hawaii has helped to improve graduate degree training, establish research fellowships, promote faculty development, improve infrastructure, develop educational libraries and provide electronic communications and internet access to the universities. Recently, the Partnership hosted an agricultural workshop in Amman, Jordan, for students and faculty from area universities. The workshop focused on horticulture, food science, plant protection and agriculture economics. It provided an opportunity for **students** from different facilities to come together and discuss ideas and learn. This workshop was the first of its kind in northern Iraq. The funding has also given students and faculty the opportunity to study abroad. Students have had the chance to complete graduate studies overseas, enabling them to come back to Iraq as professors, with a vast knowledge of new agricultural methods. Professors have gone abroad to advance their education, receiving knowledge about the latest trends in agriculture to take back to their students. The Essential Electronic Agricultural Library (TEEAL), an electronic reference tool, providing access to over 140 professional agricultural journals, is now available to students in Mosul and Dahuk. This library will give students access to current information from the leading field journals. In addition to the electronic library, computers with internet access are now available to the university students. Representatives from the University of Hawaii bought modern farming equipment, soil testing and laboratory equipment, chemicals and computer equipment for the universities. Animals were also purchased for learning purposes.

Although security has been a challenge for Salman and those he works with, he still feels that the accomplishments made by the Hawaii-Iraq partnership are significant and will help to educate the future leaders of Iraq. Iraq’s education system has been constrained by massive damage to infrastructure and faculty isolation, but with the help of outside agencies and funding, Iraq will soon be on its way to becoming an educationally developed nation.””

FOR IMMEDIATE RELEASE

May 21, 2004

Special Press Release, June 13, 2004

“USAID AND THE CPA ANNOUNCE ELECTRONIC AGRICULTURAL LIBRARY FOR UNIVERSITY

BAGHDAD, IRAQ – In support of the Coalition Provisional Authority’s (CPA) reconstruction efforts in Iraq, the U.S. Agency for International Development (USAID) announced the successful installation of the essential electronic agricultural library at the University of Mosul. This is the first electronic agricultural library in Iraq and contains more than 140 journals selected by 600 international scientists as the most essential to research and education in different fields of agriculture. The system was immediately opened up for the use of university students and faculty.

The new system is expected to benefit more than 3,000 students at the University of Mosul. The installation of this library was supported by USAID's Higher Education and Development program, which brings together American, European, and Iraqi universities to support the reestablishment of academic excellence in Iraq's higher education system. The improvement of agricultural sciences is a program partnership between the University of Hawaii College of Agriculture and Human Resources, the University of Mosul Hamam al Alil and the University of Dahuk.

This new library will be used not only by students at the College of Agriculture and Forestry at Mosul University but will be open to all graduate students and faculty members at other agricultural colleges in Iraq, including Baghdad, Basrah, Salah ad Din, Sulaymaniah, Al Anbar and Tikrit. The library will provide all Iraqi agricultural colleges with access to the most recent papers from reputable journals around the world, allowing the universities to re-connect with international developments in the agricultural field.

The Higher Education Program compliments USAID's primary and secondary education programs in Iraq by establishing activities that focus on providing rapid impact grants to enable Iraqi colleges and universities to replace antiquated equipment and rehabilitate educational facilities and libraries; promotion of national, regional and international partnerships and fostering of intellectual diversity and growth; introduction of innovative subject material and new courses to develop the quality of higher education in Iraq and to prepare Iraqi youth for leadership and employment in a competitive market economy; and introduction of modern administrative practices that orient higher education institutions to the demands of the market.

This project is part of USAID's overall relief and reconstruction efforts in Iraq. USAID works in close coordination with the Coalition Provisional Authority (CPA). For more information on CPA's and USAID's reconstruction efforts in Iraq including photos, please visit www.cpa-iraq.org and www.usaid.gov/iraq/."

***Example of Radio Appearances to discuss Project Accomplishments
Hawaii Public Radio Town Square Broadcast***

From: "Hayden, Robin" <Robin.Hayden@coe-dmha.org>
Subject: Logistics for the Town Square broadcast 12 February
To: elswaify@hawaii.edu, hallettb@hawaii.edu, "Brennen, Roy" <Roy.Brennen@coe-dmha.org>

Aloha guys,

First, let me thank you all again for supporting this activity. I think this will be a great show.

1 - Show date is 12 February, Thursday. Show starts 5:00 p.m. and goes until 6:00 p.m. sharp, as this is a live, call-in show. Therefore, you need to be at the station NO LATER THAN 4:30 p.m. I suggest try for 4:15 p.m. Beth-Ann Kozlovich is expecting you no later than 4:30 p.m. She will show you around, get the proper pronunciation of your names, do a mic check, explain what will happen, and so on.

2 - Location is the Hawaii Public Radio Station. Street address is 738 Kaheka Street, Suite 101.

3 - Metered street parking is your only legal option.

4 - Taping. The station provides one gratis tape. After that, you dub them yourself. Brien, it's okay with me if you take the gratis one, and then I'll make arrangements to get a copy, or maybe you can help me out with that. We have lots of blank tapes at COE.

5 - If you are, zounds, running late, call the station so they can let Beth-Ann know. The number is 955-8821.

6 - The show is simulcast over the web. This means you may get calls from the mainland. My intention is to pull together a flyer today (ha, ha! we'll see) to distribute to you and some of our best friends so that we can get some intelligent call-in questions. I want to crowd out the "We shouldn't be in Iraq!" calls...this show is about the humanitarian challenges. It's not a policy discussion.

Along that line, be prepared to deflect the questions you cannot/don't want to answer by acknowledging the validity of the caller's question, however, we'd like to focus on moving forward with positive humanitarian projects, blah, blah, blah, and return to talk about what you want to talk about, but in a tactful way. Beth-Ann is a professional. That said she also likes to stir up callers a little, but this is not an ambush situation. We talked yesterday...humanitarians are volunteers, they make a choice to go in or not, in peace or in war, etc.

7 - The show goes...intro/background by Beth-Ann. She'll introduce you, and then start off with a question, to get the discussion going. At about the half-way point, she'll open it up to callers. At about the 10-minutes-left mark, maybe a little later, she'll indicate time is getting short and ask you to participate in a wrap-up. I will ask one of the multimedia guys (Eric or Brian) to go to take photos. They will hover around you and take some shots, and be otherwise unobtrusive.

8 - If you have any questions, please feel free to email me, okay? As I promised earlier, I will be sending you a little more guidance on content very shortly. Feel free to have phone chats or meet prior to Thursday if you want to hash out where you want to go with things, or discuss via email. It's not necessary, up to you.

I think that's all for the logistics side.

Robin

Public Relations Manager, Editor/The Liaison
Center of Excellence in Disaster Management and Humanitarian Assistance
1 Jarrett-White Road (MCPA-DM)
Tripler AMC, HI 96859-5000
USA

Few of Several Reports in USAID Weekly Update

- On TEEAL, 2004

Highlights this week:

- On May 4, the essential electronic agricultural library at the College of Agriculture and Forestry of the University of Mosul opened to university students and faculty. This is the first electronic agricultural library in Iraq and contains more than 140 journals selected by 600 international scientists as the most essential to research and education in different fields of agriculture. The new system will benefit more than 3,000 students at the University of Mosul.
- Iraqi universities train the next generation of leaders in technical specialties, demanding rigor and clarity from potential new professionals. At the Universities of Mosul and Dahuk and the Dahuk Technical Institute more than 50 public health faculty members participated in refresher courses in scientific research techniques. The courses focused on academic excellence in public health. Training included thesis/dissertation writing, research methods, grant writing, scientific abstract development, survey development, evidence-based medicine, and community organizing.
- A 10-week workshop will begin on June 19 to inform Iraqi University faculty and post-graduate students of international developments in the fields of archaeology (Islamic and ancient) and cuneiform studies. The workshop will be held in Amman and will be divided into two 5-week sessions. Formal lecture sessions will be held in the mornings and small group sessions will be held in the afternoons to read cuneiform texts and work with new archeological technology, software, and internet materials. The technological demonstrations will include sessions on Electronic Distance Measurement technology, Global Positioning System, and magnetic gradiometry. Participants will also have the opportunity to visit museums and archaeological sites in Jordan. This workshop is being developed as part of the Archeology and Assyriology program under USAID's university partnerships and the American Center of Oriental Research in Jordan.



The University of Mosul opens its electronic library.

○ General Report 2004

“USAID is strengthening agricultural research and education in Iraq through a partnership between agriculture colleges at the University of Hawaii and Iraqi universities. The Higher Education and Development (HEAD) partnership is training faculty and students, improving laboratories and other facilities, and equipping libraries. Eleven professional development and planning workshops were recently held for 250 Iraqi university faculty members. The workshops, taught by leading agriculturalists around the world, provided faculty with training in agricultural statistics, experimental design, technology transfer, soil and water sciences, field crops, animal sciences, agricultural engineering and forest science. Six Iraqi graduate students participated in study abroad programs at an American University. The students improved their English language skills, visited research centers and conducted advanced research projects. The students also participated in a three week library skills training class which will allow them to teach others how to utilize the electronic resources being integrated into their universities at home. The program is also supporting the rehabilitation of greenhouses, libraries and computer facilities that are critical for conducting modern agricultural research. In addition, \$205,500 in small grants has been awarded to 18 faculty from Iraqi agriculture and forestry colleges to conduct research in priority areas such as pesticide and fertilizer use.”

- General Report, 2005

USAID's Higher Education and Development (HEAD) program in partnership with the University of Hawaii established a forage facility to assist agriculture students study animal nutrition at a university in Iraq. Three PhD students are utilizing the new equipment in studies that will improve technique, output and efficiency in Iraq's agricultural field. The facility consists of a grinder for grinding grain and mixer for mixing the forage. The machinery enables students to add supplements and medication to livestock forage. The new equipment will enable Iraqi students to study animal nutrition and improve both the quantity and quality of livestock in Iraq. The equipment will allow students to add medications and supplements to animal feed and monitor the results. Three doctoral students are already utilizing the laboratory to study physiology among goats and meat production of lambs and ewes.

Rotary Club Presentations

Regular briefings and introductions of AHEAD-sponsored Iraqi scholars were made at several Rotary clubs of District 500 (Hawaii). Rotarians responded with substantial support and hospitality for our Iraqi guests, including assistance to locate housing, furniture donations, and invitations to special functions.

APPENDIX F

Field Travel by Project Director and Manager

First Trip

Dec 11 2003-Jan 30 2004

1. Dec 11, 2003 leave HONOLULU 10:30PM
2. Dec 13, 2003 arrive Amman/Jordan
3. Dec 16-17, 2003 USAID orientation conference in Amman
4. Dec 18, 2003 arrive Erbil and Mosul
5. Dec 19, 2003 arrive Dohuk
6. Dec 23, 2003 Dr. Samir Elswaify left Dohuk to Erbil then to Amman back to the US
7. April 23, 2003- Ekhllass started as Interim COP
8. January 14, 2004 Leave Dohuk back to Erbil and Amman then to the US

Second Trip

March 28-April 23, 04

1. March 28, 2004 leave HONOLULU 10:30PM
2. March 30, 2004 arrive Amman/Jordan
3. April 1st, 2004 arrive Baghdad
4. April 2nd, 2004 arrive Erbil
5. April 2-13, 2004 between Mosul and Dohuk
6. April 14, 2004 leave Dohuk to Erbil then to Amman
7. April 15, 2004 arrive Damascus/Syria
8. April 16, 2004 Arrive Aleppo/ICARDA
9. April 18, 2004 arrive Beirut/Lebanon
10. April 19, 2004 back to Amman
11. April 23, 2004 depart from Amman/Jordan to Honolulu.

Third Trip

August 3-August 23, 2004

1. August 3, Tuesday: Depart Honolulu
2. August 5, Thursday Arrive Amman, Jordan
3. August 6, 7 and 8, 2004 Consultations with University of Jordan hosts
4. August 9, 2004 AHEAD Project Team meeting for briefing. (UH and Iraq only)
5. August 10, 2004 Orientation for all resources
6. August 11, 2004 Finalize detailed program and logistic arrangements
7. August 14, 2004 Workshop registration and reception
8. August 15-19, 2004 Workshop sessions
9. August 20, 21, 22, 2004 Key people to prepare Wrap-up Report
10. August 23 Monday: Leave Amman back to the US

Fourth Trip

Jan 29-March 9th, 05

1. Jan 29th, 05 leave HONOLULU 10:30PM
- 2.. Feb 1st, 05 arrive Amman/Jordan
3. Feb 2nd, 2005 arrive Damascus/Syria from Amman
4. Feb 3rd, 2005 arrive Aleppo from Damascus/Syria
5. Feb 4th, 05 preparation of Statistics workshop
6. Feb 5th-18th, 05 conduction of series of workshops at ICARDA
7. Feb 19th, 05 arrive Beirut/Lebanon from Aleppo
8. Feb 20th- 26th, 05 Conducting series of workshops at the American University
9. Feb 26th 28th, 05 wrap up report of AHEAD workshops
10. March 1st -6th, 05 Consultation with AUB and the progress of GRF and VSP
11. March 6th, 05 arrive Amman from Beirut/Lebanon
12. March 7th and 8th, 05 monitoring the progress of our GRF at UJ
13. March 9th, 05 depart from Amman/Jordan to Honolulu.

Fifth Trip

September 15-October 15, 05

1. September 15, 05 leave HONOLULU
2. September 17, 05 arrive Amman/Jordan
3. September 19-22, 2005 attend the International Environmental Health Conference
4. September 23, 2005 leave Amman/Jordan to Istanbul/Turke
5. September 24, 05 leave Istanbul/Turkey to Diar-Baker at the Iraqi Borders
6. September 25- October 2, 05 meetings, field visits, documentation, inventory..etc.
7. October 3-5, 05 Travel to Erbil
8. October 6-8, 05 meet with the Deans and their committees
9. October 9, 05 drive out of Iraq to Diar-Baker
10. October 10, 05 leave Diar-Baker to Istanbul/Turkey
11. October 12, 05 arrive Amman from Istanbul/Turkey
12. October 13-14, 05 meeting with our partners at the University of Jordan
13. October 15, 05 depart from Amman/Jordan to Honolulu.