

Agreement No. 30375-6067

AGREEMENT

between

CORNELL UNIVERSITY

and

The International Maize and Wheat Improvement Center
(CIMMYT)

under

LAG G 0097 00002 00

from

University of Hawaii (AID)

Schedule

Cornell University, (Cornell), enters into this Agreement with The International Maize and Wheat Center (CIMMYT), (Subcontractor), for the conduct of certain Work, upon the following terms and conditions. This Agreement consists of the Schedule and Exhibit, attached, which is made a part of this Agreement for all purposes.

1. General Scope. Subcontractor will host an office for Cornell's staff and provide technical knowledge, transport maintenance, accounting, administration and data analysis needs for the Soil Management Cooperative Research Support Program (SMCRRP) and the ~~SMCRRP~~ ^{SMCRRP} Chakaria Food Systems Development Program (CFSD). The work is detailed in Exhibit A attached. D
2. Period of Performance. The period of performance shall extend from September 1, 1998 to July 31, 1999. Additional funding and an extension of time will be issued as soon as Cornell is in receipt of an amendment to that effect from the Prime Sponsor.
3. Key Personnel. ^{Craig Meisner D} Subcontractor's performance under this Agreement shall be under the direction of Dr. ~~Peter Ninnos~~ who is considered essential to the Work. Substitutions or substantial reduction in Dr. ~~Ninnos~~ level of effort will be only for compelling reasons and with the prior written approval of Cornell. D
4. Estimated Cost. The total estimated cost of performing the Work is ~~\$92,004~~ ^{129,204 D}. In no event shall Cornell be liable for reimbursement of any cost which would result in cumulative payment under this Agreement exceeding the total estimated cost unless this Agreement is modified in writing in accordance with Changes.
5. Allowable Costs. The allowability of costs under this Agreement shall be determined in accordance with a) the cost principles applicable to the Subcontractor and b) the terms of this Agreement.

6. **Budget.** The Budget (Exhibit B) lists costs and categories of costs approved to fund the Subcontractor's performance of the Work.
7. **Invoicing.** The Subcontractor shall submit on a quarterly basis invoices for approval to Ms. Donna Updike, Administrative Manager, SCAS, 236 Emerson Hall, Ithaca NY 14853. In order to be eligible for reimbursement, invoices shall be for allowable, approved costs incurred in accordance with the terms of this Agreement and shall display expenses for reimbursement by budget category pursuant to Exhibit B. All invoices submitted under this Agreement, including the final invoice, must be received by Cornell no later than 60 days after the termination of this Agreement. An authorized representative of the Subcontractor shall certify on each invoice that the costs for which reimbursement is requested are the actual costs as recorded in Subcontractor's records and as expended for the Work actually performed in accordance with the terms of this Agreement.
8. **Payment.** Payment for allowable, approved expenses shall be made upon receipt of invoice. Payment shall be contingent upon the availability of funding from the Prime Sponsor under the Prime Agreement, and upon Subcontractor's compliance with the terms and conditions, including the interim and final reporting requirements, of this Agreement. All payments shall be subject to correction and adjustment upon audit or any disallowance. The Subcontractor is solely responsible for reimbursing Cornell for amounts paid the Subcontractor but disallowed under the terms of this Agreement.
9. **Examination of Records.** Cornell or a duly authorized representative, as well as the Comptroller General of the United States or a duly authorized representative from the General Accounting Office, shall, until three years after final payment under this Agreement, have access to and the right to examine any of Subcontractor's directly pertinent books, documents, papers, or other records involving transactions related to this Agreement for the purpose of making audits, examinations, excerpts and transcriptions.

The period of access and examination specified in the paragraph above for records relating to (1) appeals under a dispute, (2) litigation or settlement of claims arising from the performance of this contract, or (3) costs and expenses of this contract to which the Comptroller General or a duly authorized representative from the General Accounting Office has taken exception shall continue until such appeals, litigation, claims, or exceptions are disposed of.
10. **Reports.** A final expense report is due within 60 days of termination of this Agreement.
11. **Prime Agreement.** The Work is subject to the following Prime Agreement terms and conditions, included below and attached as Exhibit C:
 - 11.1 "Mandatory Standard Provisions for US. Non governmental Grantees" 2 a. and b. (except that portion of subparagraph (a) 1 that would require specific financial reporting forms and frequencies in accordance with the payment provisions of the Prime Agreement) and "Additional Standard Provisions for US. Non governmental Grantees", 10 and 20.
 - 11.2 **Equipment.** Subject to clause 20, Title to and Use of Property (Grantee Title) of the Prime Agreement, title to all Equipment purchased in accordance with this Agreement shall vest in the Subcontractor. Subcontractor agrees to maintain proper records of such Equipment in accordance with clause 20 of the Prime Agreement.

- 11.3 Rights in Data and Materials. Subject to the Patent Rights provision of the Prime Agreement, all materials developed by the Subcontractor in the performance of this Agreement shall be and remain the sole property of the Subcontractor. Clause 10, Patent Rights, of the Prime Agreement shall govern matters regarding rights to inventions and materials generated under this Agreement; Subcontractor should refer to this clause for an elaboration of the terms and conditions governing allocation of principal rights, invention disclosure, election of title, patent filing, reporting and other related matters. Subcontractor agrees to grant, and does hereby grant to Cornell and the Prime Sponsor an irrevocable, world-wide, royalty-non-exclusive license to reproduce, translate and otherwise use the materials. "Materials" shall mean recorded information, regardless of form or medium in which recorded.
- 11.4 Publications. The Subcontractor shall be free to publish its findings relating to the Work under this Agreement, subject to the following:
- 11.4.1 If it is the Subcontractor's intention to identify Cornell's or the Prime Sponsor's contribution to any publication resulting from this Agreement, the Subcontractor shall consult with Cornell on the nature of the acknowledgment prior to publication.
- 11.4.2 The Subcontractor shall provide the Authorized Representative for Technical Matters with one copy of all published works developed under this Agreement and with lists of other written work produced under this Agreement.
- 11.4.3 The author or Subcontractor is free to copyright any books, publications, or other copyrightable materials developed in the course of or under this Agreement. Cornell and the Prime Sponsor reserve a royalty-free non-exclusive and irrevocable right to reproduce, publish, or otherwise use, and to authorize others to use, any such copyrightable materials.
- 11.5. Termination. This Agreement may be terminated by Cornell upon thirty (30) days written notice for any reason. In the event of default by the Subcontractor, this Agreement may be terminated by Cornell upon Subcontractor's receipt of notice of termination stating the reason therefore. Any failure by the Subcontractor to perform any of its obligations hereunder, except where such failure is due to circumstances reasonably beyond the control of the Subcontractor, may be deemed default pursuant to this clause. Where appropriate, Cornell may grant Subcontractor a specified period of time in which to correct the cause of default hereunder. In no event shall such corrective action result in an increase in the estimated costs specified in 4, above unless modified in writing pursuant to Changes, of this Agreement. Except in the event of termination for default of the Subcontractor, should Cornell terminate this Agreement, Subcontractor will be reimbursed for all costs and all non-cancelable commitments incurred prior to notice of termination pursuant to 8, Payment, above. Upon termination, any unexpended or unobligated balance of funds advanced shall be refunded to Cornell by Subcontractor.

Unless otherwise noted and where the context requires, when applying the Prime Agreement to the Subcontractor's performance of the Work, "USAID," "AID" and the "Government" shall refer to Cornell and "Recipient" and "Grantee" shall refer to the Subcontractor. The applicable Prime Agreement terms and conditions appear in Exhibit C.

12. Precedence. The order of precedence for the interpretation of this agreement shall be first, the Schedule, second the General Terms and Conditions and finally the terms of the prime agreement.
13. Independent Contractor. In the performance of this Agreement, the Subcontractor shall be deemed to be and shall be an independent contractor and, as such, shall not be entitled to any benefits applicable to employees of Cornell.
14. Assignment. The Subcontractor may not assign, transfer or subcontract any part of this Agreement, any interest herein or claims hereunder, without the prior, written approval of Cornell.
15. Termination. This Agreement may be terminated by either the Subcontractor or Cornell upon 30 days written notice. In the event of termination, the Subcontractor will be reimbursed for all allowable, approved costs and non-cancelable commitments incurred in accordance with the terms of this Agreement. Upon termination, the Subcontractor shall refund to Cornell any unexpended or unobligated balance of funds advanced.
16. General Release. Subcontractor's acceptance of payment of the final invoice under this Agreement shall release Cornell from all claims of the Subcontractor, and from all liability to the Subcontractor concerning the Work, except where such claims or liabilities arise from any negligent act, error or omission of Cornell.
17. Use of Name. Neither the Subcontractor nor Cornell shall make use of this Agreement, or use the other's name or that of any member of the other's staff for publicity or advertising purposes without prior written approval of the other party.
18. Changes. By mutual agreement, the Subcontractor and Cornell may make changes to the Work and to the terms of this Agreement. Any such changes shall be in the form of a written amendment signed by authorized contractual representatives of the Subcontractor and Cornell.
19. Indemnification. The Subcontractor shall indemnify and save harmless Cornell and its officers, agents and employees from all suits, actions or claims of any character, name or description brought for or on account of any injuries or damages received or sustained by any person or property, by or from the Subcontractor, Cornell or its employees or by or in consequence of any neglect in safeguarding the Work, or through the use of inappropriate materials in performing the Work or by or on account of any act or omission, neglect, or misconduct of the Subcontractor, its officers, agents or employees or by or on account of any claims or amounts recovered under any statute, ordinance, order or decree, and so much of the money due the Subcontractor under this Agreement as shall be considered necessary by Cornell may be retained.

This Agreement is the complete agreement of the Subcontractor and Cornell and supersedes all prior understandings regarding the Work.

IN WITNESS WHEREOF, the respective parties have executed this agreement on the dates indicated below.

CORNELL UNIVERSITY

CIMMYT

J. Alcedo
26 May 1999
Date

J. G. Reaves
18 May 1999
Date

Soil Management CRSP, Cornell University

THE CHAKARIA FOOD SYSTEM PROJECT
for the Sustainable Prevention of Rickets
and Other Types of Malnutrition

Work Plan

OVERALL GOAL:

The goal of the project is to increase the intakes and utilization of Ca by infants and children in Chakaria, Bangladesh, in sustainable ways that also improve their status with respect to other limiting micronutrients¹ many of which must derive from soil. The project will seek to develop multiple opportunities within the Chakarian food system to increase the Ca intake/utilization of children from the estimated present value of 130 mg/cap/day to at least 300 mg/cap/day. Emphasis will be placed on measures that also increase the supplies of essential minerals and vitamins, which the Chakaria food system presently does not provide in sufficient amounts to support child health and development.

OBJECTIVE 1: *To characterize the Chakarian Food System*

Baseline:

Rickets has emerged as a major source of disability in the Chakaria area of SE Bangladesh (Cox's Bazaar District). Based on preliminary studies by us and our colleagues, the disease does not appear to involve vitamin D deficiency. Available evidence suggests that low Ca intake is likely to be a major cause of the disease in Chakaria; however, its recent emergence (within the last 15-20 yrs.) suggests that other food/soil/water-borne factors may also be important in its etiology. Possibilities include: losses of Ca-rich crops (e.g., brassicas, grain legumes) with triple-cropping of rice; loss of access to dairy products; exposure to antagonists of Ca utilization (e.g., oxalates in leafy vegetables, F, Sr, Al, Pb, Cd, Ba). Our preliminary case-control and village sampling studies have not revealed excessive levels of any potentially Ca-antagonistic minerals in either blood or village water/food supplies; but we have found cases to have higher blood levels of both Al and Pb than control, suggesting that otherwise non-hazardous levels of these minerals may play roles in the development of rickets in this population with very low Ca intakes. Calcium deficiency is likely to be fairly widespread in Bangladesh, as are deficiencies of iron, protein, vitamin A, iodine and probably zinc and selenium. These nutritional deficiencies can be expected to affect infants by way of their pregnant and lactating mothers and older children also directly. Our analysis of the situation thus raises two questions:

What other factor(s) are contributing to the cause of rickets in Chakaria?

ii) Is rickets under-diagnosed in this (and, perhaps, other) countries?

¹These include micronutrients for which Chakarian children are known to be at high risk to deficiency (Fe, riboflavin, vit. A, and Zn) or which affect the utilization of Ca (P) or Fe (vit. C).

Activity (1)

Conduct a nested series of studies to generate data for modeling and, subsequently, analyzing the Chakaria food system to identify opportunities to improve yields and availability of Ca and other limiting nutrients:

1. Collect *area-level data* to map the geographic distribution of rickets; this will include directing a collaborative effort² to map the prevalence of rickets in Bangladesh;
2. Collect *village-level data* for measures of soil and water chemistry and for the characterization of food production/acquisition/utilization channels. A total of six village (600 households) will be selected on the basis of their having either high (4 villages) or low (2 villages) rickets prevalence;
3. Collect *household-level data* from 200 households (400 children 0.5-3 yrs.) in each village for parameters of food security, socio-economic status, food behaviors/decision-making, demographics, land tenure/farming practices and health status;
4. Collect *individual data* for 400 children in each study village for anthropometry, blood chemistry and radiographic measurements. Data from the latter villages will serve as the baseline against which the project impacts will be measured, for which purpose we will focus on 0.5-3 yrs. children.

The study will be implemented in two sites (6 villages total) in Chakaria Thana selected on the basis of having low (2 villages) or high (4 villages) rickets prevalence, respectively. We will select these sites after reviewing data on the geographic distribution of rickets prevalence in the area. These data will be used to map the distribution of rickets, which we will compare to the available information on soil and water chemistries, cropping systems, etc. This design should yield sufficient statistical power for informative case-control studies of the characteristics and/or behaviours of both individuals and households, while also offering an adequate base for understanding the natures and interrelationships among the various components of the Chakaria food system. It may be modified after further consultation with our biometrician colleagues.

OBJECTIVE 2: *To analyze the Chakarian Food System***Baseline:**

Children in Chakaria consume diets deficient in Ca as well as several other nutrients (e.g., iron, zinc, vitamins A and C, riboflavin, protein). Most are stunted (height/age <3rd percentile); 25-50% show signs of protein-energy malnutrition and/or riboflavin deficiency and, in general, have a significant morbidity burden (malaria, worms and episodic diarrhea). Many children in Chakaria do not consume adequate amounts of Ca (Ca intakes are thought to be <135 mg/day³). The challenge will be to identify means of increasing the production of Ca by the food system in ways that target the

2 in collaboration with the UNICEF Iodine Deficiency Disease reporting system (65,000 workers), the Bangladesh Rural Advancement Committee School System (35,000 schools), and the Grameen Health System.

³The RDAs for Ca for children are 400 mg: 0-0.5 yrs; 600 mg: 0.5-1 yr.; and 800 mg: 1-10 yrs.

vulnerable groups (infants, children and lactating women) and, if possible, also increase the supplies of other limiting nutrients.

Activity (2): The food system survey data will be used to construct a *Chakaria Food System Model* by the Cornell group (Combs, Duxbury and Welch)⁴ working with Dr. Hassan. The model will be analyzed to identify:

1. patterns of food production, acquisition and/or utilization associated with rickets risk;
2. sustainable ways to increase Ca intakes and/or decrease exposures to Ca- antagonists, e.g., modifying cropping systems, developing/improving home gardens, treating water supplies, changing food marketing, developing local food businesses, modifying food preparation; and
3. opportunities that increase access both to Ca as well as to other limiting nutrients.

We will seek a *combination of measures* that will be very likely to increase the Ca intakes of children (under 5 yrs) by at least 150 mg/cap/day. This target is based on the provisional assumption that most are presently consuming at least 130 mg Ca/cap/day and that an appropriate target level of consumption should be at least 280 mg Ca/cap/day (i.e., 70% of the American RDA). With this goal in mind, our analysis will be designed to identify opportunities to:

1. increase the numbers of significant sources (provide ≥ 50 mg/cap/day) of Ca;
2. increase the accessibility of Ca-sources to poor households;
3. target Ca-rich foods to infants, young children and pregnant/lactating women;
4. increase the general Ca contents of other foods; and
5. increase the supply or enhance the utilization of other limiting nutrients.

OBJECTIVE 3: *To Evaluate and Develop Home Gardens*

Baseline: At present we have little information, short of casual observations, about home gardening practices in Chakaria. We are aware of the constraints to successful home gardens that have been identified elsewhere in south Asia: access to seed stock and other supplies, labor costs, pest control, seasonality. Both Helen Keller International (through the NGO, SHEDD) and CARE currently have home gardening programs in the Chittagong area. We have had preliminary conversations with HKI and the Asian Vegetable Research and Development Center (AVRDC) about collaborations in Chakaria.

Activity 3: *Development of a "Healthy Legs" Home Gardening Program in Chakaria*

We will do the following:

1. Determine the status and experience of the home gardening programs of SHEDD and

⁴Dr. Howarth Bouis (IFPRI) has agreed to advise in this activity.

- CARE in the Chittagong District; and
2. Using home interviews and village meetings; evaluate systematically the nature of home gardening activities, including types of crops used, area/location, labor allocation, product disposition, problems/limitations, prevalent attitudes, etc.
 - a. Determine outputs of Ca and other nutrients, and resulting nutrient disposition within families;
 - b. Assess continuities of supplies and storage methods;
 - c. Identify constraints (soil, water, pests, labor, etc.) to increased production
 - d. Develop home garden models for evaluation on the SARPV "Healthy Legs" Demonstration Farm

OBJECTIVE 4: *To introduce new products/techniques and strategies to the Chakaria Food System that will increase intakes of calcium and other nutrients by infants and children*

Baseline:

The most promising options identified by our food system analysis will be evaluated in the field for efficacy, feasibility, acceptability and sustainability. We can expect these to include several types of opportunities:

- crop selection/rotation (Ca-rich pulses; crops suitable as weaning foods)
- liming upland crops (addressing total Ca supply, pH and subsoil Ca level)
- new cultivars (low-oxalate amaranth; Ca-rich pulses)
- home gardens (emphasizing low-oxalate foods, Ca-rich as brassicas, other fruits and vegetables)
- indigenous food plants (evaluate potential contributions to Ca-supply, value-added opportunities)
- new farm enterprises (small fish production; smallholder dairy/poultry)
- shrimp culture/aquaculture (evaluate impact on Ca supplies for children)
- new food businesses (fish racks, animal bones, milk products)

For some of these available information is strong enough to warrant their implementation as part of the start-up of the SARPV Health Legs Demonstration Farm in the first year of the project. We will use a step-wise, expert/community-based approach to identify options for field-testing: first, we will consult with colleagues in the several appropriate agricultural disciplines (particularly agronomists, plant breeders, plant nutritionists and horticulturalists)⁵; with that information, we will convene a series of village meetings at which the results of the Food System Model analysis will be discussed.

⁵Cornell University, Bangladesh Agricultural Research Institute (BARI), Chittagong Agricultural Extension Service, Asian Vegetable Research and Development Center (AVRDC)

These will be important to learn from local farmer experience and to engage farmers and households as partners in this process of discovery and evaluation.

Activity (4A): *Development of SARPV "Healthy Legs" Demonstration Farm*

We will do the following:

1. Conduct survey and hydrological evaluation of the SARPV farm;
2. Develop farm facilities (house for farm manager, storage building(s));
3. Purchase Chinese tractor and implements;
4. Develop farm utilization and management plan (including water management systems);

Activity (4B): *Evaluate new products/techniques and strategies to the Chakaria Food System*

We will use the SARPV "Healthy Legs" Demonstration Farm to:

1. Identify and establish crops and crop rotations that increase the Ca supply;
2. Evaluate the effects of lime and/or gypsum additions of crop production and crop Ca contents;
3. Test other agricultural options suggested by the Food System Analysis; and
4. Identify constraints/advantages to adoption by farmers/home gardeners for promising products/techniques.

Activity (4C): *Introduce new products/techniques and strategies to the Chakaria Food System*

We will use three strategies to introduce promising products, techniques and strategies found most promising in our field-testing (above).

1. Make demonstration plots on the SARPV "Healthy Legs" Demonstration Farm for use with farmer/family seminars.
2. Recruit farmers (*"Healthy Legs" Leader Farmers*) to grow recommended crops/use recommended methods. Identify constraints to adoption; measure yields and nutrient contents under farming conditions; identify efficacy/ constraints to targeting women and children.
3. Recruit households (*"Healthy Legs" Leader Households*) to establish home gardens and/or household plots. Identify constraints to adoption; measure yield and nutrient contents under home garden conditions; identify efficacy/constraints to targeting women and children.

We will employ *Community Project Teams* composed of paid workers and part-time volunteers that will work with the existing SARPV village organizations at the village, para and household levels to provide seed stock, technical information, supporting education (using materials developed by Dhaka University) and some micro-loans to initiate and support these activities. In addition, we will use micro-loans and/or cooperative ventures to incubate small business partner-ships with local businessmen and SARPV to market Ca-rich foods/supplements obtainable outside Chakaria (e.g., Chittagong). Such examples may include the marketing of processed (cooked/ground) fish racks from commercial filleting operations in Chittagong or animal bone from local slaughterers as weaning foods in Chakaria.

WORK PLAN: *Chakaria Food System Project*

Objective	activity	Individuals responsible	completion	Outputs
1 Characterize Food System	1A collect area-level data	Meisner, Duxbury, Daly ⁶	6.30.99	area soil/water/farming practices data set
	1B collect village-level data	Daly, Meisner, Haque	6.30.99	village practices data set
	1C collect household-level data	Hassan, Combs	6.30.99	household food security/health data set
	1D collect individual data	Daly, Tapin ⁷ , Hassan, Combs, Fischer	6.30.99	baseline rickets/ malnutrition prevalence data set
2 Analyze Food System	2A develop evaluate model	Combs, Duxbury, Welch, Meisner, Hassan, PC	1.1.00	Food System Model; intervention opportunities
3 Evaluate/Develop Home Gardens	3A conduct home and village meetings	Haque, Hassan, Meisner, PC	6.30.99	constraints/opportunities/needs of home gardens
	3B sample soil, water supplies	Meisner, Duxbury, Daly, Welch	6.30.99	baseline data set for home garden program
	3C estimate nutrient outputs in crop products	Combs, Duxbury, Welch	1.1.00	home gardens nutrient models
4 Introduce New Products/ Techniques/Strategies	4A develop SARPV farm	Duxbury, Meisner, Haque	6.30.99	functioning farm for testing, and demonstration
	4B evaluate new products, techniques and strategies	Daly, Meisner, Duxbury	continuing	candidate interventions for farmers and home gardeners
	4C introduce new products, techniques and strategies	Daly, Meisner, Duxbury, Haque, Hassan	continuing	interventions for farmers and home gardeners

⁶Project Coordinator

⁷Project Nutrition/Health Officer

SECTION III - SPECIAL CONDITIONS

CIMMYT and Cornell agree that the following activities constitute projects under this contract. Cornell shall advise CIMMYT in writing of the cessation of any of these activities at least three (3) months prior to their completion. CIMMYT shall advise Cornell in writing of the change in status of personnel or the CIMMYT office in Bangladesh at least three (3) months prior to effecting such changes.

Under the terms of Article 3, CIMMYT will transfer the ownership of office furniture and equipment, including computers, and vehicles to Cornell, should CIMMYT no longer maintain an office in Bangladesh.

SECTION 4 - BUDGET

Two years of budgets for both projects are outlined below:

1) Soil management cooperative research project

February 1, 1999 - January 31, 2000

Personnel Costs	<u>\$</u>
Support for CIMMYT Scientist (C. Meisner)	31,000
Indirect costs (20%)	6,200
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	37,200

February 1, 2000 - January 31, 2001

Personnel Costs	
Support for CIMMYT Scientist (C. Meisner)	31,000
Indirect Costs (20%)	6,200
	<hr/>
	37,200

2) Chakaria food systems development project

September 1, 1998-September 30, 1999

Personnel	a) CIMMYT:	Craig Meisner	5500
		Data Manager	2400
		Guard	1300
		Driver	1400
		Office Staff	4000

	b) CFSD:	Project Assistant	2400
		Account Assistant	2000
		Cook	1500
		Farm Staff	5350
		Staff Benefits	2000
		Subtotal	\$27,850
Equipment	a) CIMMYT:	Recond. Vehicle	11500
		Computers (2)	1200
		Printer	1000
		Office Furniture	700
		Copier	3000
		UPS	625
	b) CFSD:	Guest Facility	5500
		Furniture	
		Telephone (PABX)	1875
		Air Conds. (3)	7850
		Refrigerator	400
		Farm Equipment	2000
		Subtotal	\$35,650
Supplies		Office expend.	2000
		Fuel, oil, etc.	2870
		Farm supplies	1000
		Subtotal	\$5,870
Travel		Domestic (10 trips)	1600
		Subtotal	\$1,600
Other		Office Rental	4000
		Phone	1200
		Courier	500
		Subtotal	\$5,700
		Total Direct Costs	\$76,670
		Indirect Costs (20%)	\$15,334
		TOTAL	\$92,004

October 1, 1999- September 30, 2000 (Estimated budget; actual allocation from
SMCRSP Management Entity may require budget amendment)

Personnel	a) CIMMYT:	Craig Meisner	6000	
		Data Manager	2520	
		Guard	1500	
		Driver (2)	3000	
		Office Staff	4500	
	b) CFSD:	Project Assistant	2520	
		Account Assistant	2100	
		Cook	1625	
		Farm Staff	5850	
		Staff Benefits	2100	
		Subtotal	\$31,715	
	Equipment	a) CIMMYT:	Recond. Vehicle	12500
			Computer	1200
		b) CFSD:	Telephone (PABX)	300
Farm Equipment			500	
Subtotal			\$14,500	
Supplies		Office expendibles	3000	
		Fuel, oil, etc.	8000	
	Farm supplies	1000		
	Subtotal	\$12,000		
Travel	Domestic (20 trips)	2000		
	International (co-PI)	1600		
	Subtotal	\$3,600		
Other	Office Rental	4200		
	Phone	2000		
	Courier	2000		
	Subtotal	\$8,200		
Total Direct Costs		\$70,015		
Indirect Costs (20%)		\$14,003		
TOTAL		\$84,018		

Mandatory Reference: 303
File Name: 30353m2\DR-CD 11

Grants

**Appendix 4D: Mandatory Standard Provisions for Non-US
Non-governmental Grantees**

**Mandatory Standard Provisions for Non-US, Non-governmental
Grantees**

1974/10/15

1992/09/29

**APPENDIX 4D
MANDATORY STANDARD PROVISIONS FOR
NON-U.S., NON-GOVERNMENTAL GRANTEES**

- | | |
|---------------------------------|---|
| 1. Allowable Costs | 8. Debarment, Suspension, and
Other Responsibility Matters |
| 2. Accounting, Audit, & Records | 9. U.S. Officials Not to Benefit |
| 3. Refunds | 10. Investment Promotion |
| 4. Revision of Grant Budget | 11. Nonliability |
| 5. Termination and Suspension | 12. Amendment |
| 6. Disputes | 13. Notices |
| 7. Ineligible Countries | 14. Metric System of Measurement |

1. ALLOWABLE COSTS (JUNE 1993)

(a) The grantee shall be reimbursed for costs incurred in carrying out the purposes of this grant which are determined by the grant officer to be reasonable, allocable, and allowable in accordance with the terms of this grant and the applicable* cost principles in effect on the date of this grant, which are attached.

(1) Reasonable. Shall mean those costs which are generally recognized as ordinary and necessary and would be incurred by a prudent person in the conduct of normal business.

(2) Allocable Costs. Shall mean those costs which are incurred specifically for the grant.

(3) Allowable Costs. Shall mean those costs which conform to any limitations in the grant.

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*NOTE: For educational institutions use OMB Circular A-21; for all other non-profit organizations use OMB Circular A-122; and for profit making firms use Federal Acquisition Regulation 31.2 and AID Acquisition Regulation 731.2.

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²When these Standard Provisions are used for cooperative agreements, the following terms apply: "Grantee" means "Recipient" "Grant" means "Cooperative Agreement," and "AID Grant Officer" means "AID Agreement Officer."
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(4) Unallowable costs, direct or indirect, include but are not limited to the following examples: Advertising, bad debts, contingencies, entertainment, fines and penalties, interest, fund raising, investment management costs, losses on other awards, and first class air fare unless specifically approved. Public information service costs are unallowable as indirect costs.

(b) Prior to incurring a questionable or unique cost, the grantee should obtain the grant officer's written determination on whether the cost will be allowable.

2. ACCOUNTING, AUDIT, AND RECORDS (OCT 1992)

(a) The grantee shall maintain books, records, documents, and other evidence relating to the AID-sponsored project or program in accordance with generally accepted accounting principles formally prescribed by the U.S., the cooperating country, or the International Accounting Standards Committee (an affiliate of the International Federation of Accountants) to sufficiently substantiate charges to this grant. Accounting records that are supported by documentation will as a minimum be adequate to show all costs incurred under the grant, receipt and use of goods and services acquired under the grant, the costs of the program supplied from other sources, and the overall progress of the program. The grantee records and subgrantee records which pertain to this grant shall be retained for a period of three years from the date of expiration of this grant and may be audited by AID and/or its representatives. The grantee shall insert this paragraph (a) in all subgrants valued in excess of \$10,000.

(b) If the grantee receives \$25,000 per year or more under this grant, the grantee agrees that it shall have an audit made of the funds provided under this grant and of the financial statements of the organization as a whole. The grantee shall select an independent auditor in accordance with the "Guidelines for Financial Audits Contracted by Foreign Recipients" issued by the AID Inspector General. The audit shall be a financial audit performed in accordance with such guidelines and in accordance with generally accepted government auditing standards issued by the Comptroller General of the United States, and shall determine whether the grant funds have been used in accordance with this agreement. Audits shall be performed annually.

(c) The audit report shall be submitted to AID within 30 days after completion of the audit, but the audit shall be completed and the report submitted not later than 13

months after the close of the grantee's fiscal year. The AID Inspector General will review this report to determine whether it complies with the audit requirements of this grant. No audit costs may be charged to this grant if audits have not been made in accordance with the terms of this provision. In cases of continued inability or unwillingness to have an audit performed in accordance with the terms of this provision, AID will consider appropriate sanctions which may include suspension of all or a percentage of disbursements until the audit is satisfactorily completed.

(d) The grantee shall ensure that funds made available to subgrantees that receive \$25,000 or more per year under this grant are audited in accordance with this agreement. Such audit responsibilities with respect to subrecipients may be satisfied by relying on independent audits of the subgrantees, or on appropriate procedures performed by the internal audit or program staff of the grantee, by expanding the scope of the independent financial audit of the grantee to encompass testing of subgrantees' records, or by a combination of these procedures. The grantees shall ensure that appropriate corrective actions are taken on the recommendation contained in the subgrantee's audit reports; consider whether subgrantees' audits necessitate adjustment of its own records; and require each subgrantee to permit independent auditors to have access to records and financial statements as necessary.

3. REFUNDS (JUNE 1993)

(a) Interest earned on advances will be remitted to AID. However, the grantee may retain up to \$250 of interest earnings per year for administrative expenses.

(b) At the time the grant expires or is terminated, funds shall revert to AID if :

(1) AID has obligated funds to the grant, but has not disbursed them to the grantee; or

(2) AID has advanced funds to the grantee, but the grantee has not expended them.

Notwithstanding (1) and (2) above, funds which the grantee has obligated in legally binding transactions applicable to this grant will not revert to AID.

(c) AID reserves the right to require refund by the grantee of any amount which the grantee did not spend in accordance with the terms and conditions of this grant. In the event that a final audit has not been performed prior to the closeout of this grant, AID retains the right to a refund until all claims which may result from the final audit have been resolved between AID and the grantee.

4. REVISION OF GRANT BUDGET (JUNE 1993)

(a) The approved grant budget is the financial expression of the grantee's program as approved during the grant award process.

(b) The grantee shall immediately request approval from the grant officer when there is reason to believe that within the next 30 calendar days a revision of the approved grant budget will be necessary for any of the following reasons:

(1) To change the scope or the objectives of the project and/or revise the funding allocated among project objectives.

(2) Additional funding is needed.

(3) The grantee expects the amount of AID authorized funds to exceed its needs by more than \$5,000 or five percent of the AID award, whichever is greater.

(4) The grantee plans to transfer funds budgeted for indirect costs to absorb increases in direct costs or vice versa.

(5) The grantee intends to contract or subgrant any of the work under this grant, and such contracts or subgrants were not included in the approved grant budget.

(c) AID shall not be required to reimburse the grantee for costs incurred in excess of the total amount obligated under the grant, except to the extent that another provision of the grant specifically states that it is an exception to this provision.

(d) The grantee shall not be required to continue performance under the grant (including action under the "Termination and Suspension" provision) or otherwise to incur costs in excess of the amount obligated under the grant. If the total obligated amount under the grant has been increased, the grant officer will notify the grantee in writing of the increase and specify the new obligated grant total amount.

5. TERMINATION AND SUSPENSION (JUNE 1993)

(a) For Cause. The grant officer may terminate this grant for cause at any time, in whole or in part, upon written notice to the grantee, whenever it is determined that the grantee has failed to comply with the terms and conditions of the grant.

(b) For Convenience. This grant may be terminated for convenience at any time by either party, in whole or in part, if both parties agree that the continuation of the grant would not produce beneficial results commensurate with the further expenditure of funds. Both parties shall agree upon termination conditions, including the effective date and, in the case of partial terminations, the portion to be terminated. The agreement to terminate shall be set forth in a letter from the grant officer to the grantee.

(c) Suspension or Termination for Changed Circumstances. If at any time AID determines that continuation of all or part of the funding for a program should be suspended or terminated because such assistance would not be in the national interest of the United States or would be in violation of an applicable law, then AID may, following notice to the grantee, suspend or terminate this grant in whole or part

and prohibit the grantee from incurring additional obligations chargeable to this grant other than those costs specified in the notice of suspension during the period of suspension. If the situation causing the suspension continues for 60 days or more, then AID may terminate this grant on written notice to the grantee and cancel that portion of this grant which has not been disbursed or irrevocably committed to third parties.

(d) Termination Procedures. Upon receipt of and in accordance with a termination notice as specified in either paragraph (a) or (b) above, the grantee shall take immediate action to minimize all expenditures and obligations financed by this grant and shall cancel such unliquidated obligations whenever possible. Except as provided below, no further reimbursement shall be made after the effective date of termination. The grantee shall within 30 calendar days after the effective date of such termination repay to the Government all unexpended AID funds which are not otherwise obligated by a legally binding transaction applicable to this grant. Should the funds paid by the Government to the grantee prior to the effective date of the termination of this grant be insufficient to cover the grantee's obligations in the legally binding transaction, the grantee may submit to the Government within 90 calendar days after the effective date of such termination a written claim covering such obligations. The grant officer shall determine the amount(s) to be paid by the Government to the grantee under such claim in accordance with the applicable cost principles.

6. DISPUTES (JUNE 1993)

(a) Any dispute under this grant shall be decided by the AID grant officer. The grant officer shall furnish the grantee a written copy of the decision.

(b) Decisions of the AID grant officer shall be final unless, within 30 days of receipt of the decision of the grant officer, the grantee appeals the decision to AID's Deputy Associate Administrator for Finance and Administration. Any appeal made under this provision shall be in writing and addressed to the Deputy Associate Administrator for Finance and Administration, Agency for International Development, Washington, D.C. 20523. A copy of the appeal shall be concurrently furnished to the grant officer.

(c) In order to facilitate review on the record by the Deputy Associate Administrator for Finance and Administration, the grantee shall be given an opportunity to submit written evidence in support of its appeal. No hearing will be provided.

(d) A decision under this provision by the Deputy Associate Administrator for Finance and Administration shall be final.

7. INELIGIBLE COUNTRIES (MAY 1986)

Unless otherwise approved by the AID grant officer, funds will only be expended for assistance to countries eligible for assistance under the Foreign Assistance Act of 1961, as amended, or under acts appropriating funds for foreign assistance.

8. DEBARMENT, SUSPENSION, AND OTHER RESPONSIBILITY MATTERS
(MARCH 1989)

(1) The grantee certifies to the best of its knowledge and belief, that it and its principals:

(a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;

(b) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(c) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (1)(b) of this certification; and

(d) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

(2) The grantee agrees that, unless authorized by the Grant Officer, it will not knowingly enter into any subagreements or contracts under this grant with a person or entity that is included on the "Lists of Parties Excluded from Federal Procurement or Nonprocurement Programs". The grantee further agrees to include the following provision in any subagreements or contracts entered into under this grant:

DEBARMENT, SUSPENSION, INELIGIBILITY, AND VOLUNTARY EXCLUSION
(MARCH 1989)

The recipient/contractor certifies that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.

(3) The policies and procedures applicable to debarment, suspension and ineligibility under AID-financed transactions are set forth in 22 CFR Part 208.

9. U.S. OFFICIALS NOT TO BENEFIT (NOVEMBER 1985)

No member of or delegate to the U.S. Congress or resident U.S. Commissioner shall be admitted to any share or part of this grant or to any benefit that may arise therefrom;

but this provision shall not be construed to extend to this grant if made with a corporation for its general benefit.

10. INVESTMENT PROMOTION (January 1994)

No funds or other support provided hereunder may be used in a project or activity reasonably likely to involve the relocation or expansion outside of the United States of an enterprise located in the United States if non-U.S. production in such relocation or expansion replaces some or all of the production of, and reduces the number of employees at, said enterprise in the United States.

No funds or other support provided hereunder may be used in a project or activity the purpose of which is the establishment or development in a foreign country of any export processing zone or designated area where the labor, environmental, tax, tariff, and safety laws of the country would not apply, without the prior written approval of USAID.

No funds or other support provided hereunder may be used in a project or activity which contributes to the violation of internationally recognized rights of workers in the recipient country, including those in any designated zone or area in that country.

This provision must be included in all subagreements.

11. NONLIABILITY (NOVEMBER 1985)

USAID does not assume liability for any third party claims for damages arising out of this grant.

12. AMEMDMENT (NOVEMBER 1985)

The grant may be amended by formal modifications to the basic grant document or by means of an exchange of letters between the grant officer and an appropriate official of the grantee.

13. NOTICES (NOVEMBER 1985)

Any notice given by AID or the grantee shall be sufficient only if in writing and delivered in person, mailed, or cabled as follows:

To the AID grant officer, at the address specified in the grant.

To grantee, at grantee's address shown in the grant or to such other address designated within the grant.

Notices shall be effective when delivered in accordance with this provision, or on effective date of the notice, whichever is later.

14. METRIC SYSTEM OF MEASUREMENT (AUGUST 1992)

Wherever measurements are required or authorized, they shall be made, computed, and recorded in metric system units of measurement, unless otherwise authorized by the grant officer in writing when it has found that such usage is impractical or is likely to cause U.S. firms to experience significant inefficiencies or the loss of markets. Where the metric system is not the predominant standard for a particular application, measurements may be expressed in both the metric and the traditional equivalent units, provided the metric units are listed first.

(END OF MANDATORY STANDARD PROVISIONS)

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