PD-ABJ-647

U.S. AGENCY FOR
INTERNATIONAL
DEVELOPMENT

APR 16 1993

Mr. Robert L. Halvorsen
Contracting Officer
Administrative Services Building B306
Oregon State University
Corvallis, OR 97331-1641

Subject: Cooperative Agreement No. PCE-5063-A-00-3011-00

Dear Mr. Halvorsen:

Pursuant to the authority contained in the Foreign Assistance Act of 1961 and the Federal Grant and Cooperative Agreement Act of 1982, as amended, the Agency for International Development (hereinafter referred to as "A.I.D.") hereby provides to Oregon State University (hereinafter referred to as "Oregon State" or "Recipient") the sum set forth in Section 1C.2. of Attachment 1 of this Cooperative Agreement to provide financial support for the program described in Attachment 2 of this Cooperative Agreement entitled "Program Description."

This Cooperative Agreement is effective as of the date of this letter and funds obligated hereunder shall be used to reimburse the Recipient for allowable program expenditures for the period set forth in Section 1B. of Attachment 1 of this Cooperative Agreement.

The total estimated amount of this Cooperative Agreement is the amount set forth in Section 1C.1. of Attachment 1, of which the amount set forth in Section 1C.2. is hereby obligated. A.I.D. shall not be liable for reimbursing the Recipient for any costs in excess of the obligated amount. However, subject to Section 1C.4. of Attachment 1, additional funds may be obligated by A.I.D. until such time as the obligated amount may equal the total estimated amount of this Cooperative Agreement.

This Cooperative Agreement is made to the Recipient on the condition that the funds will be administered in accordance with the terms and conditions as set forth in the attachments listed under my signature below, which together constitute the entire Cooperative Agreement document and have been agreed to by your organization.

320 TWENTY-FIRST STREET N.W. WASHINGTON, D.C. 20523

Please acknowledge receipt and acceptance of this Cooperative Agreement by signing all copies of this Cover Letter, retaining one copy for your files, and returning the remaining copies to the undersigned.

Sincerely,

Thomas M. Stephens
Agreement Officer
Chief, FA/OP/B/PCE Branch
Office of Procurement

Attachments:

1. Schedule
2. Program Description
3. Standard Provisions
4. Special Provision entitled "Restrictions on Lobbying"
5. A.I.D. Eligibility Rules (total procurement value > $250K)

ACKNOWLEDGED:

OREGON STATE UNIVERSITY

BY: Clem DeCava

TYPED NAME: [illegible]
Grant Administrator

TITLE:

DATE: 4-23-93

FISCAL DATA

A. GENERAL

A.1. Total Estimated A.I.D. Amount: $999,648
A.2. Total Obligated A.I.D. Amount: $200,000
A.3. Cost-Sharing Amount: $1,215,504
A.4. Other Federal (non-A.I.D.) Amount: $ N/A
A.5. Project No.: 936-5063
A.6. A.I.D. Project Office: R&D/UC, R. Frischer
A.7. Funding Source: A.I.D./W
A.8. Tax I.D. No.: 93-6001786-A4
A.9. DUNS No.: 053599908
A.10. LOC No.: 72-00-1343

B. SPECIFIC

B.1.(a) PIO/T No.: 936-5063-3692126
B.1.(b) Appropriation: 72-1131021.1
B.1.(c) Allotment: 341-36-099-00-20-31
B.1.(d) BPC: DDVA-93-16900-KG11
B.1.(e) Amount: $200,000

ATTACHMENT 1 - SCHEDULE

SCHEDULE

1A. PURPOSE OF COOPERATIVE AGREEMENT

The purpose of this Cooperative Agreement is to provide financial support for the program described in Attachment 2 of this Cooperative Agreement entitled "Program Description."

1B. PERIOD OF COOPERATIVE AGREEMENT

The effective date of this Cooperative Agreement is the date of the Cover Letter and the estimated completion date is April 29, 1998. Funds obligated hereunder (see Section 1C.2. below) shall be used to reimburse the Recipient for allowable program expenditures incurred by the Recipient in pursuit of program objectives at any time during the period beginning on the effective date of this Cooperative Agreement and ending on the estimated completion date. However, because this Cooperative Agreement is incrementally funded (see Section 1C.4. below), funds obligated hereunder are only anticipated to be sufficient for program expenditures through April 29, 1994.

1C. AMOUNT OF COOPERATIVE AGREEMENT AND PAYMENT

1C.1. The total estimated amount of this Cooperative Agreement for its full period, as set forth in Section 1B. above, is $999,648.

1C.2. A.I.D. hereby obligates the amount of $200,000 as partial funding of the total estimated amount set forth in Section 1C.1. above for program expenditures during the indicated period set forth in Section 1B. above. Notwithstanding said total estimated amount, A.I.D. shall not be liable for reimbursing the Recipient for any costs in excess of the obligated amount, except as specified in paragraph (f) of the Standard Provision of this Cooperative Agreement entitled "Revision of Grant Budget" (see also Section 1C.4. below).

1C.3. Payment shall be made to the Recipient in accordance with procedures set forth in the Standard Provision of this Cooperative Agreement entitled "Payment - Letter of Credit," as shown in Attachment 3.

1C.4. As indicated in Section 1C.2. above, this Cooperative Agreement is partially funded. Until such time as the obligated amount (see Section 1C.2. above) shall equal the total estimated amount (see Section 1C.1. above) of this Cooperative Agreement,

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additional increments of funds may be obligated by A.I.D. under this Cooperative Agreement (by a Cooperative Agreement modification), subject to availability of funds, possible evaluation of the program, sufficient progress toward attainment of program objectives, program priorities at the time, and the requirements of the Standard Provisions of this Cooperative Agreement entitled "Revision of Grant Budget" and "Cost Sharing (Matching)," as set forth in Attachment 3.

1C.5. The total estimated amount of the program described in Attachment 2 of this Cooperative Agreement is $2,215,152, of which A.I.D. may provide the amount specified in Section 1C.1. above, and the Recipient and/or others will provide $1,215,504 in accordance with Sections 1D.2. and 1L. below.

1D. <u>COOPERATIVE AGREEMENT BUDGET</u>

1D.1. The following is the Budget for the total estimated amount of this Cooperative Agreement (see Section 1C.1. above) for its full period (see Section 1B. above). The Recipient may not exceed the total estimated amount or the obligated amount of this Cooperative Agreement, whichever is less (see Sections 1C.1. and 1C.2., respectively, above). Except as specified in the Standard Provision of this Cooperative Agreement entitled "Revision of Grant Budget," as shown in Attachment 3, the Recipient may adjust line item amounts within the budget for each objective and between objectives as may be reasonably necessary for the attainment of program objectives. The Recipient shall notify the A.I.D. Project Officer specified in the Cover Letter of this Cooperative Agreement of such adjustments by providing five (5) copies of a revised budget (following the form of section 1D.2. below) and a brief explanation of the reason for the adjustment and any impact on program objectives. Revisions to the budget must be in accordance with Section 1C. above and the Standard Provisions entitled "Revision of Grant Budget" and "Cost Sharing (Matching)."

1D.2. Budget

1D.2.(a) Objective 1: Master of Science Program in Extension

Cost Element	A.I.D.	Recipient/ Others (Non-Federal)	Recipient/ Others (Federal)	Total
Salaries & Wages	$ 11,508	$ 30,544	$ - 0 -	$ 42,052
Fringe Benefits	6,029	10,251	- 0 -	16,280
Indirect Costs	- 0 -	38,645	- 0 -	38,645
Consultants	- 0 -	- 0 -	- 0 -	- 0 -
Travel, Transportation & Per Diem	59,250	- 0 -	- 0 -	59,250
Nonexpendable Equipment	- 0 -	- 0 -	- 0 -	- 0 -
Participant Training	89,575	- 0 -	- 0 -	89,575
Other Direct Costs	9,750	1,387	- 0 -	11,137
Subcontracts/ Subagreements	161,224	330,952	- 0 -	492,176
SUBTOTAL	$337,336	$ 411,779	$ - 0 -	$ 749,115

1D.2.(b) Objective 2: Research on Extension Methods and Outreach Activities

Cost Element	A.I.D.	Recipient/ Others (Non-Federal)	Recipient/ Others (Federal)	Total
Salaries & Wages	$ 6,632	$ 18,588	$ - 0 -	$ 25,220
Fringe Benefits	2,361	6,305	- 0 -	8,666
Indirect Costs	- 0 -	19,751	- 0 -	19,751
Consultants	- 0 -	- 0 -	- 0 -	- 0 -
Travel, Transportation & Per Diem	34,250	- 0 -	- 0 -	34,250
Nonexpendable Equipment	5,000	- 0 -	- 0 -	5,000
Participant Training	- 0 -	- 0 -	- 0 -	- 0 -
Other Direct Costs	6,500	1,028	- 0 -	7,528
Subcontracts/ Subagreements	30,474	110,026	- 0 -	140,500
SUBTOTAL	$ 85,217	$ 155,698	$ - 0 -	$ 240,915

1D.2.(c) Objective 3: Home Economics Curriculum Development

Cost Element	A.I.D.	Recipient/ Others (Non-Federal)	Recipient/ Others (Federal)	Total
Salaries & Wages	$ 7,608	$ 35,090	$ - 0 -	$ 42,698
Fringe Benefits	2,769	11,752	- 0 -	14,521
Indirect Costs	- 0 -	33,540	- 0 -	33,540
Consultants	- 0 -	- 0 -	- 0 -	- 0 -
Travel, Transportation & Per Diem	27,184	- 0 -	- 0 -	27,184
Nonexpendable Equipment	5,000	- 0 -	- 0 -	5,000
Participant Training	- 0 -	- 0 -	- 0 -	- 0 -
Other Direct Costs	7,150	1,335	- 0 -	8,485
Subcontracts/ Subagreements	23,068	63,831	- 0 -	86,899
SUBTOTAL	$ 72,779	$ 145,548	$ - 0 -	$ 218,327

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1D.2.(d) Objective 4: Home Economics Curriculum Development

Cost Element	A.I.D.	Recipient/ Others (Non-Federal)	Recipient/ Others (Federal)	Total
Salaries & Wages	$ 15,082	$ 26,948	$ - 0 -	$ 42,030
Fringe Benefits	5,149	3,930	- 0 -	9,079
Indirect Costs	- 0 -	34,355	- 0 -	34,355
Consultants	- 0 -	- 0 -	- 0 -	- 0 -
Travel, Transportation & Per Diem	62,266	- 0 -	- 0 -	62,266
Nonexpendable Equipment	5,000	- 0 -	- 0 -	5,000
Participant Training	89,575	- 0 -	- 0 -	89,575
Other Direct Costs	5,600	1,325	- 0 -	6,925
Subcontracts/ Subagreements	118,784	161,417	- 0 -	280,201
SUBTOTAL	$301,456	$ 227,975	$ - 0 -	$ 529,431

1D.2.(e) Objective 5: Family Resource Management/Intra-Household Dynamics

Cost Element	A.I.D.	Recipient/ Others (Non-Federal)	Recipient/ Others (Federal)	Total
Salaries & Wages	$ 6,748	$ 11,439	$ - 0 -	$ 18,187
Fringe Benefits	2,313	3,946	- 0 -	6,259
Indirect Costs	- 0 -	17,710	- 0 -	17,710
Consultants	- 0 -	- 0 -	- 0 -	- 0 -
Travel, Transportation & Per Diem	9,712	- 0 -	- 0 -	9,712
Nonexpendable Equipment	- 0 -	- 0 -	- 0 -	- 0 -
Participant Training	- 0 -	- 0 -	- 0 -	- 0 -
Other Direct Costs	4,250	727	- 0 -	4,977
Subcontracts/ Subagreements	18,974	40,349	- 0 -	59,323
SUBTOTAL	$ 41,997	$ 74,171	$ - 0 -	$ 116,168

1D.2.(f) Objective 6: Development of Fruits and Vegetables Processing Technology

Cost Element	A.I.D.	Recipient/ Others (Non-Federal)	Recipient/ Others (Federal)	Total
Salaries & Wages	$ 2,472	$ 1,236	$ - 0 -	$ 3,708
Fringe Benefits	988	494	- 0 -	1,482
Indirect Costs	- 0 -	1,853	- 0 -	1,853
Consultants	- 0 -	- 0 -	- 0 -	- 0 -
Travel, Transportation & Per Diem	21,634	- 0 -	- 0 -	21,634
Nonexpendable Equipment	- 0 -	- 0 -	- 0 -	- 0 -
Participant Training	- 0 -	- 0 -	- 0 -	- 0 -
Other Direct Costs	3,900	89	- 0 -	3,989
Subcontracts/ Subagreements	38,458	53,142	- 0 -	91,600
SUBTOTAL	$ 67,452	$ 56,814	$ - 0 -	$ 124,266

1D.2.(g) Objective 7: Study of Malawian Foods

Cost Element	A.I.D.	Recipient/ Others (Non-Federal)	Recipient/ Others (Federal)	Total
Salaries & Wages	$ 1,236	$ 11,182	$ - 0 -	$ 12,418
Fringe Benefits	494	3,862	- 0 -	4,356
Indirect Costs	- 0 -	12,746	- 0 -	12,746
Consultants	- 0 -	- 0 -	- 0 -	- 0 -
Travel, Transportation & Per Diem	13,942	- 0 -	- 0 -	13,942
Nonexpendable Equipment	- 0 -	- 0 -	- 0 -	- 0 -
Participant Training	- 0 -	- 0 -	- 0 -	- 0 -
Other Direct Costs	3,250	617	- 0 -	3,867
Subcontracts/ Subagreements	30,584	56,805	- 0 -	87,389
SUBTOTAL	$ 49,506	$ 85,212	$ - 0 -	$ 134,718

1D.2.(h) Objective 8: Food Security and Nutrition Among Fish-Eating Households

Cost Element	A.I.D.	Recipient/ Others (Non-Federal)	Recipient/ Others (Federal)	Total
Salaries & Wages	$ 6,540	$ 1,236	$ - 0 -	$ 7,776
Fringe Benefits	2,244	494	- 0 -	2,738
Indirect Costs	- 0 -	1,454	- 0 -	1,454
Consultants	- 0 -	- 0 -	- 0 -	- 0 -
Travel, Transportation & Per Diem	14,154	- 0 -	- 0 -	14,154
Nonexpendable Equipment	- 0 -	- 0 -	- 0 -	- 0 -
Participant Training	- 0 -	- 0 -	- 0 -	- 0 -
Other Direct Costs	3,950	56	- 0 -	4,006
Subcontracts/ Subagreements	17,017	55,067	- 0 -	72,084
SUBTOTAL	$ 43,905	$ 58,307	$ - 0 -	$ 102,212
TOTAL ESTIMATED COST	$999,648	$1,215,504	$ - 0 -	$2,215,152

1D.3. Inclusion of any cost in the budget of this Cooperative Agreement does not obviate the requirement for prior approval by the Agreement Officer of cost items designated as requiring prior approval by the applicable cost principles (see the Standard Provision of this Cooperative Agreement set forth in Attachment 3 entitled "Allowable Costs") and other terms and conditions of this Cooperative Agreement, unless specifically stated in Section 1I. below.

1E. REPORTING

1E.1. Financial Reporting

1E.1.(a) Financial reporting requirements shall be in accordance with the Standard Provision of this Cooperative Agreement entitled "Payment - Letter of Credit," as shown in Attachment 3. The "Long Form" version of the Financial Status Report (Standard Form 269 dated 4/88) shall be utilized.

1E.1.(b) All financial reports shall be submitted to A.I.D., Office of Financial Management, FA/FM/CMPD/DCB, Room 700 SA-2, Washington, D.C. 20523-0209. In addition, three copies of all financial reports shall be submitted to the A.I.D. Project Officer specified in the Cover Letter of this Cooperative Agreement, concurrently with submission of the Quarterly Technical Reports (See Section 1E.2. below).

1E.1.(c) The frequency of financial reporting and the due dates of reports shall be as specified in the Standard Provision of this Cooperative Agreement referred to in Section 1E.1.(a) above.

1E.1.(d) The Recipient's financial reports shall include expenditures of A.I.D. Cooperative Agreement funds provided hereunder, as well as non-federal matching funds and other federal (non-A.I.D.) funds in accordance with Section 1L. below.

1E.2. Program Performance Planning and Reporting

1E.2.(a) Project Implementation Plan

Not later than ninety (90) days from the effective date of this Cooperative Agreement (see Section 1B. above), the Recipient shall prepare and submit to the A.I.D. Project Officer specified in the Cover Letter of this Cooperative Agreement five (5) copies of a project implementation plan, in a Gantt Chart format, covering the full term of this Cooperative Agreement.

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1E.2.(b) Annual Workplans

1E.2.(b)(1) The Recipient shall submit annual workplans for this Cooperative Agreement. Each annual workplan shall contain the following:

1E.2.(b)(1)(A) An action-oriented workplan describing planned activities for each linkage objective during the next year, delineated by calendar quarter, and tied to the project goals and objectives, which describes and quantifies the individuals to be involved, the activities to be conducted, and where and when they will be conducted. Planned activities shall be grouped by and related to project objectives;

1E.2.(b)(1)(B) A projected budget, utilizing the same budget line items as are set forth in the budget of this Cooperative Agreement, for each half-year, corresponding to the workplan, using a computer spreadsheet template provided on diskette by the A.I.D. Project Officer; and

1E.2.(b)(1)(C) Publications, reports, workshops, seminars, and other information dissemination activities planned, by calendar quarter.

1E.2.(b)(2) The Recipient may develop the annual workplans in consultation with the A.I.D. Project Officer for this Cooperative Agreement.

1E.2.(b)(3) Five (5) copies of each annual workplan will be submitted to the designated A.I.D. Project Officer for this Cooperative Agreement and one copy submitted to the Agreement Officer. One diskette copy of the workplan budget will also be submitted to the A.I.D. Project Officer. The first annual workplan covering the first year of this Cooperative Agreement shall be submitted by the Recipient not later than ninety (90) days from the effective date of this Cooperative Agreement (see Section 1B. above). Thereafter, the annual workplan for each successive year of this Cooperative Agreement shall be submitted by the Recipient not later than July 30 of each year.

1E.2.(c) Quarterly Reports

1E.2.(c)(1) The Recipient shall submit five (5) copies of brief quarterly program performance reports, which coincide with the financial reporting periods described in Section 1E.1. above, to the A.I.D. Project Officer specified in the Cover Letter of this Cooperative Agreement. In addition, two copies shall be submitted to A.I.D., POL/CDIE/DI, Washington, DC 20523-1802. These reports shall be submitted at the same time

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the financial reports are submitted (within 30 days following the end of the reporting period), and shall briefly present the following information:

1E.2.(c)(1) A statement of accomplishments and a comparison of those accomplishments with the objectives and activities established for the reporting period in the Annual Workplan;

1E.2.(c)(2) A description of any problems or barriers affecting the accomplishment of established objectives and activities, if applicable; and

1E.2.(c)(3) Any other pertinent information.

1E.2.(c)(4) Five (5) printed copies and one diskette copy of expenditure information shall be submitted semiannually to the A.I.D. Project Officer in conjunction with the second Quarterly Report and the Annual Activity Report (see section 1E.2.[d] below), detailing the status of expenditures for each specific linkage objective, utilizing a computer spreadsheet template provided by the A.I.D. Project Officer, and, when appropriate, analysis and explanation of expenditures which differ significantly from those projected in the Annual Workplan budget.

1E.2.(c)(5) The Annual Activity Report (see section 1E.2.[d] below) will be submitted in place of the fourth quarterly report each year.

1E.2.(d) Annual Activity Reports

Within thirty (30) days following the annual anniversary date of this Cooperative Agreement, the Recipient shall submit to the A.I.D. Project Officer specified in the cover letter of this Cooperative Agreement five (5) copies of an annual activity report. In addition, two copies shall be submitted to A.I.D., POL/CDIE/DI, Washington, DC 20523-1802. This report shall include the following:

- a description of the past year's activities under each linkage objective;
- a description of progress toward the completion of each linkage objective;
- a description of any problems or barriers affecting the progress toward acheiving the linkage objectives;
- a description of progress toward ensuring the sustainability of the linkage;
- quantitative outputs of the linkage activities;
- an assessment of the impact of the linkage on internationalization of the Recipient institution and any U.S. linkage partners;

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- an assessment of the impact of the linkage on stengthening each developing country linkage partner institution's capabilities to meet its societal development needs; and
- a statement satisfying the requirements of 1I.6.(b) below.

The Annual Activity Report shall also include a semiannual expenditure report described in 1E.2.(c)(4) above.

1E.2.(e) Special Reports

Between the required program performance reporting dates, events may occur that have significant impact upon the program. In such instances, the Recipient shall inform the A.I.D. Project Officer as soon as the following types of conditions become known:

1E.2.(e)(1) Problems, delays, or adverse conditions that will materially affect the ability to attain program objectives, prevent the meeting of time schedules and goals, or preclude the attainment of work units by established time periods. This disclosure shall be accompanied by a statement of the action taken, or contemplated, and any A.I.D. assistance needed to resolve the situation.

1E.2.(e)(2) Favorable developments or events that enable time schedules to be met sooner than anticipated or more work units to be produced than originally projected.

1E.2.(e)(3) If any performance review conducted by the Recipient discloses the need for change in the budget estimates in accordance with the criteria established in the Standard Provision of this Cooperative Agreement entitled "Revision of Grant Budget," the Recipient shall submit a request for budget revision to the Agreement Officer and the A.I.D. Project Officer specified in the Cover Letter of this Cooperative Agreement.

1E.2.(f) Technical and Research Reports and Publications

The Recipient shall summarize technical and research activities of the project in reports, and distribute such reports to the appropriate USAID Missions, LDCs, and host country and international institutions in order to encourage use of the technology developed. Such reports will be completed within 60 days after completion of the activity. Journal articles and other publications are encouraged. See also Section 1I. of this Cooperative Agreement pertaining to publications.

1E.2.(g) Environmental Impact

If it appears that outputs of this project will result in an adverse environmental impact, the Recipient shall notify the A.I.D. Project Officer prior to implementation, in order to allow for orderly preparation of an environmental impact statement. The Recipient shall assure that appropriate U.S. Government and/or host country procedures are followed.

1E.2.(h) Trip Reports

Within 30 days following the completion of each international trip, including trips to the United States by personnel of the Recipient's linkage partner institution, the Recipient shall submit 3 copies of a trip report summarizing the accomplishments of the trip to the A.I.D. Project Officer specified in the cover letter of this Cooperative Agreement. If several individuals are travelling together to one site, a single report representing the group will suffice. The report shall include the purpose of the trip in terms of specific linkage objectives, accomplishments, any problems encountered, and a list of persons visited with their title and organizational affiliation.

1E.2.(i) Training Reports

1E.2.(i)(1) If participant training is conducted under this Cooperative Agreement (see the Standard Provision set forth in Attachment 3 entitled "Participant Training"), the Recipient shall comply with reporting and information requirements of said Standard Provision, as well as Chapters 5 and 24 of A.I.D. Handbook 10.

1E.2.(i)(2) The Recipient shall also provide five (5) copies of quarterly training reports to the A.I.D. Project Officer, covering this Cooperative Agreement. The report shall include the following information:

- Total number of new trainees during the period; and
- The following information for each LDC trainee:
  - name
  - citizenship
  - gender
  - training site
  - beginning and ending dates of training
  - purpose of training
  - type of training activities
  - source of funding

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1E.2.(i)(3) The Recipient shall provide two (2) copies of all training manuals produced under this Cooperative Agreement to the A.I.D. Project Officer.

1E.2.(j) Care of Laboratory Animals

If the Standard Provision entitled "Care of Laboratory Animals" applies to this Cooperative Agreement (see Section 1K. for applicability), the Recipient shall include the certificate required by paragraph (c) of said Standard Provision in all of its reports which pertain to the use of laboratory animals.

1E.2.(k) Research Involving Recombinant DNA

If any research involving recombinant DNA is being funded hereunder, the Recipient shall comply with the reporting requirements set forth in Section 1I.2.(d) of this Cooperative Agreement.

1E.2.(l) Final Report

Within 90 days following the estimated completion date of this Cooperative Agreement (see Section 1B. above), the Recipient shall submit five (5) copies of a final report to the A.I.D. Project Office specified in the cover letter of this Cooperative Agreement. In addition, two copies shall be submitted to A.I.D., POL/CDIE/DI, Washington, DC 20523-1802. It will cover the entire period of the Cooperative Agreement and include all information shown in Sections 1E.2.(b) through 1E.2.(f) above.

1F. SUBSTANTIAL INVOLVEMENT UNDERSTANDINGS

It is understood and agreed that A.I.D. will be substantially involved during performance of this Cooperative Agreement as follows:

1F.1. Annual Workplan - The A.I.D. Project Officer will be consulted during the development of the annual workplans and have the right of final approval of all areas of the workplan where A.I.D. funds are included.

1F.2. Workplan Revisions - The A.I.D. Project Officer will be consulted and have the right of approval for revisions of the annual workplan which involves the use of A.I.D. funds.

1F.3. Field Visits - Pursuant to the standard provision of this Cooperative Agreement entitled "Air Travel and Transportation," the A.I.D. Project Officer must provide advance approval of all international travel.

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1F.4. Participants - Where A.I.D. funds are used, the A.I.D. Project Officer must approve, in advance, the selection of technical trainees or scientists for participation in training activities.

1F.5. Key Personnel - The A.I.D. Project Officer must approve, in advance, the substitution of any key personnel.

1F.6. Subcontracts and Subagreements - In furtherance of Section 1D.3. above, the Agreement Officer must approve all subcontracts (see the Standard Provision entitled "Procurement of Goods and Services") and subagreements (see the Standard Provision entitled "Subagreements").

1G. PROCUREMENT AND (SUB)CONTRACTING

1G.1. Applicability

This Section 1G. applies to the procurement of goods and services by the Recipient (i.e., contracts, purchase orders, etc.) from a supplier of goods and services (see the Standard Provisions of this Cooperative Agreement entitled "Procurement of Goods and Services" and "AID Eligibility Rules for Goods and Services"), and not to assistance provided by the Recipient (i.e., a [sub]grant or subagreement) to a subrecipient (see the Standard Provision of this Cooperative Agreement entitled "Subagreements").

1G.2. Requirements

In addition to other applicable provisions of this Cooperative Agreement, the Recipient shall comply with paragraph (b)(2) of the Standard Provision of this Cooperative Agreement entitled "AID Eligibility Rules for Goods and Services," concerning total procurement value of more than $250,000 under this Cooperative Agreement. Further thereto, the following is (are) the Authorized Geographic Code(s):

1G.2.(a) Authorized Geographic Codes

1G.2.(a)(1) Source, Origin, and Componentry of Goods and Commodities

1G.2.(a)(1)(A) Source, Origin, and Componentry

Except as specified in Sections 1G.2.(a)(1)(B) and 1G.2.(a)(1)(D) below, all goods/commodities shall have their source and origin in the United States or the cooperating country (Cooperating Country is defined as any country in which

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research, training, technical, or other assistance takes place), and shall meet A.I.D.'s componentry requirements, except as the Agreement Officer may otherwise agree in writing (see also Section 1G.2.[a][4] below).

1G.2.(a)(1)(B) Exception for Purchase/Procurement Transactions not Exceeding $5,000

If the proposed purchase/procurement transaction does not exceed $5,000 excluding transportation costs, paragraph (b)(1) of the Standard Provision of this Cooperative Agreement entitled "AID Eligibility Rules for Goods and Services" shall apply in lieu of Section 1G.2.(a)(1)(A) above.

1G.2.(a)(1)(C) Local Cost Financing

If, pursuant to Sections 1G.2.(a)(1)(A) or 1G.2.(a)(1)(B) above, the cooperating country is authorized for source and origin purposes, the Standard Provision of this Cooperative Agreement entitled "Local Cost Financing" will apply. Pursuant to said Standard Provision, indigenous goods and imported shelf items provided by local suppliers are eligible for local cost financing in quantities up to the total estimated cost of this Cooperative Agreement, subject to the restrictions stated in said Standard Provision, and Chapter 18 of Supplement B to A.I.D. Handbook 1, which, as may from time to time be amended, is incorporated herein as a part of this Cooperative Agreement by reference.

1G.2.(a)(1)(D) Restricted Goods

Notwithstanding the foregoing, the restricted goods listed in paragraph (a)(3) of the Standard Provision of this Cooperative Agreement entitled "AID Eligibility Rules for Goods and Services," and, if applicable (see Section 1G.2.[a][1][C] above or Section 1K. below for applicability), paragraph (e) of the Standard Provision entitled "Local Cost Financing," must be specifically approved by the Agreement Officer, except to the extent that such approval may be provided in Section 1I. below.

1G.2.(a)(2) Eligibility of Commodity-Related Services

1G.2.(a)(2)(A) Ocean Transportation

The eligibility of ocean transportation services is determined by the flag registry of the vessel. Notwithstanding the Standard Provision of this Cooperative Agreement entitled "Ocean Shipment of Goods," ocean shipping financed hereunder shall, except as the Agreement Officer may otherwise agree in writing, be financed only on flag vessels of the United States (A.I.D.

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Geographic Code 000). If the Agreement Officer approves the use of non-U.S. flag vessels, the Standard Provision of this Cooperative Agreement entitled "Ocean Shipment of Goods" will apply. Notwithstanding any of the foregoing, commodities shipped by a transportation medium owned, operated, or under the control of any country not included in A.I.D. Geographic Code 935 (see Section 1G.2.[a][4][B] below) are ineligible for A.I.D. financing hereunder, regardless of whether such transportation costs are financed hereunder. Moreover, commodities are ineligible for A.I.D. financing hereunder if shipped on a vessel which A.I.D. has designated as ineligible, regardless of whether such transportation costs are financed hereunder. Commodities are also ineligible for A.I.D. financing hereunder if shipped under an ocean charter that has not received prior approval of the Agreement Officer, regardless of whether such transportation costs are financed hereunder.

1G.2.(a)(2)(B) Dead Freight

Transportation costs attributable to dead freight are not eligible for A.I.D. financing.

1G.2.(a)(2)(C) Despatch and Demurrage

If the Recipient finances the delivery costs beyond the port of loading, the Recipient must refund to A.I.D. all despatch earned at the port of unloading. Demurrage costs are ineligible for A.I.D. financing.

1G.2.(a)(2)(D) Air Transportation

The eligibility of air travel and transportation services is determined by the flag registry of the aircraft. The Standard Provision of this Cooperative Agreement entitled "Air Travel and Transportation" applies. Commodities are ineligible for A.I.D. financing hereunder if shipped under an air charter that has not received prior approval of the Agreement Officer, regardless of whether such transportation costs are financed hereunder.

1G.2.(a)(2)(E) Marine Insurance

The Authorized Geographic Code for marine insurance is the same as is set forth in Section 1G.2.(a)(3)(B) below. Paragraph (c) of the Standard Provision of this Cooperative Agreement entitled "AID Eligibility Rules for Goods and Services" applies. If the Cooperating Country is authorized for the placement of marine insurance but discriminates against any marine insurance company authorized to do business in any state of the United States, failure to insure all A.I.D.-financed commodities with U.S. insurance companies shall render the commodities ineligible for A.I.D. financing hereunder.

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1G.2.(a)(2)(F) Other Delivery Services

No special eligibility requirements pertain to other delivery services (such as export packing, loading, commodity inspection services, and services of a freight forwarder) except that citizens or firms of any country not included in Geographic Code 935 (see Section 1G.2.[a][4][B] below) are ineligible as suppliers of delivery services, and non-U.S. citizens lawfully admitted for permanent residence in the U.S. are eligible regardless of their citizenship.

1G.2.(a)(2)(G) Incidental Services

Incidental services are defined as installation or erection of A.I.D.-financed equipment or the training of personnel in the maintenance, operation, and use of such equipment. No special eligibility requirements pertain to incidental services except that citizens or firms of any country not included in Geographic Code 935 (see Section 1G.2.[a][4][B] below) are ineligible as suppliers of incidental services, and non-U.S. citizens lawfully admitted for permanent residence in the U.S. are eligible regardless of their citizenship.

1G.2.(a)(2)(H) Local Cost Financing

If, pursuant to this Section 1G.2.(a)(2), the cooperating country is authorized for commodity-related services, the Standard Provision of this Cooperative Agreement entitled "Local Cost Financing" will apply. Pursuant to said Standard Provision, services provided by local suppliers are eligible for local cost financing in quantities up to the total estimated cost of this Cooperative Agreement, subject to the restrictions stated in said Standard Provision, and Chapter 18 of Supplement B to A.I.D. Handbook 1, which, as may from time to time be amended, is incorporated herein as a part of this Cooperative Agreement by reference.

1G.2.(a)(3) Nationality of Supplier

1G.2.(a)(3)(A) Suppliers of Goods and Commodities

Except as specified in Section 1G.2.(a)(3)(C) below, the suppliers of goods and commodities shall have their nationality in the United States or the cooperating country, except as the Agreement Officer may otherwise agree in writing.

1G.2.(a)(3)(B) Suppliers of Services (Other Than Commodity-Related Services)

Except as specified in Section 1G.2.(a)(3)(C) below, the suppliers of services (other than commodity-related services, as described in Section 1G.2.[a][2] above) shall have their nationality in the United States or the cooperating country, except as the Agreement Officer may otherwise agree in writing.

1G.2.(a)(3)(C) Government Owned Organizations

Notwithstanding the foregoing, a Government Owned Organization, i.e., a firm operated as a commercial company or other organizations (including nonprofit organizations other than public educational institutions) which are wholly or partially owned by governments or agencies thereof, are not eligible as suppliers of goods and commodities, commodity-related services, or services (other than commodity-related services), except as the Agreement Officer may otherwise agree in writing.

1G.2.(a)(3)(D) Local Cost Financing

If, pursuant to this Section 1G.2.(a)(3), the cooperating country is authorized for supplier nationality purposes, the Standard Provision of this Cooperative Agreement entitled "Local Cost Financing" will apply. Pursuant to said Standard Provision, local suppliers are eligible for local cost financing of indigenous goods, imported shelf items, and services in quantities up to the total estimated cost of this Cooperative Agreement, subject to the restrictions stated in said Standard Provision, and Chapter 18 of Supplement B to A.I.D. Handbook 1, which, as may from time to time be amended, is incorporated herein as a part of this Cooperative Agreement by reference.

1G.2.(a)(4) Definitions

1G.2.(a)(4)(A) Source, Origin, Componentry, and Nationality of Supplier

Source, origin, componentry requirements, and supplier nationality are defined in Chapter 5 of A.I.D. Handbook 1, Supplement B, which, as may be amended from time to time, is incorporated herein as a part of this Cooperative Agreement by reference (see also Attachment 5 of this Cooperative Agreement which reflects the substance of Chapter 5 of A.I.D. Handbook 1, Supplement B as of the effective date of this Cooperative Agreement).

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1G.2.(a)(4)(B) A.I.D. Geographic Codes

A.I.D. Geographic Codes are defined in Appendix D of A.I.D. Handbook 18, which, as may be amended from time to time, is incorporated herein as a part of this Cooperative Agreement by reference (see also Attachment 5 of this Cooperative Agreement which reflects the substance of Appendix D of A.I.D. Handbook 18 as of the effective date of this Cooperative Agreement).

1G.3. Approvals

Inclusion of costs in the budget of this Cooperative Agreement for the purchase of nonexpendable equipment obviates neither the requirement of Section J.13. of OMB Circular A-21 (for educational institutions) or Section 13 of Attachment B of OMB Circular A-122 (for nonprofit organizations other than educational institutions) for prior approval of such purchases by the Agreement Officer, nor any other terms and conditions of this Cooperative Agreement, unless specifically stated in Section 1I. below.

1G.4. Title to Property

Title to property acquired hereunder shall vest in the Recipient, subject to the requirements of the Standard Provision of this Cooperative Agreement entitled "Title To and Use of Property (Grantee Title)" regarding use, accountability, and disposition of such property, except to the extent that disposition of property may be specified in Section 1I. below.

1H. INDIRECT COST RATES

1H.1. No indirect costs will be charged to this Cooperative Agreement. The Recipient understands and agrees that indirect costs attributable to this Cooperative Agreement will be absorbed by the Recipient and considered cost-sharing.

1I. SPECIAL PROVISIONS

1I.1. Limitations on Reimbursement of Costs of Compensation for Personal Services and Professional Service Costs

1I.1.(a) Employee Salaries

Except as the Agreement Officer may otherwise agree in writing, A.I.D. shall not be liable for reimbursing the Recipient for any costs allocable to the salary portion of direct compensation paid by the Recipient to its employees for personal services

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which exceed the highest salary level for a Foreign Service Officer, Class 1 (FS-1), as periodically amended.

1I.1.(b) Consultant Fees

Compensation for consultants will not be reimbursed under this agreement.

1I.2. Compliance With Federal Guidelines and Regulatory Procedures Pertaining to Recombinant DNA

1I.2.(a) The Recipient shall implement any research activities under this Cooperative Agreement which involve recombinant DNA in accordance with:

1I.2.(a)(1) The National Institutes of Health Guidelines for Research Involving Recombinant DNA Molecules;

1I.2.(a)(2) Procedures issued by the U.S. Department of Agriculture (USDA), the Environmental Protection Agency (EPA), or other appropriate Federal agency;

1I.2.(a)(3) A.I.D.'s environmental procedures; and

1I.2.(a)(4) Such other Federal guidelines and procedures as may apply during the course of research.

1I.2.(b) The Recipient cannot commence testing in any foreign location until written approval for such testing is obtained from the A.I.D. Project Officer and the government of the country where testing is planned. Testing shall be conducted in accordance with all applicable regulations of that country.

1I.2.(c) In addition, and prior to commencement of any such testing, the Recipient shall make a judgement and communicate same to the A.I.D. Project Officer as to whether the regulations, procedures, or facilities of the country in question are adequate to ensure testing in an environmentally sound manner. In the event such judgement is that they are not, the Recipient and the A.I.D. Project Officer will consult and agree on the conditions to be applied to the testing which will have such environmental effect.

1I.2.(d) Reports submitted to A.I.D. under this Cooperative Agreement will address regulatory issues as noted above related to the activity.

1I.3. Publications

1I.3.(a) The Recipient agrees to provide one copy of the manuscript of any proposed publication to the A.I.D. Project

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Officer not later than submission to the publisher, and to give serious consideration to any comments received from the A.I.D. Project Officer.

1I.3.(b) In the case of publication of any of the reports described in Section 1E.2. of this Cooperative Agreement, A.I.D. reserves the right to disclaim endorsement of the opinions expressed. For other publications, A.I.D. reserves the right to dissociate itself from sponsorship or publication. In both cases, the Recipient will consult with the A.I.D. Project Officer as to the nature and extent of any A.I.D. disclaimer of endorsement or dissociation from sponsorship or publication.

1I.3.(c) If A.I.D. does not choose to disclaim endorsement or dissociate itself from sponsorship or publication, the Recipient shall, in accordance with the Standard Provision of this Cooperative Agreement entitled "Publications," acknowledge A.I.D. support as follows:

> "This publication was made possible through support provided by the Center for University Cooperation in Development, Bureau for Research and Development, U.S. Agency for International Development, under Cooperative Agreement No. PCE-5063-A-00-3011-00."

1I.3.(d) In addition to providing one copy of all published works and lists of other written work produced under this Cooperative Agreement to the A.I.D. Project Officer, as required by paragraph (b) of the Standard Provision of this Cooperative Agreement entitled "Publications," the Recipient shall also provide two copies of such publications and lists to A.I.D., POL/CDIE/DI, Washington, D.C. 20523-1802.

1I.4. <u>Equipment and Other Capital Expenditures</u>

1I.4.(a) <u>Requirement for Prior Approval</u>

Pursuant to Sections 1D.3. and 1G.3. above and the Standard Provisions of this Cooperative Agreement entitled "Allowable Costs" and "Revision of Grant Budget," and by extension, Section J.13. of OMB Circular A-21, the Recipient must obtain A.I.D. Agreement Officer approval for the following:

1I.4.(a)(1) Purchase of <u>General Purpose Equipment</u>, which is defined as an article of nonexpendable tangible personal property, the use of which is not limited only to research, medical, scientific, or other activities [e.g., office equipment and furnishings, air conditioning equipment, reproduction and other equipment, motor vehicles, and automatic data processing equipment, having a useful life of more than two years and an acquisition cost of $500 or more per unit);

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1I.4.(a)(2) Purchase of Special Purpose Equipment, which is defined as an article of nonexpendable tangible personal property, which is used only for research, medical, scientific, or other technical activities, and which has a useful life of more than two years and an acquisition cost of $1,000 or more per unit); and

1I.4.(a)(3) Other Capital Expenditures, which is defined as the cost of the asset, including the cost to put it in place).

1I.4.(b) Approvals

In furtherance of the foregoing, the Agreement Officer does hereby provide approval for the following purchases, which shall not be construed as authorization to exceed the total estimated amount or the obligated amount of this Cooperative Agreement, whichever is less (see Section 1C. above):

Quantity	Description
2	Computers
2	Laser Printers
4	Nutrition Analysis Equipment
1	Facsimile Machines
1	Photocopier
10	Audio-visual Equipment
5	Cameras
2	Video Equipment

1I.4.(c) Exception for Automation Equipment

Any approval for the purchase of automation equipment which may be provided in Section 1I.4.(b) above or subsequently provided by the Agreement Officer is not valid if the total cost of purchases of automation equipment (e.g., computers, word processors, etc.), software, or related services made hereunder will exceed $100,000. The Recipient must, under such circumstances, obtain the approval of the Agreement Officer for the total planned system of any automation equipment, software, or related services.

1I.4.(d) Compliance with A.I.D. Eligibility Rules

Any approvals provided in Section 1I.4.(b) above or subsequently provided by the Agreement Officer shall not serve to waive the A.I.D. eligibility rules described in Section 1G. of this Cooperative Agreement, unless specifically stated.

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1I.5. Restricted Goods

Pursuant to Section 1G. above, paragraph (a)(3) of the Standard Provisions of this Cooperative Agreement entitled "AID Eligibility Rules for Goods and Services," and, if applicable (see Section 1K. below for applicability), paragraph (e) of the Standard Provision of this Cooperative Agreement entitled "Local Cost Financing," the Agreement Officer's approval is required for purchase of the restricted goods described therein. In furtherance thereof, the Agreement Officer does hereby provide such approval to the extent set forth below. The Agreement Officer's approval is required for purchases of such restricted goods if all of the conditions set forth below are not met by the Recipient. Any approval provided below or subsequently provided by the Agreement Officer shall not serve to waive any terms and conditions of this Cooperative Agreement unless specifically stated.

1I.5.(a) Agricultural Commodities

Agricultural commodities may be purchased provided that they are of U.S. source (generally, the country from which the commodities are shipped) and origin (generally, the country in which the commodities are mined, grown, or produced) and purchased from a U.S. supplier, except that wheat, rice, corn, soybeans, sorghums, flour, meal, beans, peas, tobacco, hides and skins, cotton, vegetable oils, and animal fats and oils cannot be purchased under any circumstances without the prior written approval of the Agreement Officer.

1I.5.(b) Motor Vehicles

Motor vehicles, if approved for purchase under Section 1I.4.(b) above or subsequently approved by the Agreement Officer, must be of U.S. manufacture and must be of at least 51% U.S. componentry. The origin of the motor vehicles, and the nationality of the supplier of the vehicles, must be in accordance with Section 1G.2. above. Motor vehicles are defined as self-propelled vehicles with passenger carriage capacity, such as highway trucks, passenger cars and busses, motorcycles, scooters, motorized bicycles, and utility vehicles. Excluded from this definition are industrial vehicles for materials handling and earthmoving, such as lift trucks, tractors, graders, scrapers, and off-the-highway trucks.

1I.5.(c) Pharmaceuticals

Pharmaceuticals may be purchased provided that all of the following conditions are met: (1) the pharmaceuticals must be

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safe and efficacious; (2) the pharmaceuticals must be of U.S. source and origin (see Section 1G. above); (3) the pharmaceuticals must be of at least 51% U.S. componentry (see Section 1G. above); (4) the pharmaceuticals must be purchased from a supplier whose nationality is in the U.S. (see Section 1G. above); (5) the pharmaceuticals must be in compliance with U.S. Food and Drug Administration (FDA) (or other controlling U.S. authority) regulations governing United States interstate shipment of pharmaceuticals; (6) the manufacturer of the pharmaceuticals must not infringe on U.S. patents; and (7) the pharmaceuticals must be competitively procured in accordance with the procurement policies and procedures of the Recipient and the Standard Provision of this Cooperative Agreement entitled "Procurement of Goods and Services."

1I.5.(d) Pesticides

Pesticides may only be purchased if the purchase and/or use of such pesticides is for research or limited field evaluation by or under the supervision of project personnel. Pesticides are defined as substances or mixtures of substances: intended for preventing destroying, repelling, or mitigating any unwanted insects, rodents, nematodes, fungi, weeds, and other forms of plant or animal life or viruses, bacteria, or other micro-organisms (except viruses, bacteria, or other micro-organisms on or living in man or other living animals); or intended for use as a plant regulator, defoliant, or desiccant.

1I.5.(e) Rubber Compounding Chemicals and Plasticizers

Rubber compounding chemicals and plasticizers may only be purchased with the prior written approval of the Agreement Officer.

1I.5.(f) Used Equipment

Used equipment may only be purchased with the prior written approval of the Agreement Officer.

1I.5.(g) Fertilizer

Fertilizer may be purchased if it is either purchased in the U.S. and used in the U.S., or if it is purchased in the cooperating country with local currency for use in the cooperating country. Any fertilizer purchases which do not comply with these limitations must be approved in advance by the Agreement Officer.

1I.6. Limitation on Use of Funds

1I.6.(a) The Recipient shall not utilize funds provided by A.I.D. for any testing or breeding feasibility study, variety improvement or introduction, consultancy, publication, conference or training in connection with the growth or production in countries other than the United States of an agricultural commodity for export which would compete with a similar commodity grown or produced in the United States.

1I.6.(b) The Annual Activity Report (as set forth in Section 1E.2.[d]) shall contain a statement indicating the objectives and activities to which United States funds have been attributed, together with a brief description of the activities adequate to show that United States funds have not been used for the purpose in Section 1I.6.(a) above.

1I.6.(c) The Recipient agrees to refund to A.I.D. upon request an amount equal to any United States funds used for the purposes prohibited by Section 1I.6.(a) above.

1I.6.(d) No funds provided by A.I.D. under this Cooperative Agreement shall be used to provide assistance, either directly or indirectly, to any country ineligible to receive assistance pursuant to the Foreign Assistance Act as amended, related appropriations acts, or other statutes and Executive Orders of the United States (also see the Standard Provision of this Cooperative Agreement entitled "Ineligible Countries").

1I.7. Disposition of Property

With reference to Sections 1G.4. and 1I.4.(b) above, disposition of nonexpendable property acquired hereunder shall be as follows:

To Be Turned Over to Host Country Linkage Institution

1I.8. Failure to Make Sufficient Progress

If, at any time, the Assistant Administrator of the A.I.D. Bureau for Research and Development (AA/R&D) determines that the Recipient has failed to make sufficient progress toward attainment of program objectives such as to warrant the discontinuation of A.I.D. funding, this Cooperative Agreement may be unilaterally terminated by A.I.D. for its convenience, unless such failure was without the fault or negligence, or beyond the control, of the Recipient. In such circumstances,

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the procedures for settling a termination, as set forth in the Standard Provision of this Cooperative Agreement entitled "Termination and Suspension," will apply. The AA/R&D's determination will be final and not subject to appeal.

1J. RESOLUTION OF CONFLICTS

Conflicts between any of the Attachments of this Cooperative Agreement shall be resolved by applying the following descending order of precedence:

Attachment 1 - Schedule
Attachment 3 - Standard Provisions
Attachment 4 - Special Provision entitled "Restrictions on Lobbying"
Attachment 5 - A.I.D. Eligibility Rules
Attachment 2 - Program Description

1K. STANDARD PROVISIONS

The Standard Provisions set forth as Attachment 3 of this Cooperative Agreement consist of the following Standard Provisions denoted by an "X", which are attached hereto and made a part of this Cooperative Agreement:

1K.1. Mandatory Standard Provisions For U.S., Nongovernmental Grantees

(X) Allowable Costs (November 1985)
(X) Accounting, Audit, and Records (August 1992)
(X) Refunds (September 1990)
(X) Revision of Grant Budget (November 1985)
(X) Termination and Suspension (August 1992)
(X) Disputes (August 1992)
(X) Ineligible Countries (May 1986)
(X) Debarment, Suspension, and Other Matters (August 1992)
(X) Nondiscrimination (May 1986)
(X) U.S. Officials Not to Benefit (November 1985)
(X) Nonliability (November 1985)
(X) Amendment (November 1985)
(X) Notices (November 1985)
(X) Metric System of Measurement (August 1992)

1K.2. Additional Standard Provisions For U.S., Nongovernmental Grantees

(X) OMB Approval Under the Paperwork Reduction Act (August 1992)

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(X)	Payment - Letter of Credit (August 1992)
( )	Payment - Periodic Advance (January 1988)
( )	Payment - Cost Reimbursement (August 1992)
(X)	Air Travel and Transportation (August 1992)
(X)	Ocean Shipment of Goods (August 1992)
(X)	Procurement of Goods and Services (November 1985)
(X)	AID Eligibility Rules for Goods and Services (August 1992)
(X)	Subagreements (August 1992)
(X)	Local Cost Financing (August 1992)
(X)	Patent Rights (August 1992)
(X)	Publications (August 1992)
( )	Negotiated Indirect Cost Rates - Predetermined (August 1992)
( )	Negotiated Indirect Cost Rates - Provisional (August 1992)
(X)	Regulations Governing Employees (August 1992)
(X)	Participant Training (August 1992)
(X)	Voluntary Population Planning (August 1986)
(X)	Protection of the Individual as a Research Subject (August 1992)
(X)	Care of Laboratory Animals (November 1985)
(X)	Title To and Use of Property (Grantee Title) (November 1985)
( )	Title To and Care of Property (U.S. Government Title) (November 1985)
( )	Title To and Care of Property (Cooperating Country Title) (November 1985)
(X)	Cost Sharing (Matching) (August 1992)
(X)	Use of Pouch Facilities (August 1992)
(X)	Conversion of United States Dollars to Local Currency (November 1985)
(X)	Public Notices (August 1992)
(X)	Provision on Rights in Data (August 1992)

1L. <u>COST-SHARING AND OTHER NON-A.I.D. CONTRIBUTIONS</u>

1L.1. The Recipient agrees to expend an amount not less than (a) the amount shown in the budget of this Cooperative Agreement for financing by the Recipient and/or others from non-federal funds, and (b) the amount shown in the budget of this Cooperative Agreement for financing by the Recipient and/or others from other (non-A.I.D.) federal funds (see Section 1D.).

1L.2. Direct costs to be funded by non-federal funds must constitute at least 25% of the total costs to be funded by A.I.D.

1L.3. The Standard Provision of this Cooperative Agreement entitled "Cost Sharing (Matching)" makes reference to project costs. "Project Costs" are defined in Attachment E of OMB Circular A-110 as all allowable costs (as set forth in the applicable cost principles (see the Standard Provision of this

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Cooperative Agreement entitled "Allowable Costs"]) incurred by a Recipient and the value of in-kind contributions made by the Recipient or third parties in accomplishing the objectives of this Cooperative Agreement during the program period. In this context, "objectives" refers to the specific objectives of the linkage (as set forth in Attachment 2 [Program Description] of this Cooperative Agreement), and not to the objectives of the University Development Linkages Project (936-5063), under which this Cooperative Agreement is funded.

1L.4. The restrictions on the use of A.I.D. funds set forth in this Cooperative Agreement do not apply to cost-sharing (matching) unless such restrictions are stated in the applicable federal cost principles.

ATTACHMENT 2 - PROGRAM DESCRIPTION

ATTACHMENT 2

PROGRAM DESCRIPTION

The Recipient's proposal entitled "Human Resource Development for Service to Rural Families" and dated June 2, 1992, as revised by the Recipient's Revised Application dated January 25, 1993, is attached hereto as the Program Description (Attachment 2) and is made a part of this Cooperative Agreement.

EXECUTIVE SUMMARY

Title: Human Resources Development for Service to Rural Families

Participant List:
Bunda College of Agriculture
Oregon State University (Lead)
Tuskegee University
Washington State University

Introduction

Due to its uneven success, reliance on the technology transfer approach as a stimulant of agricultural development has been under increasing scrutiny. In circumstances where the approach has yielded poor results, it is often attributed to the heterogeneity of target populations, cross cultural communication barriers, and lack of appropriateness of technologies. Given the dominance of this approach it is not surprising that the training for most rural change agents has been guided by this paradigm. Alternatives to this approach have been proposed which shift some of the focus away from the development of technology and toward an emphasis on the development of human resources (Roling, 1988; Woog, Kelleher and Turner, 1992). The proposed linkage focuses on this issue through improvement in the educational infrastructure which supports rural human resources development.

The Linkage

The primary focus of the linkage project is "Human Resources Development for Service to Rural Families." The proposed linkage would unite Bunda College of Agriculture (BCA) of the University of Malawi and a consortium of U.S. universities led by Oregon State University (OSU) and supported by significant contributions from Tuskegee University (TU) and Washington State University (WSU). The linkage will help Malawi prepare well-trained professionals to manage sustainable rural development with particular attention to family food security. The USIHE consortium will benefit from opportunities to educate our students and faculty on global issues such as food security, natural resources management and rural development, issues which are of foremost importance in Malawi and which are playing an increasingly greater role in the U.S. In keeping with our collective belief that long-term linkages are mutually beneficial, the project is also intended to produce indirect benefits in the form of new knowledge about rural development as it affects rural communities in Oregon, Washington and Alabama and to the internationalization of the BCA student body and faculty.

BCA has actively sought long-term linkages with both OSU and WSU, as evidenced by our existing Memoranda of Understanding and has held discussions with TU regarding research collaboration. OSU has exceptionally strong, internationally oriented programs in foods,

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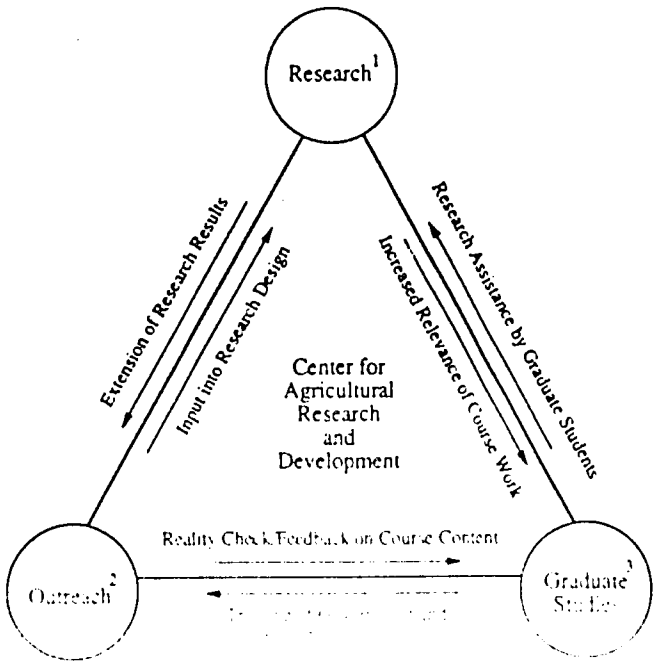
nutrition and home economics as well as extensive experience in coordinating consortia activities in Malawi with WSU and TU. WSU, with extensive work in Malawi as well as many other countries, will provide leadership for the work in extension program development. TU, with a wealth of successful experience in similar tropical environments, will provide leadership for work in tropical food processing and will also support work in extension education and nutrition program development. Other supporters include the Ministry of Agriculture/Malawi, USAID/Malawi, World Bank/Malawi, Rockefeller Foundation and the American Farm School/Greece (a third country training site). Each of these organizations have endorsed the proposal and have offered varying levels and forms of support ranging from the support of complementary activities to direct support of UDLP activities.

Particular attention has been paid to maximizing the involvement of women faculty (45 % of proposed faculty are women), rural women and the incorporation of a gender perspective throughout the proposed activities.

Implementation and Management

Faculty from BCA, in collaboration with USIHE consortium faculty, have developed a plan (see figure below) which balances and integrates three key functions under the new Center for Agricultural Research and Development at BCA. These key functions are research, graduate studies and outreach/continuing education.



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Within these three areas they have identified eight interdependent areas (referred to as modules) which will support the goal of improving human resources for rural development. These areas are grouped under two programmatic areas: 1) extension education development and 2) family development with a focus on food security.

Extension Education Development

Module 1: Master of Science Program in Extension (WSU Lead)
Module 2: Research on Extension Methods and Outreach Activities (WSU Lead)

Family Development with a Focus on Food Security

Module 3: Home Economics Curriculum Development (OSU Lead)
Module 4: Master of Science Program in Foods and Nutrition (OSU Lead)
Module 5: Family Resource Management: Curriculum Enrichment, Teaching Intra-Household Resource Dynamics, Income Generating Activities Research and Data Base Development (OSU Lead)
Module 6: Development of Fruits and Vegetables Processing Technology in Malawi (TU Lead)
Module 7: Study of Malawian Foods (OSU/TU Lead)
Module 8: Food Security and Nutrition Among Fish-eating Households in Malawi (OSU Lead)

A collaborative management arrangement will be used to ensure that BCA is fully involved in the planning, management and evaluation of the linkage. For example, an initial planning workshop will be conducted during the first month of the linkage and will involve the Heads of the Departments of Home Economics/Human Nutrition and Rural Development meeting with consortium colleagues in the U.S. to fine tune plans for implementation and to develop procedures for management routines.

Monitoring and Evaluation

Monitoring of each UDLP objective is critical to the success of the linkage. Key indicators are described in the "Expected Outcomes" section of each module and will be used as the basis for measuring progress of the linkage. At BCA, monitoring will include measurement of students and faculty professional growth in their ability to contribute to the food security and well-being of rural families in Malawi. At consortium universities, internationalization gains will be measured in student and faculty awareness of, and involvement in, social, cultural, economic and environmental issues learned through interactions with Malawian

individuals and institutions. At consortium universities an external review panel will be convened to evaluate the project on an annual basis. This panel will utilize the expected outcomes as specified in the cooperative agreement as the basis for their evaluation.

Sustainability

The consortium universities are committed to a permanent linkage with BCA. Since 1986, funds have been found to initiate a wide variety of collaborative activities with BCA. The UDLP will assist us in expanding these activities, but will not supplant our commitment to continue to locate funding to maintain this association on a permanent basis.

There are several other key elements related to sustainability of this linkage. First, the link must be in the self interest of each institution. For this reason we have focused on areas which are of mutual interest to all collaborating institutions. Second, networking of BCA and consortium universities with Malawi government, NGOs and private sector is an integral part of the linkage project. This aspect of the linkage enhances the project's sustainability by emphasizing the building of working relations between BCA and government, education, and the private sector which will ensure the flow of input to sustain program relevance. In turn, this should lead to continued support for research, instruction, and extension at BCA as long as the program is truly serving societal needs. Third, the link with BCA has been carefully sculpted to deal with BCA's highest priority needs which are also of interest to donors. Extensive discussions with USAID/Malawi, World Bank/Malawi, Rockefeller Foundation and other private organizations have laid the groundwork for long-term, multi-agency support.

TABLE OF ACRONYMS

BCA	Bunda College of Agriculture
BIFADE	Board for International Food, Agricultural Development and Economic Cooperation
CAHE	College of Agriculture and Home Economics (WSU)
CARD	Center for Agricultural Research and Development
CIMMYT	International Center for the Improvement of Maize and Wheat
FAO	Food and Agriculture Organization
HEC	Home Economics
HECE	Home Economics Communication and Education
HEHN	Home Economics and Human Nutrition
IGA	Income Generating Activity
ILRAD	International Laboratory for Research in Animal Diseases
M.Sc.	Master of Science
MARE	Malawi Agricultural Research and Extension Project
MPH	Master of Public Health
MSG	Matching Support Grant
NGO	Non-Governmental Organization
OIRD	Office of International Research and Development
OSU	Oregon State University
Ph.D.	Doctor of Philosophy
PSG	Program Support Grant
PVO	Private Voluntary Organization
RFA	Request for Application
SACCAR	Southern African Center for Coordination in Agricultural Research
SADCC	Southern African Development Coordination Committee
TU	Tuskegee University
U.S.	United States of America
UDLP	University Development Linkages Project
UNICEF	United Nations Children's Education Fund
USAID	United States Agency for International Development
USIHE	U.S. Institute of Higher Education
WSU	Washington State University

SECTION I: THE LINKAGE

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A. RATIONALE

The technology transfer approach to rural development has experienced uneven success in its application in resource poor countries. In circumstances where the approach has yielded poor results, it is often attributed to the heterogeneity of target populations, cross cultural communication barriers, and lack of appropriateness of technologies. Given the dominance of this approach it is not surprising that the training for most rural change agents has been guided by this paradigm. Alternatives to this approach have been proposed which shift some of the focus away from the development of technology and toward an emphasis on the development of human resources (Roling, 1988; Woog, Kelleher and Turner, 1992). The proposed linkage focuses on this issue through improvement in the educational infrastructure which supports rural human resources development.

The proposed linkage between Bunda College of Agriculture (BCA) of the University of Malawi and a consortium of U.S. universities led by Oregon State University (OSU) optimizes the comparative strengths of each institution and builds on the foundation of existing linkages. These linkages will help to prepare well-trained professionals to manage sustainable rural development in Malawi while enhancing the internationalization of participating U.S. universities. In keeping with our collective belief that long-term linkages are mutually beneficial, the project is also intended to produce indirect benefits in the form of new knowledge about rural development as it affects rural communities in Oregon, Washington and Alabama and to the internationalization of the BCA student body and faculty.

BCA focuses on the rural development needs of Malawi with programs in agricultural sciences and nutrition/home economics. The faculty of the consortium of U.S. universities have been active participants in the Malawi Agricultural Research and Extension Project (MARE), an institution-building project assisting the Malawi Ministry of Agriculture to develop its capacity to increase productivity and well-being of smallholder farmers through advancements in research, extension, and training. By providing a network for the joint creation, delivery, and evaluation of quality research, instruction, and extension programs at BCA, the partnership will continue to build human resources in both countries, leading to the achievement of successful rural development efforts in Malawi and greater internationalization of the U.S. universities. BCA has actively sought long-term linkages with both OSU and Washington State University (WSU), as evidenced by our Memoranda of Understanding (see Annex 5) and has held discussions with Tuskegee University (TU) regarding research collaboration.

OSU will serve as coordinator of the USIHE consortium and will provide leadership for the work in foods, nutrition and family resource development. OSU has exceptionally strong, internationally oriented programs in foods, nutrition and home economics as well as extensive experience in coordinating consortia activities in Malawi with WSU and TU. WSU, with extensive work in Malawi as well as many other countries, will provide leadership for the work in extension program development. TU, with a wealth of successful experience in similar [illegible]

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Because of its interdisciplinary approach to meeting the rural development needs of Malawi, the linkage project is structured to attract other participants who might have a specific interest in a particular component of the development project. The Ministry of Agriculture/Malawi, USAID/Malawi, World Bank/Malawi, Rockefeller Foundation and the American Farm School/Greece have all endorsed the proposal and have offered varying levels of support (See Annex 1 for details of support).

The primary focus of the linkage project is on "Human Resources Development for Service to Rural Families." This effort will be supported by an interdisciplinary approach to natural resources/agriculture extension improvement and nutrition research and extension, with a particular emphasis on rural family development. Particular attention has been paid to maximizing the involvement of women faculty (45 % of proposed faculty are women), rural women and the incorporation of a gender perspective throughout the proposed activities. Specifically, the linkage will assist BCA to increase its capacity to prepare future leaders to serve the societal needs of rural citizens in Malawi in the areas of food security, nutrition and family well-being. By having a well-established linkage with the consortium universities, BCA will share and participate in a worldwide network of resources and opportunities that will enhance the on-going development efforts in Malawi. In turn, the consortium universities wull benefit from an in-depth relationship with an institution dealing on a daily basis with critical problems of relevance to the rest of the world.

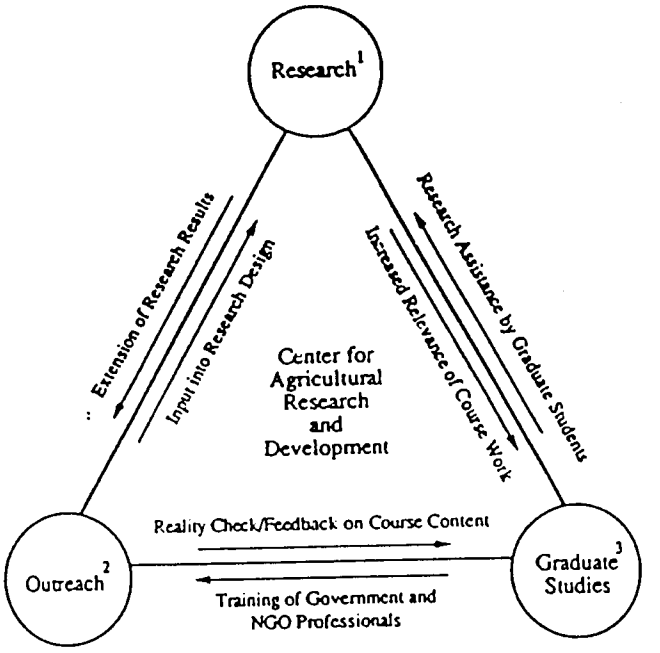
The linkage will further the U.S. universities' internationalization endeavors as faculty members from the consortium universities participate in research, instruction, and extension efforts individually and jointly with Malawian colleagues. This will generate new information and opportunities for practical application of the new information in international and local settings. Such efforts will add to the depth and breadth of curricula at the consortium universities and will broaden the scope of students' studies. Specifically, the USIHE consortium will benefit from opportunities to educate our students and faculty on global issues such as food security, natural resources management and rural development, issues which are common to Malawi and which are playing an increasingly greater role in the U.S.

B. IMPLEMENTATION AND MANAGEMENT

Faculty from BCA, in collaboration with USIHE consortium faculty, have developed a model (See Figure 1) which balances and integrates three key functions under the Center for Agricultural Research and Development at BCA: research, graduate studies and outreach/continuing education. Within these three areas they have identified eight interdependent areas which will support the goal of improving human resources for rural development. These areas are described here as modules for ease of analysis by reviewers (see Annex 2 and 3 for the project workplan and implementation plan).

Figure 1:

Integration of UDLP Supported Linkage
with Components of the Center for Agricultural Research and
Development at Bunda College of Agriculture



Footnotes:

1. Policy research to be supported by USAID/Malawi under the AgricultueSector Assistance Program.
2. Outreach/Continuing Education to be supported by World Bank under the Agricultural Sector Project.
3. Graduate Studies to be supported by AID/W under UDLP.

Module 1: Master of Science Program in Extension (WSU Lead)

Objectives:

1. To develop and implement a joint M.Sc. program in extension at BCA with OSU and WSU.
2. To strengthen the consortium universities' experience in extension related to family production systems and natural resource management.

Activities at BCA:

1. BCA and consortium faculty will develop appropriate M.Sc. curricula in extension for BCA through workshops, surveys, needs assessment and review of similar curricula.
2. M.Sc. candidates in extension will conduct their research in Malawi under the joint supervision of BCA and consortium university staff.
3. M.Sc. courses will initially be taught by both BCA and consortium faculty, with an increasing number of M.Sc. courses taught solely by BCA faculty in successive years.

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4. Course development and research projects conducted in Malawi will focus on already identified priority areas, i.e., family production systems, food security, alternative production systems, land use practices, and income generating activities.
5. Ministry of Agriculture staff with M.Sc. and Ph.D. degrees in extension will be involved with BCA and consortium faculty in both teaching and research activities.

Activities at Consortium Universities:

1. M.Sc. candidates will complete part of their coursework in extension at OSU/WSU during the early years of the joint program.
2. Consortium universities will facilitate exchanges for graduate studies and professional development in extension with students and faculty from BCA.
3. M.Sc. candidates in extension will conduct literature reviews and prepare methodologies for their research to be conducted in Malawi.
4. One BCA faculty member will pursue Ph.D. studies at WSU in Extension Education.
5. Research articles will be written and published jointly by BCA and consortium faculty.

Expected Outcomes:

1. Malawi-specific M.Sc. curricula in extension will be developed and implemented jointly between BCA and OSU/WSU.
2. Research findings will be published and disseminated on extension problems relevant to Malawi agriculture, natural resources, farm families in development, agroforestry, women in development, and ecologically and environmentally sound land use practices.
3. There will be an increased number of M.Sc. graduates from BCA and from SADCC countries in extension.
4. Consortium faculty and students will increase their experience with extension approaches appropriate to Malawian natural resource development, development of ecologically and economically sound family production systems, and development of broad-based community and inter-agency approaches to problem solving and will also utilize new approaches and knowledge in developing innovative solutions to problems confronting rural communities in Oregon, Washington and Alabama.
5. Increased cooperative teaching and research projects with Natural Resources College, BCA departments, Ministry of Agriculture, other Malawian Ministries, SADCC institutions, NGOs, PVOs, and international agencies will be developed.

Key BCA Personnel:
D.H. Ng'ong'ola, BCA (9 months)
J.S. Nankumba, BCA (9 months)
R.K. Mkandawire (6 months)

Key Consortium Personnel
Tom Trail, WSU (4 months)
Jim Long, WSU (3 months)

24 person months over 5 years

Key Consortium Personnel (cont'd):
Betty Lea Trout, WSU (1 month)
Trent Bunderson, WSU (3 months)
Jan Hiller, WSU (2 months)
Ron Jimmerson, WSU (2 months)
Herschel Weeks, OSU (1 month)
Joe Cvancara, WSU (1 month)
David Acker, OSU (1 month)

18 person months over 5 years

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Module 2: Research on Extension Methods and Outreach Activities (WSU Lead)

Objectives:

1. To develop research programs related to extension planning of environmentally and economically sound alternative production systems for smallholders.
2. To gain knowledge of Malawian farm management on small farms and small estates and their relation to sustainable, environmentally sound development of natural resources.
3. To enhance the management skills of Malawian small farm managers with emphasis on women managed units.
4. To provide research findings in cooperation with agricultural economists and CARD on smallholder needs to policy makers.
5. To establish a continuing education function at BCA to disseminate the results of research to policy makers, extension professionals and NGO leaders involved in rural development.

Activities at BCA:

1. BCA and consortium university faculty will jointly conduct research on environmentally sound and socially acceptable small farm and small estate management. Results will have an impact on extension messages and BCA curricula.
2. BCA and consortium university faculty will develop in cooperation with public and private institutions appropriate extension methods and practices which promote ecologically and economically sound alternative production technologies which can be used by groups of smallholders and managers of small private estates.
3. Examine alternative income generating activities for women and means to access new enterprises, smallholder access to markets for high value cash crops which resource poor farmers can grow efficiently, and credit and savings of smallholders.
4. BCA and consortium faculty will jointly develop with the Ministry of Agriculture and Natural Resources College a continuing education center focusing on improved production systems and natural resource management with particular emphasis on sustainable, environmentally sound production technologies.

Activities at Consortium Universities:

1. M.Sc. candidates collaborating with BCA and consortium university faculty will design and conduct research on topics previously outlined.
2. BCA faculty and students will utilize research and library facilities at consortium universities to access appropriate materials, equipment, and information.
3. Facilitate two-way exchanges for graduate studies and professional development with faculty and students from BCA and the consortium universities.
4. Conduct training on management of technology development and diffusion as it relates to agroforestry, land use management, IGAs, alternative production systems, and aquaculture.
5. Develop strategies among faculty and students from both BCA and consortium universities to promote greater understanding of global awareness.
6. Consortium universities will assist in curriculum development and evaluation of extension and outreach materials used at their continuing education center.
7. Trainees and faculty travelling from Malawi to the U.S. for training or other professional

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development will be invited to stop off at the American Farm School in Thessaloniki, Greece, to study their successful model of agricultural education and outreach.

Expected Outcomes:

1. Enhancement of teaching and research skills of M.Sc. (extension) graduates sensitive to the natural resource and human development base and needs in Malawi.
2. Increase in the agricultural extension and management skills of extension staff and farm managers including women managed small farm units attuned to the development of environmentally and economically sound alternative farming systems.
3. Up-to-date production of curricula resource material on natural resource production systems, food security, agroforestry, IGA, and community based cooperatives, at BCA, including case studies and videos.
4. Extension and research publications resulting from the cooperative work of BCA and consortium faculty and students will be produced and utilized both in extension training and graduate work.
5. Policy makers, extension professionals, and NGO leaders involved in rural development will have received training through the continuing education center.

Key BCA Personnel:
R. Mkandawire, BCA (6 months)
J.S. Nankumba, BCA (3 months)
D.W. Nothale, BCA (3 months)
W.D. Kamkondo, BCA (3 months)
M.A. Nambote, BCA (3 months)
D.H. Ng'ong'ola, BCA (3 months)

21 person months over 5 years

Key Consortium Personnel:
Tom Trail, WSU (3 months)
Jim Long, WSU (2 months)
Ron Jimmerson, WSU (1 month)
David Acker, OSU (1 month)
Herschel Weeks, OSU (2 months)
S. Devadoss, TU (2 months)

11 person months over 5 years

Module 3: Home Economics Curriculum Development (OSU Lead)

Objectives

1. To assess the needs of rural homes and the educational needs of home economics professionals.
2. To evaluate the current Home Economics/Human Nutrition (HEHN) Diploma/Degree curriculum in relation to expressed needs.
3. To initiate curriculum revision to meet identified needs.
4. To assess the need for creating an advisory board for home economics and human nutrition related areas.
5. To establish a network among BCA and consortium universities for mutually advantageous curriculum enrichment and revision and to expand research based knowledge.

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Activities at BCA

1. Conduct needs assessment of rural homes and home economists operating in rural areas to determine training needs.
2. Faculty will visit a selected number of institutions offering services in home economics and human nutrition related programs in Malawi to establish contacts between BCA and the public and private sectors and professional colleagues to help guide programs.
3. BCA and consortium university faculty will jointly engage in a workshop for BCA HEHN faculty on "Developing a Curriculum to Meet the Identified Needs of the Home Economics Profession."
4. BCA and consortium faculty will identify and document community resources for practical work and advisory personnel.
5. BCA and consortium students and faculty will develop research linkages in home economics and human nutrition related areas.
6. Conduct joint assessment of HEHN department preparedness to conduct graduate programs and examine alternative curricula and syllabi.
7. BCA and consortium university faculty will collect materials suitable for OSU course, (HDFS450) "Families and Quality of Life in the Developing World," (HDFS561) "International Development and Families," and similar courses at other consortium universities.

Activities at Consortium Universities

1. BCA and consortium university faculty will identify professional literature suitable for use by the HEHN Department and for library development.
2. Consortium university faculty will facilitate exchanges for graduate studies and professional development with students and faculty from BCA.

Expected Outcomes:

1. Links with private sector established to help guide program.
2. Curriculum workshop conducted based on needs assessment and evaluation and influencing curriculum development work.
3. Case studies collected for use at consortium universities.
4. Long-term research collaboration established.

Key BCA Personnel:

Beatrice Mtimuni, BCA (1 month)
Mercy Ngwira, BCA (1 month)
Dorothy Kaponya, BCA (2 month)

4 person months over 5 years

Key Consortium Personnel:

Catherine Mumaw, OSU (4 months)

4 person months over 5 years

Module 4: Master of Science Program in Foods and Nutrition (OSU Lead)

Objectives:

1. To assess the needs and potential of HEHN department to create a graduate curriculum.
2. To develop a joint M.Sc. program in Foods and Nutrition at BCA and OSU/TU.
3. To strengthen the consortium universities' experience in developing country food and nutrition systems and the implications of this knowledge for rural U.S. communities.

Activities at BCA:

1. BCA and consortium faculty will develop appropriate M.Sc. curricula in Foods and Nutrition at BCA.
2. M.Sc. candidates in Foods and Nutrition will conduct their research in Malawi under the joint supervision of BCA and consortium university staff.
3. M.Sc. courses will initially be taught by both BCA and consortium faculty, with an increasing number of M.Sc. courses taught solely by BCA faculty in successive years.
4. Course development and research projects conducted in Malawi will focus on already identified priority areas, i.e., nutritional surveillance, food security, family production systems, weaning foods, etc.

Activities at Consortium Universities:

1. M.Sc. candidates will complete all or part of their coursework in Foods and Nutrition at OSU/TU during the early years of the joint program.
2. Consortium universities will facilitate exchanges for graduate studies and professional development in Foods and Nutrition with students and faculty from BCA.
3. M.Sc. candidates in Foods and Nutrition will conduct literature reviews and develop methodologies for their research to be conducted in Malawi.
4. One BCA faculty member will pursue Ph.D. studies at OSU in Foods and Nutrition.
5. Research articles written jointly by BCA and consortium faculty will be published and disseminated.

Expected Outcomes:

1. Malawi-specific M.Sc. curricula in Foods and Nutrition will be developed and implemented jointly between BCA and OSU/TU
2. Research findings will be published and disseminated on problems relevant to Malawi.
3. There will be an increased number of M.Sc. graduates from BCA and from SADCC countries in Foods and Nutrition.
4. Consortium faculty and students will increase their expertise and experience in Malawian situations and new knowledge applicable to developing innovative solutions to problems confronting rural communities in Oregon, Washington and Alabama.
5. Courses at OSU in new M.P.H. program in nutrition will reflect experience of faculty and graduate students input for an international focus.

Key BCA Personnel:
Beatrice Mtimuni, BCA (2 months)
Mercy Ngwira, BCA (2 months)
Dorothy Kaponya, BCA (2 months)
Gil Cusack, BCA (2 months)
Additional Lecturer, BCA (24 months)

32 person months over 5 years

Key Consortium Personnel:
Marge Woodburn, OSU (4 months)
Catherine Mumaw, OSU (3 months)
John Lu, TU (4 months)

11 person months over 5 years

Module 5: Family Resource Management:
Curriculum Enrichment and Teaching Intra-Household Resource Dynamics
Income Generating Activities Research and Data Base Development (OSU Lead)

Objectives:
1. Curriculum enrichment and teaching in the area of family resource management with major emphasis on gender roles in Malawian limited resource farm families.
2. Research and data base development in the area of intra-household resource dynamics and income generating activities as they impact family health among limited resource families.

Activities at BCA:
1. Integrate farm and family resource systems approach with the family resource management courses currently offered.
2. Improve Malawi library collections of Malawi-based research on family resource management and gender issues.
3. Develop a student field work project to expand the understanding of household resource dynamics issues to improve skills relevant to assisting rural families.
4. Develop field work manual and supervision guidelines for student field work.
5. Develop and teach a short course on "Issues and techniques for research on intra -household resource dynamics."
6. Develop a research project to study intra-household resource dynamics and income generating activities as they impact on family health.
7. Develop a data base on gender roles in farm and family dynamics utilizing both secondary data currently available and continued research efforts.

Activities at Oregon State University and Tuskegee University
1. Improve the library resource base relevant to family resource management and intra-household resource dynamics relevant to Malawi and Southern African countries.
2. Joint publication of field work manual for household resource dynamics adaptable for Southern African context.
3. Develop and teach an interdisciplinary seminar with focus on "Family Resource Systems and Development" to complement the OSU course on "Farming Systems Research."
4. Improve skills of OSU faculty to teach in a cross cultural educational environment

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5. Seek external funding for research on intra-household resource dynamics and income generating activities as they impact on family health.

Expected Outcomes:

1. Development of Malawi professionals with greater understanding of and preparedness to work with rural families through field work.
2. Data base on gender roles in farm and family dynamics accessible to Government and Non-government organizations dealing with gender issues.
3. Collaborative research and publication in the area of intra-household dynamics and income generating activities.
4. New courses with international perspective at OSU and TU and revised curriculum at BCA.

Key BCA Personnel	Consortium Personnel
P. Mkandawire (2 months)	Revathi Balakrishnan, OSU (3 months)
Beatrice Mtimuni (2 months)	
Dorothy Kaponya (2 months)	
6 person months over five years	3 person months over 5 years

Module 6: Development of Fruits and Vegetables Processing Technology in Malawi (TU Lead)

Objectives:

1. To train BCA students and faculty in food processing technology and income generating opportunities for fruit and vegetable producers.
2. To incorporate curricula on food processing at BCA.
3. To improve BCA capacity in laboratory and analytical research techniques.

Activities at BCA:

1. Survey of fruit and vegetable production, utilization, distribution, consumption and traditional food preparation methods in Malawi.
2. Assist in the establishment of a research laboratory at BCA that will be used to determine processing conditions and product quality.
3. Evaluate fruit and vegetable quality and determine appropriate processing methods.
4. Exchange students and faculty for short-term training.
5. Disseminate information on production practices through demonstrations in villages and training of extension staff.

Activities at Tuskegee University

1. Train laboratory technicians in analytical techniques.
2. Host fruit and vegetable processing specialist from Malawi.

Expected Outcomes:

1. Improved methods of processing demonstrated and incorporated into curriculum and used in

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extension worker training.

2. Highlight the findings of food processing investigations and make recommendations for use by the extension service.
3. Increased international experience of TU faculty and students, and internationalization of the curriculum.
4. Established linkage between TU and BCA to sustain the exchange of faculty, students and resource materials.

Key BCA Personnel
Beatrice Mtimuni, BCA (1 month)
Mercy Ngwira, BCA (1 month)
Dorothy Kaponya, BCA (1 month)
Gil Cusack, BCA (1 month)

4 person months over 5 years

Key Consortium Personnel
Eloise Carter, TU (2 months)
David Kamau, TU (1 month)
John Lu, TU, (1 month)

4 person months over 5 years

Module 7: Study of Malawian Foods (OSU/TU Lead)

Objectives

1. To improve the capabilities of HEHN Department at BCA in evaluating the nutrient content of locally grown foods in Malawi as they are eaten at the household level.
2. To enhance the capabilities of BCA laboratory staff to conduct research in food processing, preservation and food safety.
3. To enhance the capabilities of BCA graduates to disseminate technical information and provide training in small-scale and commercial preservation of fruits and vegetables with emphasis on dehydration.

Activities at BCA

1. BCA and consortium university faculty will jointly evaluate capabilities of BCA's laboratory researchers and make recommendations for increasing their capabilities.
2. Collect, analyze and tabulate nutrient composition data for Malawi foods.
3. Compile, evaluate and improve on traditional and modern food processing, preservation, and preparation methods.

Activities at Consortium Universities

1. Malawian students and faculty will do literature reviews and prepare methodology for research in nutrition, food processing, preservation, and safety.
2. Consortium faculty will support on-going Malawian research.
3. Specialized analysis of nutrient composition of Malawian foods.
4. Training of laboratory technicians.

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Expected Outcomes

1. Increased information on nutritional content of foods, food processing, preservation and food safety in Malawi.
2. Improved laboratory equipment available at BCA to enhance chemical and physical analysis.
3. Enrich food science and nutrition courses in course content at both BCA and OSU/TU.
4. Research findings will be made available to relevant government and non-government organizations.
5. The practical training portion of BCA course "Principles of Human Nutrition" will be enriched.

Key BCA Personnel
Mercy Ngwira, BCA (2 months)
Gil Cusack, BCA (2 months)
Dorothy Kaponya, BCA (2 months)
Beatrice Mtimuni, BCA (2 months)

8 person months over 5 years.

Key Consortium Personnel
Marge Woodburn, OSU (3 months)
John Lu, TU (3 months)

6 person months over 5 years

Module 8: Food Security and Nutrition Among Fish-eating Households in Malawi (OSU Lead)

Objectives:

1. To characterize the nutrient content of fish species commonly consumed in Malawi.
2. To develop techniques for enhancing the bioavailability of micronutrients in traditional Malawian fish dishes.
3. To examine the effect of recent developments in aquaculture, particularly in the Zomba District, on the distribution and consumption of fish within the household.
4. To examine the link between human populations and their nutritional environment, with an emphasis on the role of fish in the Malawian household.

General Study Design

Study zones: Study sites in each of three distinct agro-ecological zones will be selected on the basis of the following attribute: distance from natural or artificial fish-producing water bodies such as lakes and ponds. Population size and demographics should be as varied as possible (Beebe 1986).

Zone 1: A village or villages near Lake Malawi, including Likoma Island

Zone 2: A village or villages in the Zomba District, near aquaculture ponds, or in another district which has aquaculture ponds

Zone 3: A village or villages far from fish-producing water bodies such as ponds, lakes, or streams; these may be in the highlands or in other areas that have poor access routes.

Methodology:

Rapid rural appraisal will be used to define the boundaries of the "problem" and to collect baseline data that will be used in Studies 1 to 4. Composition of multidisciplinary rural appraisal teams will be decided upon initiation of the project, once participating faculty and students are

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identified. Other techniques (e.g., focus group interviews, surveys) will be employed for triangulation purposes as determined by interested researchers. A workshop for faculty to learn new research techniques will be conducted. Literature (i.e., books on research methods) and other field research materials will be purchased to facilitate the course and workshop.

Activities at BCA

1. Characterization of the nutrient content of fish species consumed in Malawi to determine micronutrient bioavailability.
2. Investigation of new techniques for improving fish preparation to increase micronutrient bioavailability in the diet.
3. Assessment of the potential of fish culture for alleviating nutritional problems.
4. Description of the link between environment, subsistence, and nutritional status as observed through nutritional strategies in which fish is a component of the diet.

Expected Outcomes:

1. Food preparation techniques to improve nutritional status among fish-eating households.
2. Information for extension agents for improving smallholder's nutritional status.
3. Identification and assessment of needs for improving fish processing.
4. Improved policy decisions regarding the development of aquaculture in Malawi.
5. Research findings will be made available to relevant government and non-government organizations.
6. Case studies developed for incorporation into OSU/TU curricula.

Key BCA Personnel

Beatrice Mtimuni, BCA (1 month)
Mercy Ngwira, BCA (1 month)
Timothy Ngwira, BCA (1 month)
Gil Cusack, BCA (1 month)

4 person months over 5 years

Key Consortium Personnel

Hillary Egna, OSU (1 month)
Suchet Louis, TU (1 month)
Marge Woodburn, OSU (1 month)
Eloise Carter, TU (1 month)

4 person months over 5 years

Management of UDLP

A collaborative management arrangement will be used to ensure that BCA is fully involved in the planning, management and evaluation of the linkage. For example, an initial planning workshop will be conducted during the first month of the linkage and will involve the Heads of the Departments of Home Economics/Human Nutrition and Rural Development meeting with consortium colleagues in the U.S. to fine tune plans for implementation and to develop procedures for management routines.

The U.S. university consortium will be coordinated by OSU through the Office of International Research and Development (OIRD). Specifically, OIRD will provide management assistance in

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communication among cooperating universities in the U.S. and Malawi; coordination of planning, monitoring, and evaluation; equipment procurement, shipping, and inventory control; travel assistance, financial accounting and oversight; student admissions and management; fund raising to supplement UDLP funds; mobilization of personnel and technical resources; and report preparation.

To ensure that participating institutions contribute the resources promised in this application and to ensure the smooth implementation of the linkage project the lead university (OSU) will prepare individual agreements with each of the contributors. These agreements will specify the nature of the commitment, the name of the participating faculty, target dates for involvement, expected duration of involvement, and other relevant terms. The agreement would be signed by all relevant administrators of the institution.

UDLP Coordinator nominee, Dr. David G. Acker, has 12 years of experience working with development assistance projects in East and Southern Africa, including six years of experience working with the Malawi Agricultural Research and Extension project. Dr. Acker serves as Associate Director of the Office of International Research and Development and as Program Director of Extension Education at OSU. His background includes long-term assignments in Tanzania and Greece, and short-term assignments in Malawi, Zimbabwe, Botswana, Swaziland, Tanzania and Costa Rica. Dr. Acker has been a Fulbright scholar, an external examiner and served during 1991-92 as president of the Association for International Agricultural and Extension Education. His research interests include relevance of agricultural higher education, access of women to agricultural higher education and extension effectiveness.

C. Monitoring and Evaluation

Monitoring of each UDLP objective is critical to the success of the linkage. Key indicators are described in the "Expected Outcomes" section of each module and will be used as the basis for measuring progress of the linkage. At BCA monitoring will include: 1) surveys of students and faculty to measure gains in knowledge and skills relevant to UDLP objectives, 2) course evaluations completed by students, 3) student reports on internships, 4) published research results, and 5) review of curriculum materials. At consortium universities internationalization gains will be measured through surveys of U.S. students and faculty to assess awareness of social, cultural, economic and environmental issues learned through interactions with Malawian individuals and institutions. As well, increased numbers of case studies from Malawi incorporated into courses will be an indication of dual benefit flows under UDLP. At consortium universities an external review panel will be convened to evaluate the project on an annual basis. This panel will utilize the expected outcomes as specified in the cooperative agreement as the basis for their evaluation.

The information derived from monitoring will supplement the overall project evaluation plan which will consist of quarterly technical and financial reports, annual inventories of procured goods, and annual internal audits of financial records. The plan for evaluation incorporates a social impact assessment at the close of years three and five. The evaluation will examine the success in meeting the broader goals of improving rural services for Malawian families.

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D. Sustainability

There are three key elements of sustainability related to this linkage. First, the link must be in the self interest of each institution. For this reason we have focused on areas which are of mutual interest to all collaborating institutions. If the linkage is maintained so that it is in the best interest of the universities, we will find ways to keep these collaborative linkages alive and well. Second, networking of BCA and consortium universities with Malawi government, NGOs and private sector is an integral part of the linkage project. This aspect of the proposal enhances the project's sustainability by emphasizing the building of contacts between government, education, and the private sector which will provide input to sustain program relevance and which should lead to continued support for research, instruction, and extension at BCA as long as the program is truly serving societal needs. Third, in the medium-term, funding will be required to maintain an active linkage. The link with BCA has been carefully sculpted to deal with BCA's highest priority needs which are also of interest to donors. Extensive discussions with USAID/Malawi, World Bank/Malawi, Rockefeller Foundation and other private organizations have laid the groundwork for long-term support.

The consortium universities are committed to a permanent linkage with BCA. During the past 6 years funds have been found to initiate a wide variety of collaborative activities with Bunda BCA. The UDLP will assist us in expanding these activities, but will not supplant our commitment to continue to locate funding to maintain this association on a permanent basis.

An example of funds that have recently been identified to enable the consortium to provide more than a 1:1 match are those committed by the American Farm School in Thessaloniki, Greece. The American Farm School is committed to establishing a link with Malawi institutions of agricultural education and has invited us to utilize their model program as a third country training site, with the school providing room and board for participants. Rockefeller Foundation has also expressed keen interest in receiving proposals from the consortium/BCA and may likely be a significant source of support. Private U.S. companies which import agricultural produce from Malawi have expressed willingness to contribute funding once the link is operating. The good will which can be easily tapped in the U.S. will be a source of strong financial support which we will develop through a "Support Agriculture in Malawi" campaign. Cooperative projects with Save the Children, World Vision and other NGOs will also be explored.

SECTION II: USIHE INSTITUTIONAL CHARACTERISTICS AND CAPABILITIES RELATED TO THE LINKAGE

Oregon State University

(1) Administrative Commitment

For more than 125 years Oregon State University (OSU) has played a lead role in the development of the State of Oregon through instruction, research and extension services.

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Oregon State currently enrolls over 15,000 students, of whom 2,600 are at the graduate level and 1,600 are foreign students from more than ninety-one countries. The faculty of more than 2,000 is from all parts of the world. The operating budget for 1991-92 is approximately $ 250 million.

OSU places internationalization of students, faculty, curriculum and research at the head of its agenda. In April 1992, OSU adopted revised mission and vision statements which clearly reaffirm the institutional commitment to be a truly international university (see Annex 5). OSU's strategic plan includes a goal to sustain, coordinate, and sharpen the university's international focus. The administration of OSU views continued involvement with international linkage and development projects as one way of achieving this goal. The university's involvement in international development is intended to benefit the cooperating countries, OSU, the state of Oregon and the U.S. by:

- improving the quality of life and standard of living for citizens in cooperating countries and in Oregon through mutual exploration of solutions to rural development constraints;
- strengthening the U.S. and overseas institutions that teach, conduct research and provide services; and
- providing training to future government and business leaders in cooperating countries and in Oregon through involvement in a process of participatory development of mutual benefit to all stakeholders.

OSU has more than 35 years of experience implementing international development programs, including programs focused on research and extension. In 1991-92 OSU participated in projects in 14 countries, with a combined annual budget of more than 12 million dollars, with 9 faculty members working full-time abroad in development activities.

International activities are an integral part of the University. Areas of emphasis include strengthening in-country institutions in areas such as instruction, research, and extension activities, and establishing lasting relationships with foreign institutions and national and international organizations. Dr. Edwin C. Price serves as Assistant Vice President for International Research and Development. The Office of International Research and Development has management responsibility for all international programs at OSU related to research and development in developing countries. Dr. Price made working visits to Malawi in 1987 and 1989. International activities are under the direction of Dr. George Keller, OSU Vice-President for Research, Graduate Programs and International Programs. Dr. Keller visited BCA in 1989 to assist in planning the Memorandum of Understanding between BCA and OSU (See Annex 5). Dr. John V. Byrne, the president of the university and member of BIFADEC, visited Malawi in 1987 to convey the vision of a long-term relationship.

(2) Faculty Commitment

Evidence of faculty commitment to international activities can be seen in faculty members'

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extensive experience providing technical assistance to developing countries. OSU's international programs have forty full-time faculty involved in international projects and research, and are supported by over eighty staff. More than 300 students participate in international exchange programs each year.

For promotion, a candidate's professional activities are scrutinized for evidence of achievement and leadership in the field when serving on international programs and of demonstrated effectiveness in the development or use of new approaches and techniques for the solution of professional problems. As an indication of the weight given to international experience, three faculty members at OSU were recently granted tenure and/or promotion on the strength of their international contributions. International involvement and recognition are important criteria in the performance evaluation process, and letters of evaluation are required from host country colleagues. OSU supports international development projects and programs through the promotion and tenure policies outlined in Annex 5. Administrative and staff policies encourage faculty involvement in international assignments through compensation for increased responsibility, relinquishment of a position, and the extra-professional work requirements.

(3) Resource Commitment

OSU supports international programs in Natural Resources Management, International Institutional and Human Resource Development and Technology Transfer. Financial support of the direct costs of international programs is approximately $800,000 annually. The following is a summary of selected international grant and collaboration projects implemented during the past three years related to the University Development Linkage Project.

Yemen Faculty of Agriculture:
OSU has provided technical assistance to establish Yemen's first Faculty of Agriculture (1983-91).

Malawi Agricultural Research and Extension Project:
OSU has provided technical assistance to Malawi in progress toward attaining food self-sufficiency, improving rural incomes, and improving rural technologies in agro-forestry and agriculture (1986-92).

Bangladesh Institute for Post-Graduate Studies in Agriculture:
This is a long-term institution-building project in which OSU has provided technical assistance to establish the Institute of Post Graduate Studies in Agriculture (1986-94).

Oman Fisheries Development Project:
OSU has provided technical assistance to establish research programs in six sections of Oman, provide training, and provide assistance with routine operation of programs (1986-90).

OSU's stated internationalization goals include encouraging international involvement among all students, expanding opportunities for students to acquire an international dimension in their undergraduate education, stimulating faculty and departments to become involved in

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international education, and promoting OSU as an international university by preparing undergraduates for the interdependent and globally-connected world in which they live. These internationalization objectives are being approached through a new international studies undergraduate degree and the Bachelor's of Arts dual requirements of foreign language proficiency and non-Western cultural studies. The International Degree Program was developed during the past two years and will begin in Fall 1992. It allows students to concentrate on the international aspects of their field and to be recognized for their achievement with a degree entitled International Baccalaureate. As part of the program students are required to study abroad for at least one term.

Internationally oriented education and awareness programs for faculty, staff, alumni, board of trustees members and others are facilitated by the Office of International Education. This office provides the leadership for OSU's involvement in a wide range of activities, including hosting international students and scholars, sponsoring student and faculty exchanges and international cooperative research projects, developing internationalized curricula, and developing global perspectives and understanding among nations and peoples. This office also provides homestays and visits, language assistance for spouses, and cross-cultural workshops, and maintains a close relationship with West International House (a campus residence hall) and the International Student Organization of OSU. The International Cultural Service Program enables international students to serve as cultural and educational resources for the local community.

(4) Public Support

OSU's internationalization strategies have been integrated into campus life as part of the university's recognition of the value of international student activities as part of a college education. Over 39 student groups represent students from each country, and sponsor and promote many educational and cultural programs and activities. The university's commitment to international student activities includes the establishment and support of several cultural centers which involve community members and families in various events.

An example of the integration of international development projects and the citizens of Oregon is the development and incorporation of a study unit on Malawi adopted by the Extension Service for use with global education programs conducted in communities across the state. Global studies and multi-cultural education are also a formal part of the K-12 curriculum in area schools; the OIRD coordinates a "visiting scholar" program whereby international visitors, as well as OSU faculty with international experience, offer "guest lectures" or seminars to classes interested in their area of expertise.

(5) Academic Programs

Among the 282 degree programs at OSU, more than 450 internationally-focused courses are offered (See Annex 5). The new International Baccalaureate Degree Program and the new focus of the College of Liberal Arts on international competencies are illustrations of the

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rapid evolution of academic programs into international areas.

Interdisciplinary approaches are pursued through several degree and concentration programs. For example, the College of Liberal Arts offers a liberal studies undergraduate degree program in which a student concentrates in two or more related areas, and a Masters of Arts in Interdisciplinary Studies for graduate students.

The College of Home Economics and Education provides leadership in teaching, research, extension and international development in the areas of family resource management, nutrition and food management, and extension education. The College of Agricultural Sciences supports programs Agricultural Education and General Agriculture, Agricultural and Resource Economics, Animal Science, Crop and Soil Science, Fisheries and Wildlife, Food Science and Technology, Horticulture, and Rangeland Resources.

Tuskegee University

Tuskegee University (TU) is making significant strides toward the internationalization of its curriculum and toward becoming a world class institution. In 1988, a globalizing curriculum workshop was organized on campus; and ten faculty members participated in a study abroad program in both Senegal and the Gambia. Moreover, a year ago, key administrators participated in a national conference on internationalizing U.S. universities. Most academic units have one or two international courses taught every semester and a large number of students are enrolled in these courses. Since 1984, more than twelve joint international research projects have been implemented in the fields of agriculture, food technology, veterinary medicine, and human health and nutrition. Most of this research was carried out on the continent of Africa and in areas that were relevant to the specific country's needs. The priorities were in health, food production, preservation and marketing. Tuskegee University's institutional characteristics and capabilities can be best described by its mission statement, academic and relevant research program.

Tuskegee University is a national, independent and nonprofit institution of higher learning that has a special and unique relationship with the State of Alabama and with distinctive strengths in the sciences, engineering and other professions. The University's basic mission is to provide educational programs of exceptional quality which promote the development of liberally prepared and professionally-oriented people. The University is rooted in a history of successfully educating black Americans to understand themselves against the background of their total heritage and the promise of their individual and collective future. A primary mission has been to prepare them to play an effective professional and leadership role in society and to become productive citizens in the national and world community. Tuskegee University continues to be dedicated to these broad aims.

Over the past century, various social and historical changes have transformed this institution into a comprehensive multicultural place of learning whose primary purpose is to develop leadership, knowledge, and service for a global society committed deeply to academic

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excellence. The University admits highly talented students and challenges them to reach the highest possible levels of intellectual and moral development. The University also believes strongly in equality of opportunity and recognizes that exquisite talent is often hidden in students whose finest development requires unusual education, personal and financial reinforcement. The University actively invites a diversity of talented students, staff and faculty from all racial, religious and ethnic backgrounds to participate in this education enterprise.

Area studies relevant to internationalization objectives in general and to the linkage proposal in particular include agriculture and home economics. In agriculture and home economics Tuskegee has special strengths in agricultural economics, environmental sciences, food science, nutritional science and plants and soil sciences. In the areas of food science, strengths include food microbiology, food preservation, food chemistry and food analysis.

Tuskegee's approach to achieving development with limited resources is especially relevant to problems faced by emerging nations of the world. As a consequence of Tuskegee University's unique history and interests, it has attracted a faculty dedicated to humanitarian service and possessing strong technical and professional expertise. In Africa, Tuskegee has implemented projects in Malawi, Mali, Niger, Burkina Faso, Cameroon, Ghana, and Liberia. Oregon State University and Tuskegee University signed a Joint Memorandum of Understanding in 1984 agreeing to cooperate in assisting developing countries in food and agricultural sciences and have worked together on several projects. Research programs in nutrition and food science are specially relevant to the UDLP. Examples of relevant experience include:

Ghana: TU, in collaboration with the Ghanaian Food Technology Institute, conducted two research projects: 1) Evaluation of Indigenous Food Preservation Techniques used and Their Effect on Nutrient Quality, and 2) Evaluation of Selected Storage on Post-Processing Losses and Quality Preservation of Smoked Dry Fish.
Jamaica: TU, in collaboration with the Ministry of Health, carried out research on adolescent nutritional surveillance.
Senegal: TU, in collaboration with Senegalese researchers, researched and developed mango preservation and marketing.
Guinea-Bissau: TU developed and tested a solar dehydration device for preservation of fruits and vegetables.

Workshops have been conducted on food processing for Costa Rican women and school teachers, Honduran rural change agents and Salvadoran extensionists.

Washington State University

The mission of Washington State University (WSU) is to provide instruction, research, and community services for the citizens of the state, the nation and the greater world community. Graduate and undergraduate training is offered in all major disciplines and numerous technical

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and professional fields. Current enrollment is 16,300 students, including about 1840 graduate students. WSU has 1715 faculty, with 131 in disciplines within the College of Agriculture and Home Economics (CAHE), and an additional 261 in related Cooperative Extension positions with programs serving the 39 counties. WSU's curriculum and programs are developed to produce graduating students, research results and services which contribute to the evolving social and economic development goals of its clientele.

The University's activities at home and abroad have promoted a client-oriented multi-disciplinary research and outreach approach addressing issues in the agricultural and home economics, rural, and related sectors. Both domestically and internationally, the conservation of threatened and fragile natural resources, whether soil, water, or land (rangeland, forest, or agricultural land), has been a primary concern of WSU faculty and their research, teaching and extension programs.

The University has recognized and is responding to new needs and opportunities resulting from the increasing interdependence of nations and their peoples. A linkage with BCA would both benefit from and contribute to WSU's internationalization efforts. In April, 1990, WSU signed a Memorandum of Understanding with BCA (See Annex 5).

Policies and procedures in support of institutional commitment:

- University mission and goals emphasize development cooperation
- "Strategic Plan for the Internationalization of Curricula and Programs" and "Planning for the Second Century: Common Understandings" both document internationalization as one of the highest priorities at WSU
- Policies support professional advancement of faculty based upon successful international performance
- Established Office of International Development Cooperation

Documentation of commitment through long-term affiliation:

- With research organizations - CIMMYT, ILRAD, IRRI, CIP, ICARDA, ICRISAT
- With donors - World Bank, USAID, FAO and others

Documentation of commitment to Malawi:

- Five year commitment to strengthen agricultural research, extension and graduate training through the Malawi Agricultural Research and Extension Project (in collaboration with OSU and TU)
- Five year commitment to strengthen agroforestry research and extension in conjunction with the Ministry of Agriculture, BCA and Rockefeller

Commitment of domestic resources:

- Provision of WSU supported faculty, travel, and technical backstopping to Malawian institutions and scientists in support of long-term linkages.

Documentation of commitment to international activities and projects:

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- WSU recognized as national leader in internationalization of U.S. universities
- Provision of support for study abroad, internships, exchanges, and foreign scholars
- Assistance and training to other universities to develop, plan, and strengthen research, extension and teaching programs.

For additional information see Annex 5.

SECTION III: DEVELOPING COUNTRY INSTITUTION CHARACTERISTICS AND CAPABILITIES RELATED TO THE LINKAGE

1) Administrative Commitment

Bunda College of Agriculture was established in 1967 as a constituent college of the University of Malawi in the University of Malawi Act of 1974. The act states that "the objects of the University shall be to advance knowledge and to promote wisdom and understanding by engaging in teaching and research and by making provision for the dissemination, promotion, and preservation of learning; by engaging in such university education and research as is responsive to the needs of Malawi and Africa."

The college's strategic plan is to emphasize growth, especially in the areas of graduate studies. Faculty currently on study leave will be returning to strengthen program offerings in all areas. The college has identified two broad areas of particular interest and has asked the consortium of U.S. universities to assist them in strengthening these areas.

International standards are maintained through the use of external examiners, visiting lecturers, and frequent participation in international and regional conferences. BCA maintains links with universities in Europe and is eager to develop linkages with U.S. Land Grant Universities.

2) Faculty Commitment

The administrative and staff policies at BCA are designed to encourage faculty and student involvement in local, regional and international activities. Specifically students are involved in practical field experiences which gives them an understanding of local development problems. Regionally, college faculty are involved with numerous research projects aimed at solving the everyday problems of society. Faculty and administrators are involved in the Southern African Development Coordination Committee (SADCC), and in the Southern African Center for Cooperation in Agricultural Research (SACCAR), which operate a number of regional research and education programs. BCA is also actively involved with a variety of international research centers including the International Center for Living Aquatic Resource Management and collaborative research such as the Bean Cowpea Collaborative Research Support Project.

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In addition to stressing BCA faculty involvement in teaching and village outreach work, special consideration is given to research as it applies to solving everyday problems of Malawian farm families. Faculty in the Departments of Rural Development and Home Economics and Human Nutrition are engaged in nutritional surveys of villages and estate laborers, in examining the role of women farmers in production systems and in many other efforts specifically related to societal needs.

Regarding international experience for faculty there is clearly a great demand for additional international experience. Most of the faculty received degrees from institutions abroad and are eager to maintain contacts with the international scientific community. At present the demand for such experience outstrips the opportunities due to limited funds. A linkage program would ensure that additional opportunities are made available for faculty to participate in regional and international activities.

3) Resource Commitment

BCA stands ready to make a major resource commitment to the UDLP. In spite of scarce resources available to BCA the leadership of the College has set the development of links with this consortium of U.S. universities as a priority.

College financial support is derived from two principal sources. First, there are Government of Malawi resources which are channeled to meet the goals and objectives of the University of Malawi Act. Second, donor resources provide scholarship assistance for BCA students and faculty, and for some equipment. The college also benefits from collaborative programs with the International Development Research Center of Canada, International Center for Living Aquatic Resource Management, The International Council for Research on Agro-forestry, The Collaborative Research Support Program (Bean Cowpea), and the University of Wales. It is currently establishing a link with the Association for International Agricultural and Extension Education.

BCA currently has a library with a seating capacity of 96 and a stock of over 29,000 books and periodical titles. A special section of the library is devoted to Malawian reports and periodicals. BCA, while appropriately situated in the heart of agricultural land rather than in an urban setting, is never the less entirely up to date in its communication facilities. The college possesses telephone, telex, telegram and facsimile capability and is located 30 minutes from the capital city and 45 minutes from an international airport. English language courses are taught within the Department of Rural Development. Courses such as language development and communication are also included in the program.

4) Public Support

BCA has a high degree of integration of local community needs and campus life. Students are involved with internships with the extension service and with other rural agencies in order to gain practical experience. Field trips by BCA students to agriculture and rural related

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projects site are a regular feature of training. Since 1969 the college has had annual field days for the purpose of involving the public in the educational process of the university and sharing research results.

A statement in the BCA prospectus of 1990-91 states "a major requirement of both the diploma and the degree programs at BCA is that students, accompanied by staff, go into the villages to study how the people live, what they eat, and how their living conditions could be improved." This captures the prevailing attitude at BCA with respect to the orientation of education there.

The college is closely linked with primary and secondary schools in Malawi particularly in the vocational preparation areas. Teachers for such schools as the Natural Resources College often obtain their technical training at BCA before beginning their teaching career preparing change agents for rural development. The college is also involved in providing Master of Science training in animal science for SADCC students from several southern African countries.

5) Academic Programs

BCA offers three year diplomas as well as bachelor, master and doctoral degrees in agriculture. At the bachelor level all students major in agriculture with options in agricultural engineering, animal science, crop production, home economics and human nutrition, and rural development.

Courses at BCA combine case studies and information from around the world and from local communities in Malawi. For example, the new course on agro-forestry draws on research findings from a variety of countries including those in Asia, Africa and Latin America while also utilizing findings based on eight years of research in Malawi. This course also demonstrates the inter-disciplinary approaches increasingly used in teaching and research. Scientists from several departments contribute to the success of this technical area. English is offered as a course however no other foreign languages are offered.

6) Needs Assessment

> "While Malawi has seen remarkable forward movement since its independence, surviving a range of large external shocks in the process, it has to continue to place a high priority on economic growth as a means of realizing an acceptable standard of welfare for its people. Such growth will be realized through increasing productivity in the exploitation of the nation's natural and, in particular, human resources. It will take investment, reform, restructuring, regulation, direction, and exhortation in almost every field of human activity." (Statement of Development Policies, 1987-1996)

The needs of Malawi can [illegible] be [illegible] defined to include

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- Rapidly increasing population places pressure on land and other natural resources and education of farmers through extension is a critical need.
- Soil fertility decline is estimated at 30% since independence.
- Less than 2% of the cultivated land is prepared using animal power and less than 2% is irrigated. Land and labor shortages in the south and north respectively are major constraints to agriculture.
- Household food security is declining. Maize production is currently well below the nations nutrient requirements. Education of farm families through extension is evident.
- Three export crops - tobacco, tea, and sugar represent 80% of agricultural exports. These crops are grown principally on estates. The dualistic nature of the agricultural economy has created imbalances related to accessing inputs and markets.
- Women provide over 70% of the productive labor and agriculture yet many of the agricultural services do not reach women farmers.
- Input prices are so high that most farmers producing food crops are unable to utilize them.
- Rural incomes are especially low with few opportunities for altering this situation.
- Land use practices are not sustainable from an economic or ecological point view.

7) Needs Assessment Methodology

There are two aspects of the needs assessment methodology. First, the manner in which the needs of Malawians were determined is directly related to field studies conducted during the last eight years. Examples of these include:

"Beyond Dualism: the Changing Face of the Leasehold Estate Sub-sector of Malawi, (1990) by Richard Mkandawire, Steven Jaffee and Sandra Bertoli.

"Survey of Women in Agriculture in Malawi," (1990) by Carol Culler, Helen Patterson and Isabel Matenje.

"The Characteristics of Nutritionally Vulnerable Subgroups within the Small Holders Sector of Malawi," (1988) Center for Social Research.

"National Sample Survey of Agriculture," (1984) Government Printing.

"Women Farmers in Malawi," (1984) by D. Hirschmann, and M. Vaughan, Institute of International Studies (California).

"Private and Public Sector Demand for Graduates of Agricultural Training Institutions in the SADCC Region 1989-2000," (1989) by Deloitte, Haskins and Sells.

Second, the needs of BCA were assessed during a series of five faculty meetings conducted during 1989-92. These meeting were attended by faculty of the two relevant BCA departments and by representatives of OSU/WSU/TU. Further consultation was sought with the Malawian Ministry of Agriculture, USAID Malawi, World Bank and Rockefeller Foundation.

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