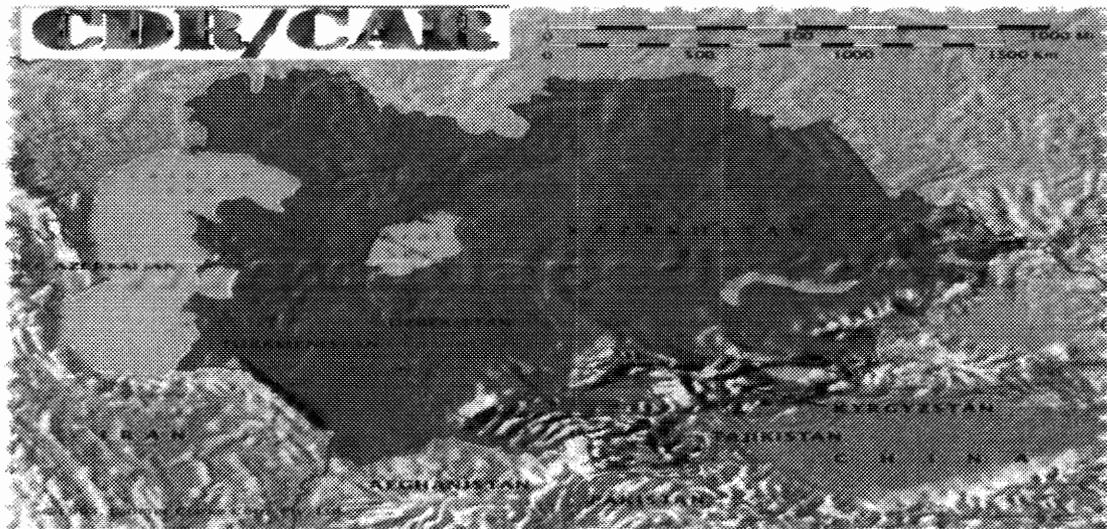




Embassy of the United States
Tel Aviv, Israel

Cooperative Development Research Program



Grant Agreement No.:

TA-MOU-06-C25-044

Participants:

Israel (HUJI), Ethiopia (JU) and USA (UOG)



U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT
BUREAU FOR GLOBAL PROGRAMS, FIELD SUPPORT & RESEARCH
CENTER FOR ECONOMIC GROWTH
WASHINGTON, D.C.

[Copy 4 of 7]



Embassy of the United States of America

June 13, 2007

Dr. Eran Vardi
Director of Authority for R&D
The Hebrew University
Jerusalem 91904
Israel

Subject: **Grant No. TA-MOU-06-C25-044**

Dear Dr. Vardi:

Pursuant to the authority contained in the Foreign Assistance Act of 1961, as amended, the Federal Grant and Cooperative Agreement Act of 1977, as amended, and the Interagency Agreement between the Agency For International Development and the U.S. Department of State of August 26, 2005, as amended, the U.S. Embassy/Tel Aviv (hereinafter referred to as "*Embassy*" or "*Grantor*") hereby grants to the Hebrew University of Jerusalem (hereinafter referred to as "*HUJI*" or "*Grantee*") the sum of one hundred thirty one thousand one hundred three U.S. dollars (\$199,815) to provide support for a research program entitled "*Enhancement of Drought Resistance in Sorghum under Ethiopian Conditions*" as more fully described in Attachment 2, entitled "Program Description", and the Grantee's proposal, as revised, which is made a part of the Grant and incorporated herein by reference.

This Grant is effective and obligation is made as of the date of this letter and shall apply to commitments made by the Grantee in furtherance of program objectives during the period beginning *July 1, 2007* and ending on or before *June 30, 2011*.

This Grant is made to the Grantee on condition that the funds will be administered in accordance with the terms and conditions as set forth in Attachment One, entitled "Schedule", Attachment Two, entitled "Program Description", Attachment Three, entitled "Payment Forms", Attachment Four, entitled "Performance Report - Guidelines", Attachment Five, entitled "Standard Provisions", and Attachment Six, "Interagency Edison", which have all been agreed to by your organization.

In order to comply with regulations applicable to this Grant, it is essential that all documentation provided as attachments to this letter be thoroughly reviewed. The Grantee is responsible for full understanding of, and compliance with, all applicable regulations. However, in some cases, information set forth in the attached is subject to interpretation and warrants specific guidance. Such additional information is set forth below.

I. SUBGRANTS

Grants are being awarded to Prime institutions to work in collaboration with Sub institutions. Notwithstanding actual billing and payment procedures, the full Grant amount and research activity is formally attributed to the Prime, or HUJI in this case. The only legal relationship the U.S. Government has is with the prime institution.

The Grantee is required to establish a legal, binding relationship with the Subgrantee (Middle East Region and Developing Countries institutions) you intend to collaborate with. That relationship can be in the format essentially identical to this award document made by the U.S. Government, or in any other appropriate format.

A copy of each Subgrant agreement must be submitted to the Embassy within ninety (90) days after the start of the grant period.

Regardless of the Subgrant format chosen by the Grantee, care should be taken to ensure that required regulations have been applied. Subgrants may only be awarded to responsible institutions which possess the potential ability to perform successfully.

Since your institution will be held accountable for the grant in its entirety, it is important that the Subrecipient institution be held accountable by your institution. In this manner, the prime protects itself from unnecessary risk of disallowed costs.

However, in no case can a U.S. Government responsibility be claimed, construed, or inferred from the use of any Subgrant agreement by the Grantee.

II. AUDITS

In order to receive advance payments, all institutions (prime and sub) must have had a current audit performed by an independent external CPA firm in accordance with applicable regulations (i.e., those pertaining to the country where the institution is located as well as Government Auditing Standards developed by the Comptroller General of the United States). Any adverse findings contained in such audits, as determined by the Grant Officer or his designee, must have been adequately resolved. In the event an audit has not been performed recently, the Grantor (U.S. Government in the case of the prime, prime in the case of the sub) may elect to perform a limited financial review, conducted at the discretion of the Grantor, prior to authorizing advance payments. In this case, the Recipient of the advance must agree to comply with all future audit requirements.

III. STANDARD PROVISIONS

All Mandatory and Required as Applicable Standard Provisions indicated to be applicable in later sections of this Grant should be reviewed, understood, and adhered to. However, the following are considered to be most frequently applied to this program:

A. Revision of Grant Budget

In many cases, specific Grant Officer approval for budget changes is not required (if the need for a change is identified, the Grantee should refer specifically to the provision to determine whether or not Grant Officer approval is required). However, there may be other changes that should be discussed with the Project Officer, or his designee, to ensure continued agreement on the direction of the program. The Grantee should consider factors such as impact and reasonableness in determining which non-mandated changes should be brought to the attention of the Embassy. In no case will a change be approved which is contrary or detrimental to the original or detrimental to the objectives of the project as technically approved by the science review panel.

B. Air Travel and Transportation

Project Officer approval is required on all international travel. All air travel and shipments are to be made on U.S. flag air carriers when available. Exceptions to the requirement may be made if a U.S. flag air carrier cannot provide the foreign air transportation needed, or if use of such service will not accomplish the U.S. Government's mission (see circumstances outlined in the provision for specific allowable exceptions). Economic considerations do not override this provision. In the event U.S. flag carrier service is deemed to be unavailable, the Grantee must prepare and retain for audit purposes, a certificate of unavailability.

C. Procurement of Goods and Services

The Grantee must ensure high standards with respect to procurement. When possible, procurement should be competed to the maximum extent practicable. Technical needs should be determined, and all other factors being equal, purchase should be made at the lowest price available. Contracts meeting applicable thresholds should include appropriate legal remedies in case the subcontractor fails to perform. Wherever possible, the Grantee should use U.S. and small business sources.

D. Eligibility Rules for Goods and Services

The Grantee (and its Sub) may not purchase the following using U.S. Government funds: military equipment, surveillance equipment; police or other law enforcement commodities or services; abortion equipment or services; luxury goods or gambling equipment; or weather modification equipment.

The Grantee may not purchase from any source listed on the List of Parties Excluded from Federal Awards. To this end, the Grantee may rely on a self-certification provided by the supplier, unless there is any knowledge by the Grantee that the certification should not be accepted.

Specific prior, written approval from the Grant Officer is required prior to purchase of the following: agricultural commodities; motor vehicles; pharmaceuticals; pesticides; rubber compounding chemicals and plasticizers; used equipment; U.S. Government-owned excess property; or fertilizer. In the event the Grantee outlined a specific need for any of these goods in its proposal, and provided full disclosure of the reason, source, method of selecting the source, price comparisons, and other pertinent information, the Grantee may assume that approval of such specific goods is provided through award of this document. Any changes to requirements outlined in the proposal must be submitted for review and approval.

Also, attached is a partial list of authorized countries for acquisition of goods and services. In general, the order of preference is (1) U.S.; (2) Cooperating Country (i.e., country of location for prime and sub); (3) selected free world countries (see Code 941 countries, attached); and (4) special free world countries (Code 935, attached). These rules apply to source (place of purchase), origin (place of manufacture) and nationality (of supplier). When the Grantee uses other than U.S., documentation must be retained for audit purposes which indicates one of the following conditions: (1) procurement was of an emergency nature; (2) higher preference sources' prices are at least 50% higher; (3) impelling local political considerations preclude consideration of higher preference sources; (4) item is only available from the intended source; or (5) procurement from the identified source best promotes the objectives of the U.S. Foreign Assistance program.

IV. GRANT ADMINISTRATION AND CLOSEOUT

A. Responsibilities and Authority

1. Only the Grant Officer has the authority to modify the terms and conditions of this Grant. The Grantee must exercise care in considering various situations. In general, if any portion of the Grant must be changed to reflect the Grantee's intentions, the Grant Officer should be so notified, in writing with a copy to the Project Officer, or his designee. This correspondence should outline the change needed, the reason, and the impact (technical and financial), and should request approval to make such change.
2. The Project Officer, or his designee, is the Embassy's contact point for all issues not addressed to the Grant Officer. This includes, but is not limited to, technical clarifications, certain budget changes, voucher tracking, etc.

B. Closeout Procedures

1. The following definitions shall apply for the purpose of this section:
 - a. **Closeout:** The closeout of a Grant is the process by which the Embassy determines that all applicable administrative actions and all required work of the Grant have been completed by the Grantee and the Embassy.
 - b. **Date of Completion:** The date of completion is the date on which all work under the grant is actually completed, or the date on the award document, or any supplement or amendment thereto, on which the Embassy sponsorship ends.
 - c. **Estimated Completion Date:** The date contained in the Grant which is anticipated to be the "Date of Completion". This date may be modified to reflect delays or other reasonable circumstances which warrant extension of the time period. Requests for such revisions should comply with the above IV.A.1. requirements for Grant Officer approval, and should be submitted sufficiently (not less than 120 days) in advance of the estimated completion date contained in the Grant to permit evaluation and action prior to that time.

- d. Disallowed Costs: Disallowed costs are those charges to a Grant that the Grant Officer determines to be unallowable, in accordance with the applicable Federal cost principles or other conditions contained in the Grant.
2. The following outlines specific requirements which must be met prior to initiation of the closeout process:
 - a. Upon request, the Embassy shall make prompt payments to a Grantee for allowable reimbursable costs under the Grant being closed out.
 - b. The Grantee shall immediately refund any balance of unobligated (unencumbered) cash that the Embassy has advanced or paid and that is not authorized to be retained by the Grantee for use in other Grants.
 - c. The Embassy shall obtain from the Grantee within 90 calendar days after the date of completion of the Grant, all financial, performance, and other reports required as the condition of the Grant. The Embassy may at its discretion grant extensions when requested by the Grantee.
 - d. When authorized by the Grant, the Embassy shall make a settlement for any upward or downward adjustments, to the Embassy's share of costs after these reports are received.
 - e. The Grantee shall account for any property acquired with funds provided herein or received from the U.S. Government, as discussed in Attachment One, Schedule.
 - f. In the event a final audit has not been performed prior to the closeout of the Grant, the Embassy shall retain the right to recover an appropriate amount after fully considering the recommendations on questioned costs resulting from the final audit.

Please sign all copies of this letter to acknowledge receipt of this Grant. Keep **two** copies for your files and **one** for the Principal Investigator, and return the **original** and all remaining copies to this office.

Sincerely,



Robert J. Tansey
Grants Officer
American Embassy, Tel Aviv

ATTACHMENTS:

<u>No.</u>	<u>Title</u>
ONE	SCHEDULE
TWO	PROGRAM DESCRIPTION
THREE	PAYMENT FORMS
FOUR	PERFORMANCE REPORTS - GUIDELINES
FIVE	STANDARD PROVISIONS - MANDATORY & REQUIRED AS APPLICABLE
SIX	INTERAGENCY EDISON

ACKNOWLEDGED:

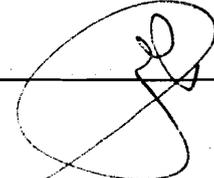
DATE: 19-06-2007

INSTITUTION: **Hebrew University of Jerusalem**

AUTHORIZED INDIVIDUAL: _____

SIGNATURE:  TITLE: Dr. ERAN VARDI
DIRECTOR
AUTHORITY FOR RESEARCH
AND DEVELOPMENT

PRINCIPAL INVESTIGATOR: **Dr. Yehoshua Saranga** DATE: 28/6/2007

SIGNATURE:  TITLE: _____

FISCAL DATA:

Proposal No.:	C25-044
Appropriation No.:	19-50113
Obligation No.:	4437665044
Amount Obligated:	\$ 113,595
Obligation No.:	4437664013
Amount Obligated:	\$ 86,220
Allotment No.:	4437
Function Code:	8550
Object Code:	4220
Total Obligated:	\$ 199,815
Estimated Amount:	\$ 199,815
Project Office:	U.S. Embassy Tel Aviv, ECON/AID
Voucher Paying Office:	RAMC/Bangkok

NUMERICAL LIST OF CURRENT AID GEOGRAPHIC CODESCode 935:SPECIAL FREE WORLD

Any area or country in the Free World* including the cooperating country itself.

Code 941:SELECTED FREE WORLD

Any independent country in the Free World*, excluding the cooperative country itself and the following:

Europe

Albania
Andorra
Armenia
Austria
Azerbaijan
Belgium
Bosnia and Herzegovina
Bulgaria
Belarus
Croatia
Czech Republic
Denmark
Estonia
Finland
France
Georgia
Germany
Greece
Hungary
Ireland
Italy
Latvia
Liechtenstein

Others

Angola
Australia
Bahamas
Bahrain
Canada
Cyprus
Gabon
Hong Kong
Iceland
Japan
Kazakhstan
Kuwait
Kyrgyzstan
Mongolia
New Zealand
Qatar
Saudi Arabia
Singapore
South Africa
Taiwan**
Turkmenistan
United Arab Emirates
Uzbekistan

* "Free World" excludes the following areas or countries:

Afghanistan, Cambodia, Cuba, Iran, Iraq, Laos, Libya, North Korea, People's Republic of China, Syria, and Viet Nam.

** Has the status of a "geopolitical entity", rather than an independent country.

Attachment Two

***Program Description
(Technical Work Plan - excerpts)***

ATTACHMENT TWO - Work Plan

Technical Work Plan

Plant materials:

The germplasm collection, to be studied in year 1, will consist of: Ethiopian sorghum germplasm collected by the Institute of Biodiversity Conservation & Research (IBCR), cultivars developed by the Ethiopian public research institutions, Ethiopian sorghum landraces, previously studied stay-green Ethiopian germplasm, lines developed within the INTSORMIL CRSP project, selected materials developed by international research organizations, and cultivars from other drought prone areas. A written permission will be obtained in cases of intellectual properties encumbrances.

Two high yielding cultivars (Birmash and Baji) are currently (2005) being crossed with each of 4 selected drought tolerant (based on previous observations) Ethiopian lines (76T1No.23, Meco-1, E-36-1 and Gambela 1107) to produce F1 seeds (all the lines being crossed are under public domain). The F1 progenies will be grown in 2006 and self fertilized to produce F2 seeds. Segregating F2 plants will be grown in 2007 and selfed to produce F3 families (mapping population), each consisting of about 200 lines.

Field trial repetition over location and years:

Two alternative approaches will be used for the repetition of our field trails. The screening of germplasm collection will be conducted in one year under four environments, two irrigation regimes in Israel + two locations in Ethiopia. This approach was selected in order to create during year 1 a reliable basis for selecting a mapping population to be examined in year 2. On the other hand, the phenotyping of mapping population will be conducted over two years (years 2 and 3) in Ethiopia, to keep the number of field plots to be characterized each year (ca 1000 per experiment) within a reasonable size. More specific details are listed below.

Year 1:

The germplasm collection of about 50 sorghum genotypes including parental genotypes (see above) as well as additional genotypes and Ethiopian landraces will be studied in year 1 (. Experiments will be conducted both in Israel (Rehovot) under well-watered control and water-limited treatment and in Ethiopia (Sirinka and Nazareth) under dry land conditions. Each genotype X treatment combination will be four times replicated in 2x5m plots. In both locations plants will be characterized for productivity in terms of total dry matter (DM) and grain yield, phenology (time of heading and ripening), plant height, yield components (number of grains and grain weight). In addition, in Israel plants will be also characterized for drought related physiological traits - ash content (an indicator of water use efficiency, e.g. DM produced per unit of water used), osmotic adjustment (difference in osmotic potential between non-stressed and

stressed leaves), and canopy temperature, as well as for grain protein content. Susceptibility index (Fischer & Maurer, 1978) will be calculated where applicable. The experiments will be sown in Israel in early spring (mid-March) and in Ethiopia in the summer (July). The Ethiopian CI will stay in Israel during spring time and in Ethiopia during the summer so that he will take a major part in both experiments. The experiment in Ethiopia will be jointly conducted by the Ethiopian PI and CI and visited by the Israel PI. These experiments will establish a multiple-environment phenotypic data upon which to base selection of a cross for mapping, as well as ten selected genotypes (resistant and susceptible) to be used for detailed physiological study in year 2.

Year 2:

Ethiopian CI will stay in Israel in early spring and study in further detail the drought resistance characters of 10 selected (tolerant and susceptible) genotypes under the supervision of the Israeli PI. Plants will be grown under well-watered control and water-limited treatments in four replicates. In addition to plant productivity and the physiological parameters specified above (year 1) plants will be also subjected to measurements of gas exchange (photosynthetic and transpiration rates), stomatal conductance, chlorophyll fluorescence (an indicator of photosynthetic efficiency) and chlorophyll content and metabolic profiling.

One F3 population, among the 8 (2x4) produced, will be selected based on the performance of its parental lines (year 1) and adequate levels of DNA polymorphism, and characterized. Plants will be sown in Ethiopia (Sirinka) in the summer (July), under dryland conditions in 5 replicates and characterized primarily for plant productivity traits (as specified year 1) and grain protein content. Selected physiological parameters (to be determined based on year 1 results) will also be determined using instruments that will be purchased for this purpose. This experiment will be conducted by the Ethiopian PI and Ethiopian CI under the supervision of the Israeli PI. The populations not used will be archived for future work.

Simultaneously, seedlings of the selected mapping population will be grown in Israel, DNA samples will be extracted and shipped to the US for genotyping.

Year 3:

The characterized F3 population (from year 2) will be used for QTL mapping. The mapping population will be genotyped in the USA using about 100 DNA markers spaced at average 10 cM intervals over the sorghum genome (chosen from more than 2,000 markers mapped in the lab of the American PI). To the extent possible, we will use PCR based markers that are more readily applied in Ethiopia. The sorghum map includes about 130 SSR markers (described above). In addition the Paterson lab is in the process of optimizing several hundred "intron scanning" primers, basically PCR primers that target exons (to be usable across taxa), but which amplify across introns to take advantage of the high level of polymorphism found in these regions.

Finally, RFLPs provide a 'failsafe' method that has been developed extensively in sorghum and can be used if necessary to fill gaps in the map. The Ethiopian PI will stay in the USA during this year and will conduct this activity under the supervision of the American PI.

Simultaneously, the Ethiopian CI will conduct in Ethiopia an additional phenotypic characterization of the F3 population, as detailed in year 2. This experiment will be supervised and visited by the Israeli PI.

Data analysis will essentially follow many similar studies of F3 progenies that have been done in the Paterson lab (eg. Paterson et al 1991). Whereas prior studies relied on MapMaker-QTL, we will also engage QTL Cartographer which offers numerous additional features to better describe biometrical parameters of individual QTLs.

Year 4:

The ten selected genotypes will be evaluated in Ethiopia in each in two (Sirinka, Nazareth) or more drought prone locations, which represent different geographical locations of the country (4 replicates each). This will further establish the basis for selection of drought tolerant cultivars to be distributed for use in the short term. These experiments will be conducted by the Ethiopian CI under the supervision of the Israeli PI.

Simultaneously, marker assisted selection for major QTLs associated with drought resistance will be initiated in Ethiopia by the Ethiopian PI under the guidance of the American PI, using equipment that will be purchased for this purpose.

Time Chart

Activity	Year 1	Year 2	Year 3	Year 4
Gemplasm study (Israel)	_____			
Gemplasm study (Ethiopia)		_____		
Physiological study (Israel)		_____		
F3 study (Ethiopia)		_____		
Genetic mapping (USA)			_____	
F3 study (Ethiopia)			_____	
Marker assisted selection (Ethiopia)				_____
Advanced germplasm test (Ethiopia)				_____

Attachment Three

Payment Forms

(Payment forms are also available by email upon request)

INSTRUCTIONS

1. Schedule

Financial Reports should be made on a quarterly basis unless otherwise agreed to by the Grant Officer (see attachment 1, page 11, Reporting and Evaluation). Advance payments should be requested for a period of up to three months only.

2. Use of Forms

It is essential that only the following forms be used when requesting Advance or Reimbursement type payments. **No other forms will be accepted for payment processing!**

Photocopy the forms for re-use or you can receive payment forms by e-mail. Please write to: ecoaidta@netvision.net.il (formatted for MS-Word or other; call us if you have any question)

- To request advance payment, use forms 1 & 3
- To request reimbursement, use forms 1, 2 & 4 (if applicable)
- Use a separate set of forms for each grant participant
- Each submitted report must include an original and one copy of the set of forms

3. Payment Information

Payments shall only be made to named grant participating institutions (***personal accounts are not allowed***). Payment information must be **detailed, accurate and complete** for each submission.

Payments can be made either by bank check or Electronic Funds Transfer (EFT).

Bank check can be sent through the Grantee's institution or directly to the Sub-grantee's institution. EFT can be sent directly to payee's account or via a correspondent bank.

- If EFT (Electronic Funds Transfer) is requested, please provide the following

ACCOUNT NAME
ACCOUNT NO.
BANK NAME & FULL ADDRESS
BRANCH NAME & NUMBER
SWIFT CODE

- If EFT via correspondent bank, please provide the following

ACCOUNT NAME	CORRESPONDENT BANK NAME & ADDRESS
ACCOUNT NO.	BRANCH NAME & NUMBER
BANK NAME & FULL ADDRESS	ACCOUNT NO.
BRANCH NAME & NUMBER	SWIFT CODE
SWIFT CODE	

- If check is requested, please provide the following

PAYEE NAME
PAYEE ADDRESS
ACCOUNT NO. (IF NEEDED)

Note: The method of payment should be clearly marked on the cover page (form 1), followed by accurate, full and valid bank details to allow funds to be transferred in a timely fashion.

For any questions, please do not hesitate calling us at 03-519-7360/2.

Embassy of the United States, Tel Aviv

(Payment forms: CDR & MERC)

REQUEST FOR PAYMENT COVER PAGE

(Please submit original and one copy from each SET OF FORMS PER PARTICIPANT)

From: _____
(Grantee/Subgrantee Institution's Name)

Grant No.: TA-MOU- - -

To: Mr. Boaz Ayalon
American Embassy Tel Aviv
ECON/AID Section
71 Hayarkon Street
Tel Aviv 63903

Advance - Attached is a duly signed Form no. 3

Reimbursement - Attached is a duly signed Form no. 2

(Please select one of the above)

Period covering this request: from _____ to _____

Payment Information

(please provide relevant information only):

PAYMENT METHOD	<input type="checkbox"/> EFT <input type="checkbox"/> Check	<input type="checkbox"/> Send to Prime Grantee <input type="checkbox"/> Send direct to Subgrantee <input type="checkbox"/> Send to Subgrantee via Prime Grantee
PAYEE NAME		
STREET and NUMBER		
CITY & POSTAL CODE		
COUNTRY		
BANK NAME & ADDRESS		
ROUTING NUMBER		
ACCOUNT NUMBER		
AMOUNT \$		
SPECIAL INSTRUCTIONS		
ADDITIONAL INFORMATION		

SIGNED: _____

NAME: _____

TITLE: _____

DATE: _____

Embassy of the United States, Tel Aviv

(Payment forms: CDR & MERC)

FEDERAL CASH ADVANCE STATUS REPORT

(Please submit original and one copy from each SET OF FORMS PER PARTICIPANT)

Grantee/Subgrantee: _____ Grant No. TA-MOU- - -

A. Period covered by this report: from _____ to _____ Grant Termination

Period covered by the next report: from _____ to _____

B. Cash Advance Use and Needs: (all in US dollars)

- | | |
|---|----|
| 1. Cash advance on hand at the beginning of this reporting period | \$ |
| 2. U.S. Treasury check advance(s) received during this reporting period | \$ |
| 3. Interest earned on cash advance during this reporting period | \$ |
| 4. GROSS cash advance available during this reporting period (lines 1,2, &3) | \$ |
| 5. LESS, interest remitted to AID during this reporting period | \$ |
| 6. NET cash advance available during this reporting period, including subadvances | \$ |
| 7. Total disbursements during this reporting period, including subadvances
(Footnote 1) | \$ |
| 8. Amount of cash advances available at the end of this reporting period
(Footnote 2) | \$ |
| 9. Projected disbursements, including subadvances, for the next reporting period
(Footnote 3) | \$ |
| 10. Additional cash advance requested for the next reporting period | \$ |
| 11. Total interest earned on cash advance from the start of the grant
to the end of this reporting period, but not remitted to AID | \$ |
| 12. Total cash advance to subgrantee, if any, as of the end of this reporting period | \$ |

Footnotes

1. The Grantee shall submit a cumulative detailed report of disbursements by BUDGET Line item quarterly.
2. If the amount of disbursements in 7 is equal to or more than the advance amount in 6, the total must be '0'!
3. The Grantee shall attach a Summary, by BUDGET Line item, of its projected disbursements for the next reporting period.

C. Certification

The undersigned hereby certifies: (1) that the amount in paragraph B.9 above represents the best estimate of funds needed for the disbursements to be incurred over the period described, (2) that appropriate refund or credit to the grant will be made in the event of disallowance in accordance with the terms of the grant, (3) that appropriate refund or credit to the grant will be made in the event funds are not expended, and (4) that any interest accrued on the funds made available herein will be refunded to AID.

SIGNED: _____ NAME: _____

TITLE: _____ DATE: _____

Attachment Four

Performance Reports
-Guidelines-

INTERIM GUIDELINES ON
PERFORMANCE REPORT PREPARATION FOR CDR PROJECTS

GENERAL COMMENTS

Although reports are to be written by the Principal Investigator (P.I.), they should reflect the work of all project institutions involved in the research. Each report should be written in English and should be submitted according to the Grant Agreement, starting eight months after the project start date. This start date may not be changed without the specific, prior written approval of the granting office in the U.S. Embassy Tel Aviv.

TYPES OF REPORTS

Two types of performance reports are required:

- 1) Semi-Annual Progress Reports (expected within 60 days after the end of each six month period of the grant) summarizing progress during each six month period and highlighting constraints.
- 2) The Final Report (expected not later than 90 days after the end date of the grant period) summarizing all the project's accomplishments.

Semi-Annual Reports should be sent to the following distribution list:

1. USAID/EGAT: U.S. Agency for International Development; Bureau for Economic Growth, Agriculture and Trade; Room 2.11-151 RRB, 1300 Pennsylvania Ave, NW; Washington, D.C. 20523-2110. One copy
2. RSP/NAS: Research Support Program for USAID; Policy and Global Affairs; National Academy of Sciences; 500 5th Street, NW, Mailstop W517; Washington DC 20001 USA. Two copies
3. U.S. Embassy in Israel: ECON/AID Office; U.S. Embassy; 71 Hayarkon Street; Tel Aviv 63903, Israel (or via e-mail: ecoaidta@netvision.net.il) One copy
4. The USAID Office (Field Mission) in the non-Israeli CDR target-country. One copy

Final Reports should be sent to the above distribution list and in addition sent to: USAID Development Experience Clearing House; ATTN: Documents Acquisitions; 8403 Colesville Road, Suite 210; Silver Spring, MD 20910-6368 (or via e-mail: docsubmit@dec.cdie.org) One copy

SEMI-ANNUAL PROGRESS REPORT

The purpose of the Semi-Annual Report is to summarize significant scientific results from the previous six months' work and to describe advances in scientific capabilities in developing countries (Section I), along with managerial issues (Section II) that have arisen in the last six months. Semi-Annual Reports should be 6-10 pages long plus a Cover Sheet. Describe in detail any significant changes in the project.

Semi-Annual Reports should be prepared in the following format:

Cover Sheet: Identify as a SEMI-ANNUAL REPORT, Covering Period [Date to Date]; state that it is "Submitted to the U.S. Agency for International Development; Bureau for Economic Growth, Agriculture, and Trade"; give the TITLE OF PROJECT; Project Number and Award Number; identify the Principal Investigator, along with his/her institution, address, telephone number, and e-mail address; list each of the Co-Principals at each cooperating institution, along with his/her institution, address, telephone number, and e-mail address; and list the current contact information for the administrative officials at each institution. See sample cover page attached. **Note:** Be sure to provide current contact information for all investigators and institutions, since personnel and contact information may have changed since the original project was approved.

Executive Summary: Typed double-spaced on a separate page. No longer than three-fourths of a page. Use non-technical language. Describe the purpose of the project. Briefly describe the findings over the past six months and explain how these findings contribute to project objectives and to international development. Clearly describe the nature of collaboration during the last six months. **Note:** The Executive Summary is extremely important. It is the section of the report that policy makers normally use to assess the impact of USAID research programs. Write the Executive Summary so that the content is clear, concise, and understandable to a non-scientist.

Section I: Technical Progress

A) Research Objectives: A brief statement of project objectives. Do not include unnecessary background, history, or literature review. Focus on objectives covered since the previous Semi-Annual Report.

B) Research Accomplishments: Provide descriptions of results that are supported, if needed, with a few key tables and/or photos. Data should be clearly presented. If results have been published, attach reprints as appendices. Describe any project products or procedures that have been patented. Focus on accomplishments achieved since the previous Semi-Annual Report.

C) Scientific Impact of Collaboration: How have collaborating scientists participated in the project during the reporting year? How has the project contributed to the scientific strength of the developing-country partner(s)?

D) Description of Project Impact: Are results from the project being applied? If so, how? If not,

what are the anticipated uses?

E) Strengthening of Developing-Country Institutions: Describe any project investments such as facilities, equipment, or training that have been made. Summarize new research or managerial skills that have been acquired. Describe efforts to strengthen institutional partners in the target country.

F) Future Work: What remains to be done? Is the project on schedule? Has the work plan been revised? If so, describe the revision.

Section II: Project Management and Cooperation

A) Managerial Issues: Describe any project managerial issues that have arisen since the last Semi-Annual Report, including any administrative barriers to cooperation, budgetary concerns, staff changes, timetable changes, or research site changes. Describe and justify major changes to the budget. i.e., 10% or more in budget items. (Remember that any budget changes must have been pre-approved by U.S. Embassy Tel Aviv).

B) Special Concerns: Have any protocols that address "special concerns" (e.g. human subjects, intellectual property rights, etc.) changed? Attach any relevant documents, such as revised consent forms or patent disclosures.

C) Collaboration, Travel, Training and Publications: Briefly describe collaborative activities.

1) Provide a roster listing all the participants on the project; include each person's name and position (such as co-PI, technician, Ph.D. student, etc.).

2) Provide a list of completed travel and training since the last report. Indicate who was involved, the purpose of the travel or training, and when and where the activities occurred.

3) Provide a list of project publications that have appeared since the last report. Clearly identify any joint publications that included target-country and Israeli co-authors on the same manuscript.

4) Very briefly describe the anticipated activities in next 6 months.

Note: The information provided in this section is essential for CDR to be able to report to the U.S. Government on whether it is meeting its objectives in promoting meaningful scientific cooperation.

D) Summary of Requests for CDR Program Actions. Indicate requests made to the U.S. Embassy in Tel Aviv or USAID/EGAT staff in Washington for assistance in promoting project productivity.

Note: All specific requests for Embassy Tel Aviv or USAID to act must be sent separately from progress reports, by either letter or e-mail to the ECON/AID Office, U.S. Embassy Tel Aviv.

Note on Publications: USAID expects CDR investigators to publish their results in scientific journals, and especially encourages research that leads to publications jointly authored by researchers from Israel and developing countries. Joint publications in peer-reviewed international journals are important for researchers seeking new funding from USAID and other agencies. All new publications from work supported by the grant should be included in an appendix to the Semi-Annual Report.

The following Acknowledgment should be included in project-funded publications:

"This research was supported (in part [if applicable]) under Grant No. _____ funded by the U.S.-Israel Cooperative Development Research Program, Bureau for Economic Growth, Agriculture, and Trade, U.S. Agency for International Development."

FINAL REPORT

The purpose of the Final Report is to link all findings from the project so that the overall effectiveness and impact of the entire project can be assessed. Project effectiveness should be discussed both in terms of scientific accomplishments and relevance of findings to international development. Information in Final Reports may be published by USAID in non-technical publications. The Final Report should not be a repetition of Annual Reports. It is an overview of accomplishments from the entire project. The Final Report generally should be 10-25 pages long, and should include the sections below.

A) Cover Sheet: Identify as the FINAL REPORT, Covering Period [Date to Date]; state that it is "Submitted to the U.S. Agency for International Development; Bureau for Economic Growth, Agriculture, and Trade"; give the TITLE OF PROJECT; Project Number and Award Number; identify the Principal Investigator, along with his/her institution, address, telephone number, and e-mail address; list each of the Co-Principals at each cooperating institution, along with his/her institution, address, telephone number, and e-mail address; and list the current contact information for the administrative officials at each institution. See sample cover page attached. **Note:** Be sure to provide current contact information for investigators and institutions, since they may have changed since the original project was approved. Also provide current contact information for any investigators who have left the project.

B) Table of Contents

C) Executive Summary: On a separate page, and no longer than one page. Use non-technical language to review and summarize the entire project. The Executive Summary should clearly place project accomplishments in the overall context of international development. Also briefly describe any technical skills, innovation, or knowledge acquired by the developing-country partner as a result of the project. **Note:** The Executive Summary is extremely important and the section of the report that policy makers use to assess the impact of USAID research programs. Write this section so that the content is clear and concise.

D) Research Objectives: Describe why your project was conducted. What problem was addressed and why is the problem important to development? Briefly describe how the project fits into ongoing research by other scientists, and reference pertinent literature. Describe the innovative aspects of the project. Briefly explain how other organizations supported the project.

E) Methods and Results: Summarize how data were collected. Present data through use of tables, charts, photographs. When appropriate, data should be statistically analyzed. This section should

be presented as if for publication in a journal.

F) Impact, Relevance, and Technology Transfer: How will findings be useful in the developing country? Describe the project's impact on individuals, laboratories, departments, and institutions. Will results be used? If so, how, by whom, when? Are larger scale trials warranted? What difference has the project made; now that the project is complete, what new capacity, equipment or expertise will be acquired by the developing country? How have the scientific capabilities of the CDR target country scientists been improved?

G) Project Activities/Outputs:

- 1) List the meetings held over the course of the entire project; include time, location, attendance.
- 2) List the training that occurred over the course of the project. Indicate who was trained, the purpose of the training, and when and where the activities occurred.
- 3) List the publications and patents for the entire project. Clearly identify all joint publications that included co-authors from Israel and the CDR target country on the same manuscript.

H) Project Productivity: Did the project accomplish all of the proposed goals? If not, why not?

I) Future Work: Will the project lead to future work? Describe.

J) Literature Cited: Provide a list of references cited throughout the report.

Note on Publications: USAID expects CDR investigators to publish their results in scientific journals, and especially encourages research that leads to publications jointly authored by researchers from Israel and developing countries. Joint publications in peer-reviewed international journals are important for researchers seeking new funding from USAID and other agencies. All publications from work supported by the grant should be included in an appendix to the Final Report.

The following Acknowledgment should be included in project-funded publications:

"This research was supported (in part [if applicable]) under Grant No. _____ funded by the U.S.-Israel Cooperative Development Research Program, Bureau for Economic Growth, Agriculture, and Trade, U.S. Agency for International Development."

Note: Prior approval of the granting office in the U.S. Embassy Tel Aviv is required for any changes in the project's workplan, budget, management or cooperation structure, or terms of agreement. Inclusion of information in progress reports does not negate this requirement to obtain prior permission from the embassy via a separate request.

SEMI-ANNUAL REPORT

Covering period from: (Date to Date)

Submitted to the U.S. Agency for International Development; Bureau for Economic Growth,
Agriculture and Trade

TITLE OF PROJECT

Project Number (e.g. C24-000) and Award Number (e.g. TA-MOU-0000)

Principal Investigator: [NAME]

Grantee Institution: [NAME]

Address:

Telephone Number:

FAX Number

E-mail address:

Co-Principal Investigator #1: [NAME]

Institution

Address:

Telephone Number

FAX Number

E-mail address:

Co-Principal Investigator #2:

Etc.

Administration Official: [NAME]

Institutional Affiliation:

Address:

Telephone Number

FAX Number:

E-mail address:

Administration Official: [NAME]

Institutional Affiliation:

Address:

Telephone Number

FAX Number:

E-mail address:

ATTACHMENT SIX



The following Internet-based system, *Interagency Edison*, should be used by both Grantees and Sub-Grantees to report their patentable inventions that are developed using USAID funding.

Internet Address: < <http://www.iedison.gov/> >

Interagency Edison provides Federal grantee/contractor organizations and participating federal agencies with the technology to electronically manage extramural invention portfolios in compliance with federal reporting requirements.

Interagency Edison was developed by the Office of Policy for Extramural Research Administration, National Institutes of Health, Bethesda, Maryland.

What is Interagency Edison?

Interagency Edison supports a "Common Face" for Invention Reporting to the Government. The system has been designed to facilitate grantee/contractor institutions with the compliance of laws and regulations mandated by the Bayh-Dole Act whose purpose is to ensure transfer of technology from the research laboratory to the commercial/public sector.

What are the steps necessary to become an Interagency Edison user?

To become an efficient and effective Interagency Edison user, follow these steps:

1. Read the "Introduction to Interagency Edison".
2. Familiarize yourself with the functions and features of Interagency Edison.
3. Create a test account and practice using Interagency Edison in a test environment.
4. Create a formal account and access the secure production server.
5. If you have a large database of invention information, read the "Special Instructions for Organizations that have Large Databases".
6. If you have any additional questions, read "Frequently-Asked-Questions (and answers)".

USAID is one of the participating Government agencies in Interagency Edison.

While it is the responsibility of grantee/contractor institutions to comply with the Bayh-Dole Act, as stewards of federal funds, and to provide assistance with compliance, Interagency Edison has been designed to streamline the invention reporting process mandated by the Code of Federal Regulations:

37CFR Part 401 with particular emphasis on the Standard Patent Rights Clauses, Section 401.14.

Grantees/contractors of USAID may utilize the system to satisfy invention reporting requirements.

What are the major Invention Reporting requirements mandated by the Bayh-Dole Act?

The following checklist contains the major invention reporting requirements which are mandatory for compliance with the Bayh-Dole Act. This checklist is based on the 37 CFR 401.14:

- Employee Agreements [401.14(f)(2)]
- Invention Disclosure [401.14(c)(1)]
- Election of Title [401.14(c)(2)]
- Filing of Patent Application [401.14(c)(3)]
- Utilization Report [401.14(h)]
- Non-Election of Title [401.14(d)(1)]
- Foreign Filings [401.14(c)(3)]
- Flowdown of Requirements [401.14(g)]
- Acknowledgement of Government Support [401.14(f)(4)]
- Preference for U.S. Industry and Small Business [401.14(i)]
- March-In Rights [401.14(j)]
- Special University Provisions [401.14(k)]
- Decision to Discontinue Patent Prosecution [401.14(f)(3)]
- Utilization of License Revenue [401.14(k)(3)]

Following are the Sec. 401.14 Standard patent rights relevant clauses mentioned above:

(c) Invention Disclosure, Election of Title and Filing of Patent Application by Contractor

(1) The contractor will disclose each subject invention to the Federal Agency within two months after the inventor discloses it in writing to contractor personnel responsible for patent matters. The disclosure to the agency shall be in the form of a written report and shall identify the contract under which the invention was made and the inventor(s). It shall be sufficiently complete in technical detail to convey a clear understanding to the extent known at the time of the disclosure, of the nature, purpose, operation, and the physical, chemical, biological or electrical characteristics of the

invention. The disclosure shall also identify any publication, on sale or public use of the invention and whether a manuscript describing the invention has been submitted for publication and, if so, whether it has been accepted for publication at the time of disclosure. In addition, after disclosure to the agency, the Contractor will promptly notify the agency of the acceptance of any manuscript describing the invention for publication or of any on sale or public use planned by the contractor.

(2) The Contractor will elect in writing whether or not to retain title to any such invention by notifying the Federal agency within two years of disclosure to the Federal agency. However, in any case where publication, on sale or public use has initiated the one year statutory period wherein valid patent protection can still be obtained in the United States, the period for election of title may be shortened by the agency to a date that is no more than 60 days prior to the end of the statutory period.

(3) The contractor will file its initial patent application on a subject invention to which it elects to retain title within one year after election of title or, if earlier, prior to the end of any statutory period wherein valid patent protection can be obtained in the United States after a publication, on sale, or public use. The contractor will file patent applications in additional countries or international patent offices within either ten months of the corresponding initial patent application or six months from the date permission is granted by the Commissioner of Patents and Trademarks to file foreign patent applications where such filing has been prohibited by a Secrecy Order.

(d) Conditions When the Government May Obtain Title

The contractor will convey to the Federal agency, upon written request, title to any subject invention--

(1) If the contractor fails to disclose or elect title to the subject invention within the times specified in (c), above, or elects not to retain title; provided that the agency may only request title within 60 days after learning of the failure of the contractor to disclose or elect within the specified times.

(f) Contractor Action to Protect the Government's Interest

(2) The contractor agrees to require, by written agreement, its employees, other than clerical and nontechnical employees, to disclose promptly in writing to personnel identified as responsible for the administration of patent matters and in a format suggested by the contractor each subject invention made under contract in order that the contractor can comply with the disclosure provisions of paragraph (c), above, and to execute all papers necessary to file patent applications on subject inventions and to establish the government's rights in the subject inventions. This disclosure format should require, as a minimum, the information required by (c)(1), above. The contractor shall instruct such employees through employee agreements or other suitable educational programs on the importance of reporting inventions in sufficient time to permit the filing of patent applications prior to U.S. or foreign statutory bars.

(4) The contractor agrees to include, within the specification of any United States patent applications and any patent issuing thereon covering a subject invention, the following statement, "This invention was made with government support under (identify the contract) awarded by (identify the Federal agency). The government has certain rights in the invention."

(g) Subcontracts

(1) The contractor will include this clause, suitably modified to identify the parties, in all subcontracts, regardless of tier, for experimental, developmental or research work to be performed by a small business firm or domestic nonprofit organization. The subcontractor will retain all rights provided for the contractor in this clause, and the contractor will not, as part of the consideration for awarding the subcontract, obtain rights in the subcontractor's subject inventions.

(2) The contractor will include in all other subcontracts, regardless of tier, for experimental developmental or research work the patent rights clause required by (cite section of agency implementing regulations or FAR).

(3) In the case of subcontracts, at any tier, when the prime award with the Federal agency was a contract (but not a grant or cooperative agreement), the agency, subcontractor, and the contractor agree that the mutual obligations of the parties created by this clause constitute a contract between the subcontractor and the Federal agency with respect to the matters covered by the clause; provided, however, that nothing in this paragraph is intended to confer any jurisdiction under the Contract Disputes Act in connection with proceedings under paragraph (j) of this clause.

(h) Reporting on Utilization of Subject Inventions

The Contractor agrees to submit on request periodic reports no more frequently than annually on the utilization of a subject invention or on efforts at obtaining such utilization that are being made by the contractor or its licensees or assignees. Such reports shall include information regarding the status of development, date of first commercial sale or use, gross royalties received by the contractor, and such other data and information as the agency may reasonably specify. The contractor also agrees to provide additional reports as may be requested by the agency in connection with any march-in proceeding undertaken by the agency in accordance with paragraph (j) of this clause. As required by 35 U.S.C. 202(c)(5), the agency agrees it will not disclose such information to persons outside the government without permission of the contractor.

(i) Preference for United States Industry

Notwithstanding any other provision of this clause, the contractor agrees that neither it nor any assignee will grant to any person the exclusive right to use or sell any subject inventions in the United States unless such person agrees that any products embodying the subject invention or produced through the use of the subject invention will be manufactured substantially in the United States. However, in individual cases, the requirement for such an agreement may be waived by the Federal agency upon a showing by the contractor or its assignee that reasonable but unsuccessful efforts have been made to grant licenses on similar terms to potential licensees that would be likely to manufacture substantially in the United States or that under the circumstances domestic manufacture is not commercially feasible.

(j) March-in Rights

The contractor agrees that with respect to any subject invention in which it has acquired title, the Federal agency has the right in accordance with the procedures in 37 CFR 401.6 and any supplemental regulations of the agency to require the contractor, an assignee or exclusive licensee of a subject invention to grant a nonexclusive, partially exclusive, or exclusive license in any field of use to a responsible applicant or applicants, upon terms that are reasonable under the circumstances, and if the contractor, assignee, or exclusive licensee refuses such a request the Federal agency has the right to grant such a license itself if the Federal agency determines that:

- (1) Such action is necessary because the contractor or assignee has not taken, or is not expected to take within a reasonable time, effective steps to achieve practical application of the subject invention in such field of use.
- (2) Such action is necessary to alleviate health or safety needs which are not reasonably satisfied by the contractor, assignee or their licensees;
- (3) Such action is necessary to meet requirements for public use specified by Federal regulations and such requirements are not reasonably satisfied by the contractor, assignee or licensees; or
- (4) Such action is necessary because the agreement required by paragraph (i) of this clause has not been obtained or waived or because a licensee of the exclusive right to use or sell any subject invention in the United States is in breach of such agreement.

(k) Special Provisions for Contracts with Nonprofit Organizations

If the contractor is a nonprofit organization, it agrees that:

- (1) Rights to a subject invention in the United States may not be assigned without the approval of the Federal agency, except where such assignment is made to an organization which has as one of its primary functions the management of inventions, provided that such assignee will be subject

to the same provisions as the contractor;

(2) The contractor will share royalties collected on a subject invention with the inventor, including Federal employee co-inventors (when the agency deems it appropriate) when the subject invention is assigned in accordance with 35 U.S.C. 202(e) and 37 CFR 401.10;

(3) The balance of any royalties or income earned by the contractor with respect to subject inventions, after payment of expenses (including payments to inventors) incidental to the administration of subject inventions, will be utilized for the support of scientific research or education; and

(4) It will make efforts that are reasonable under the circumstances to attract licensees of subject invention that are small business firms and that it will give a preference to a small business firm when licensing a subject invention if the contractor determines that the small business firm has a plan or proposal for marketing the invention which, if executed, is equally as likely to bring the invention to practical application as any plans or proposals from applicants that are not small business firms; provided, that the contractor is also satisfied that the small business firm has the capability and resources to carry out its plan or proposal. The decision whether to give a preference in any specific case will be at the discretion of the contractor. However, the contractor agrees that the Secretary may review the contractor's licensing program and decisions regarding small business applicants, and the contractor will negotiate changes to its licensing policies, procedures, or practices with the Secretary when the Secretary's review discloses that the contractor could take reasonable steps to implement more effectively the requirements of this paragraph (k)(4).

INTERAGENCY EDISON LOGIN

Access secure production server	Access test server	Create an account to access test server
---	---------------------------	---

If you have any questions or comments, please send e-mail to edison@od.nih.gov