

PROJECT DATA SHEET

1. TRANSACTION CODE

A = Add  
 C = Change  
 D = Delete

Amendment Number 3

DOCUMENT CODE 3

2. COUNTRY/ENTITY

Uganda

3. PROJECT NUMBER

617-0103

4. BUREAU/OFFICE

AFR

06

5. PROJECT TITLE (maximum 40 characters)

Manpower for Agricultural Development

6. PROJECT ASSISTANCE COMPLETION DATE (PACD)

MM DD YY  
08 21 93

7. ESTIMATED DATE OF OBLIGATION (Under 'B.' below, enter 1, 2, 3, or 4)

A. Initial FY 83

B. Quarter 4

C. Final FY 91

8. COSTS (\$000 OR EQUIVALENT \$1 = )

A. FUNDING SOURCE	FIRST FY <u>83</u>			LIFE OF PROJECT		
	B. FX	C. L/C	D. Total	E. FX	F. L/C	G. Total
AID Appropriated Total	7,021	479	7,500	24,421	479	24,900
(Grant)	(7,021)	(479)	(7,500)	(24,421)	(479)	(24,900)
(Loan)	( )	( )	( )	( )	( )	( )
Other U.S.						
1. Ohio State University				2,000		2,000
2.						
Host Country		747	747		14,955	14,955
Other Donor(s)						
<b>TOTALS</b>	<b>7,021</b>	<b>1,226</b>	<b>8,247</b>	<b>26,421</b>	<b>15,434</b>	<b>41,855</b>

9. SCHEDULE OF AID FUNDING (\$000)

A. APPROPRIATION	B. PRIMARY PURPOSE CODE	C. PRIMARY TECH CODE		D. OBLIGATIONS TO DATE		E. AMOUNT APPROVED THIS ACTION		F. LIFE OF PROJECT	
		1. Grant	2. Loan	1. Grant	2. Loan	1. Grant	2. Loan	1. Grant	2. Loan
(1) FN	183	080		9,900		15,000		24,900	
(2)									
(3)									
(4)									
<b>TOTALS</b>				<b>9,900</b>		<b>15,000</b>		<b>24,900</b>	

10. SECONDARY TECHNICAL CODES (maximum 6 codes of 3 positions each)

11. SECONDARY PURPOSE CODE

12. SPECIAL CONCERNS CODES (maximum 7 codes of 4 positions each)

A. Code R/AG XII PVOU  
 B. Amount

13. PROJECT PURPOSE (maximum 480 characters)

To assist the Government of Uganda to rehabilitate, retrain and redirect its agricultural manpower and institutional capability in food crops production.

14. SCHEDULED EVALUATIONS

Interim MM YY MM YY Final MM YY  
08 90 07 92

15. SOURCE/ORIGIN OF GOODS AND SERVICES

000  941  Local  Other (Specify) 935

16. AMENDMENTS/NATURE OF CHANGE PROPOSED (This is page 1 of a 44 page PP Amendment)

This project is being extended for four years and eleven months to a revised PACD of 8/26/93. An additional \$ 15million is being added to the project with \$ 2.5million planned for obligation in FY 88. The remaining funds will be added in subsequent years subject to availability of funds.

17. APPROVED BY

Signature

*Richard Podol*

Title Richard Podol  
 Mission Director

Date Signed

MM DD YY  
03 22 98

18. DATE DOCUMENT RECEIVED IN AID/W, OR FOR AID/W DOCUMENTS, DATE OF DISTRIBUTION

MM DD YY

# UNITED STATES OF AMERICA

AGENCY FOR INTERNATIONAL DEVELOPMENT

U.S.A.I.D. MISSION TO UGANDA

UNITED STATES POSTAL ADDRESS  
USAID/KAMPALA  
AGENCY FOR INTERNATIONAL DEVELOPMENT  
WASHINGTON, D.C. 20520

INTERNATIONAL POSTAL ADDRESS  
P. O. BOX 7007  
KAMPALA, UGANDA.

## ACTION MEMORANDUM FOR THE MISSION DIRECTOR, USAID/KAMPALA

FROM: Ken Lyver *KL*

SUBJECT: Manpower for Agricultural Development (617-0103)

**ACTION:** Your approval is required to authorize a \$ 15,000,000 increase in project funding for the Subject Project from \$ 9.9 million to \$ 24.9 million and an increase in the life of project from five years to ten years. It is planned that \$ 2,500,000 will be obligated during FY 88.

**DISCUSSION:** The Manpower for Agricultural Development Project was originally authorized in 1983 at \$ 9.0 million, amended to \$ 13.1 million in March of 1985 and then amended again on 7/28/86 to \$ 9.9 million. The project was originally designed to revitalize Uganda's agricultural institutions. The purpose of the project is to assist the Government of Uganda to rehabilitate, retrain and redirect its agricultural manpower and institutional capacity in food crops production.

The total cost of the project will now be \$ 41.9 million. Total AID grant financing of the project will be \$ 24.9 million of which \$9.9 million was funded in previous years, \$ 2.5 million will be funded in FY 1988, and the remainder will be obligated in subsequent years, subject to funding availability. The project has two major components: (1) the research component; and (2) the university component. About 47 percent of the project funding is for the research component. This money will be used mainly to develop two of the country's research stations by rehabilitating and re-equipping them, providing long and short term training for Ministry of Agriculture personnel, and provision of both long and short term technical advisors, who will concentrate mainly on maize and oil seed crops. The university component, which will receive about 53 percent of the project funding, will concentrate on those departments in the Faculty of Agriculture that are critical to our food crop strategy, training of long and short term participants, rehabilitation and re-equipping of the Faculty of Agriculture building and University Farm at Kabanyolo.

Within each of the two major components, five major elements will be addressed: (1) technical assistance both for the Ministry of Agriculture and the Makerere University Faculty of Agriculture and Forestry; (2) support for reorganization of agricultural research; (3) support for research, including on-farm testing and improved linkages with extension; (4) support for post graduate training both abroad and in-country, specialized commodity training at the international agriculture research centers and training for technical personnel; and 5) further rehabilitation and equipping research facilities.

Additional USAID funding of \$ 15 million will cover the foreign exchange cost of the technical assistance, equipment/supplies, vehicles and training for the participant trainees as indicated in the table below. The GOU and OSU proposed budget are also provided.

Proposed Budget  
Summary of Project Costs  
(US \$ '000)

<u>AID CONTRIBUTION</u>	<u>PHASE I</u>	<u>PHASE II</u>	<u>TOTAL</u>
Technical Assistance	5,357	7,353	12,710
Training	800	2,337	3,137
Commodities	2,261	1,272	3,533
Other Costs	1,482	3,030	4,512
Inflation & Contingency	-	1,008	1,008
Total	9,900	15,000	24,900
<u>GOU CONTRIBUTION:</u>			
Research/Teaching	2,400	2,165	4,565
Rehabilitation	140	1,665	1,805
Project Support	1,250	2,330	3,580
Inflation & Contingency	1,465	3,540	5,005
Total	5,255	9,700	14,955
<u>OHIO STATE UNIVERSITY</u>	-	2,000	2,000
TOTAL	15,158	26,700	41,855

WAIVERS: The authorized Source and origin for the procurement of goods and services for the project is AID Geographic Code 941. A waiver is being prepared for the Mission Director's signature for those items identified in the procurement plan as coming from 935 sources.

CLEARANCE: Both the RLA (Nairobi 0110) and RFMC (Nairobi 00434) have reviewed the draft Project Paper and their comments have been included in the final version of the Paper. A REDSO PDO and Agricultural Economist also provided extensive design assistance with initial aspects of the PP Amendment. The RLA's comments were received during her December 9-11, 1987 TDY and the draft authorization was hand delivered to Mission on 1/27/88. The RCO's comments on the planned OSU contract extension were also received via cable (88 Nairobi 01110). The construction analysis was sent by the REDSO engineer via cable (88 Gaborone 00141) and sections are included in the final version of the paper. The Action Memorandum waiving competition was signed by the Assistant Administrator and approved the five year extension of the OSU contract (State 060847).

**AUTHORITY:** Delegation of Authority 551, Section 4A-2 delegates to principal officer of Africa Bureau field posts set forth in Schedule A the authority to amend project authorization if the total life of project funding does not exceed \$ 30 million, does not present significant policy issues or deviates from the original project purpose, does not have a life of project over ten years, nor requires issuance of waivers that may only be approved by the Assistant Administrator for Africa or the Administrator, unless such waivers are approved prior to authorization of the Amendment. Per discussion above the only waiver required by the AA has now been signed.

**RECOMMENDATION:** That you approve the Manpower for Agricultural Development Project Amendment by signing below as well as the Project Paper face sheet, and that you authorize the project amendment by signing the Project Authorization.

APPROVED: W. Medel

DISAPPROVED: \_\_\_\_\_

DATE: 22 MAR 88

Drafted: AAgard: jyn: 03/18/88  
Clearance: PDO: LLOdle (Draft)  
PO: KShafer (Draft)  
A/DIR: FEWinch \_\_\_\_\_

PROJECT AUTHORIZATION AMENDMENT NUMBER THREE

COUNTRY: Uganda  
NAME OF PROJECT: Manpower for Agricultural Development  
NUMBER OF PROJECT: 617-0103

1. Pursuant to Section 103 of the Foreign Assistance Act of 1961, as amended, the Manpower for Agricultural Development Project for Uganda was authorized on August 26, 1983, and the authorization was amended on February 21, 1984, and July 11, 1985. The amended authorization is hereby further amended as follows:
  - a. In Paragraph 1 thereof the words "and Foreign Operations, Export Financing, and Related Programs Appropriations Act, 1988" is inserted in the second line after the words "as amended".
  - b. In paragraph 1 thereof the words "and the Foreign Assistance and Related Programs Appropriations Act, 1988" is inserted in the second line after the words "as amended".
  - c. In paragraph 1 thereof the words "five years" are deleted and the words "ten years" is substituted therefor.
  - d. In paragraph 1 thereof "thirteen million one hundred thousand U.S. dollars (\$13,100,000)" is deleted and "twenty four million nine hundred thousand U.S. dollars (\$24,900,000)" is substituted therefor.
  - e. In paragraph 1 thereof "over a three-year period from date of authorization" is deleted and "over an eight-year period from date of authorization" is substituted therefor.
  - f. In paragraph 3b, the following two paragraphs are added:

Prior to the disbursement of funds under the Grant for Training, or to the issuance by A.I.D. of documentation pursuant to which disbursement will be made, the Grantee will, except as the parties may otherwise agree in writing, furnish to A.I.D. in form and substance satisfactory to A.I.D:

A detailed life of project training plan which will be updated in January of each year which provides: 1) by name and discipline, details of overseas training to be conducted for both the University and the Ministry of Agriculture; 2) the number and disciplines of personnel to receive Msc degrees at the University in support of the Project; 3) details of how all Phd/Msc candidates to the maximum extent possible, will do their course work and conduct their research in Uganda, receive their degrees from Makerere and be properly supervised by University faculty/consultants; 4) a system whereby candidates for overseas training will be bonded to provide up to three years of service for each year of overseas training received; and 5) detailed budget (foreign exchange/local costs) and other aspects of the five year training effort of Phase II of the Project.

Prior to the disbursement of Grant funds for Training in subsequent years, or to the issuance by A. I. D., of documentation pursuant to which disbursement will be made, the Grantee will, except as the parties may otherwise agree in writing, furnish to A. I. D. in January of each year after FY 1988 for which Grant funds for training are to be provided, in form and substance satisfactory to A. I. D., an update of the detailed life-of-project training plan referred to above.

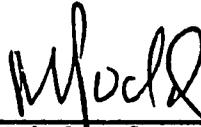
g. In paragraph 3c, the following paragraphs 7-9 are added:

7. The Cooperating Country agrees, unless A.I.D. otherwise agrees in writing, that within six months of the signing of Amendment Number Four to the Grant Agreement, it will:
  - a. Prepare a detailed long term (five years) Agriculture Food Crops Research Plan which will spell out: 1) the upgrading of Namulonge to a food crop research Station; 2) the priority and establishment of commodity focused research teams to include maize, oilseed crops and field beans; 3) the specific work to be conducted at Namulonge, Kawanda, Serere research stations and Kabanyolo Farm, as well as at a minimal number of sub-stations and variety trial centers; 4) a program to accelerate on-farm research and the relationships between research and the extension service; 5) the relationships between the Ministry of Agriculture and the Makerere

University and agriculture research to be conducted by each; 6) other details including foreign exchange and local currency requirements as well as annual/semi-annual reviews; and

- b) Complete the draft "Proposed Five-Year Development Plan for the Makerere University Faculty of Agriculture and Forestry" which will; 1) focus on a continued upgrading of the Faculty staff, facilities and curriculum over the life of project; 2) detail how certificate/diploma holders of MOA and MCM can receive credit for this training and thus can complete requirements for BSc/BA degrees without having to start as Freshman; 3) show proposed USAID funding and indicate the required University/GOU and other donor financial and other assistance needed to return the Faculty to the level of excellence experienced in the 1960's.
8. The Cooperating Country agrees that, unless A. I. D. otherwise agrees in writing, it will, within a year of signing Amendment Number Four to the Grant Agreement:
- a. Do its utmost to establish a semi-autonomous, self-accounting, National Agricultural Research Organization (NARO) or similar semi autonomous organization with a National Agricultural Research Board which reviews and approves the research program, as recommended by the Agriculture Task Force, and approved by the Agriculture Policy Committee, in its recommendation to the President's Economic Committee.
  - b. Provide the first plan (and subsequently each year until the end of project) of how the extension service is being given increased support (budget, etc.) to strengthen its ability to disseminate research results to farmers in order to increase production and productivity.

- c. Develop a long term food crop production strategy which includes the research and production plans needed to support this strategy.
  - 9. The Cooperating Country agrees that, unless A. I. D. otherwise agrees in writing, it will develop a plan which, by the end of the fifth year of the project, will cover the full local recurrent costs of the research program without donor assistance.
2. The amended authorization cited above remains in force except as hereby amended.



Richard L. Podol  
Mission Director

22 MAR 88

Date

**MANPOWER FOR AGRICULTURE DEVELOPMENT PROJECT  
PROJECT AMENDMENT**

Table of Contents	Page
Project Data Sheet	
Table of Contents	--
List of Acronyms	iv
Action Memorandum	v
Project Authorization	viii
I. PROJECT SUMMARY	1
II. PROJECT RATIONALE AND DESCRIPTION	4
A. Relationship of Project to Sector goals	4
B. Phase I of the Manpower for Agricultural Development Project	5
C. Phase II of the Manpower for Agricultural Development Project	7
1. University Faculty of Agriculture and Forestry	8
2. Research Component	13
3. Ohio State Contribution	18
4. Relevance of Project Activities to Bumpers Amendment	20
5. Relevance of Project to Regional and Central Projects	21
III. COST ESTIMATES AND FINANCIAL PLAN	23
A. AID Contribution	23
B. GOU Contribution	27
C. Methods of Implementation and Finance	27
D. Financial Review and Audits	28
IV. IMPLEMENTATION PLAN	29
A. Administrative Responsibilities	29
1. Entities Within the Government of Uganda	29
2. USAID/Kampala	29
B. Contractor for the Project	29
C. Procurement Plan	30
D. Implementation Actions	30
V. MONITORING AND EVALUATION PLAN	32
A. Monitoring	32
B. Evaluation	33

<b>VI. SUMMARIES OF ANALYSES</b>	<b>34</b>
A. Technical	34
B. Institutional	35
C. Financial	36
D. Economic	38
E. Social	38
F. Administrative	40
G. Environmental	41

<b>VII. CONDITIONS AND COVENANTS</b>	<b>43</b>
--------------------------------------	-----------

**Annexes**

- A. Logframe
- B. Statutory Checklist
- C. Government Request
- D. Rehabilitation List and Housing Plan
- E. Commodity Procurement Plan
- F. Technical and Institutional Analyses
- G. Revised USAID Expenditure Budget
- H. AA Sole Source Waiver Approval Cable
- I. Long Term Training Schedule
- J. 611 (e) Certification

AERP	African Economic Policy Reform Program
AID/W	AID Washington
CIP	Commodity Import Program
CIP	International Potato Center
CIMMYT	International Maize and Wheat Improvement Center
FY	Fiscal Year
GOU	Government of Uganda
IARCs	International Agricultural Research Center
IBSNAT	International Benchmark Sites Network
	Agrotechnology Transfer
IFDC	International Fertilizer Development Center
IITA	International Institute for Tropical Agriculture
IMF	International Monetary Fund
ISNAR	International Service for National Agriculture Research Network
LOP	Life of Project
MOA or MA	Ministry of Agriculture
MFAD	Manpower for Agricultural Development
MU/FAF	Makerere University/Faculty of Agriculture and Forestry
NARO	National Agricultural Research Organization
NIFTAL	Nitrogen Fixation of Tropical Agricultural Legumes
NRM	Natural Resource Management
NRM	Natural Resistance Movement (Government)
OSU	Ohio State University
PL 480	Public Law 480
PP	Project Paper
PSC	Personal Services Contract
REDSO	Regional Economic Development Services Office
SAARFA	Strengthening African Agricultural Research and Faculties of Agriculture
S and T	Science and Technology
SMSS	Soil Management Support Services
SOW	Scope of Work
TA	Technical Assistance
TREAD	Technology for Resource Evaluation and Agricultural Development
VTCs	Variety Trial Centers
USAID	United States Agency for International Development
USG	United States Government

I. PROJECT SUMMARY

A. Grantee:

Government of Uganda.

B. Implementing Agency:

Makerere University and the Ministry of Agriculture.

C. Financial Plan and Terms of Project:

Total cost of the nearly five year Phase II, extension will be \$26.7 million while the total AID contribution will be \$15.0 million. The total GOU contribution for the extension period will be about \$9.7 million (dollar equivalent) which will be from the GOU budget, in-kind and from PL-480 or commodity import generated funds. Ohio State University will contribute approximately \$2 million mainly for Makerere University. Over the entire 10 years of the project, the project will cost \$41.9 million of which AID is contributing \$24.9 million.

No change will be made in the financial plan for Phase II unless NARO is established. If this occurs, arrangements will be made to ensure proper and sound financial practices are followed by NARO as they relate to project activities. AID funds will be used for technical assistance, education/training, commodities and other costs (primarily related to rehabilitation of facilities). Because of the availability of local funds, no dollars from the Phase II Grant will be converted to local currency.

The GOU's contribution of approximately 38% will be provided through the Ministry of Agriculture and Makerere University. These funds will be used for research, rehabilitation of facilities and project support.

SUMMARY OF PROJECT COSTS  
(US \$'000)

<u>AID CONTRIBUTION:</u>	<u>PHASE I</u>	<u>PHASE II</u>	<u>TOTAL</u>
Technical Assistance	5,357	7,353	12,710
Training	800	2,337	3,137
Commodities	2,261	1,272	3,533
Other Costs	1,482	3,030	4,512
Inflation & Contingency	-	1,008	1,008
Total.....	9,900	15,000	24,900

<u>GOU CONTRIBUTION:</u>			
Research/Teaching	2,400	2,165	4,565
Rehabilitation	140	1,665	1,805
Project Support	1,250	2,330	3,580
Inflation & Contingency	1,465	3,540	5,005
Total.....	5,255	9,700	14,955
<u>OHIO STATE UNIVERSITY:</u>	-	2,000	2,000
<u>TOTAL .....</u>	<u>15,158</u>	<u>26,700</u>	<u>41,855</u>

**D. Project Purpose:**

The project purpose (unchanged from the original Project Paper of 1983) is to assist the Government of Uganda to rehabilitate, retrain and redirect its agricultural manpower and institutional capability in food crops production.

**E. Background of Project:**

The original Project Paper which was signed on August 20, 1983, is designed to assist the Government of Uganda stimulate small farmer agricultural production. More specifically, it is designed to assist the Ministry of Agriculture and Makerere University to address critical constraints and provide institutional support to implement activities in agricultural research, education and link this to agricultural extension. Since late 1984, the Ohio State University has been the prime contractor charged with the responsibility of implementing Phase I of the project on behalf of the GOU. As a result of a coup in July 1985 and a civil war in January 1986, activities were suspended for almost a year until May 1986.

The task of rehabilitation, retraining and redirecting Uganda's Manpower and institutional capabilities in food crop research has proved to be enormous and requires a long term commitment. Due to this fact and to overcome time lost and delays in implementation, the MFAD project will be extended by nearly five years to August 26, 1993, and the LOP funding increased by \$15.0 millions for a new total (USAID) project funding level of \$24.9 million.

Phase II is a logical progression of activities initiated in Phase I. During the extension, some of the activities will differ somewhat from what has been done to date. However, the main thrust of the project will remain the same with resources focused more keenly on maize and oilseed crops and those departments in the Faculty of Agriculture that are critical to AID's food crop strategy.

F. Description of the Project:

The project will continue to have two major components: (1) The Research Component; and (2) The University Component. Within the two major components, five major elements will be addressed: (1) technical assistance both for the Ministry of Agriculture and the Makerere University Faculty of Agriculture and Forestry; (2) support for reorganization of agricultural research; (3) support for research, including on-farm testing and improved linkages with extension; (4) support for post-graduate training both abroad and in-country, specialized commodity training at the international agricultural research centers and training for technical personnel; (5) further rehabilitation and equipping research facilities.

In addition, the Ohio State University has pledged \$2 million of its own funds and resources over the next five years to help establish a long-term institutional relationship with Makerere.

By the revised Project Completion Date, the Government of Uganda will have an improved capacity for institutional collaboration in training, research and extending technologies that will more effectively utilize farmer's resources in increasing food crop production and it will be funding all recurrent costs associated with on-going activities originally financed under this project..

## II. PROJECT RATIONALE AND DESCRIPTION

### A. Relationship of the Project to the Sector Goals

Uganda is overwhelmingly an agricultural country, with 93 percent of the population of 15.5 million living in the rural area, and an even higher percentage relying on the agricultural sector for a living. The population growth rate of three percent a year will lead to a doubling of the population by the end of the century and a further doubling to over 50 million by 2040. The country is fortunate at present in having sufficient fertile land for the food needs of the growing population, and possibly to produce certain selected food crops for export. However, further increases in agricultural production will have to come primarily from increased productivity, more intensive use of the existing land base and from a movement into more marginally productive areas in the future.

Major components of the agricultural production sector are traditional export crops, food crops, livestock and livestock products. The traditional export crops, which include coffee, tea, tobacco and cotton, accounted for over 95 percent of all formal exports in recent years. Production of these crops which declined sharply during the decade of the seventies, recovered substantially after 1980, but continues below the level attained during the late sixties. Major food crops are plantains, cassava and sweet potatoes in the high carbohydrates food group; maize, sorghum and millet in the cereals group; and phaseolus beans and peanuts among the legumes. These eight crops are estimated to account for a large percentage of the calories in the Ugandan diet. Food crop production was reduced less drastically than export crops during the seventies and has recovered to a level slightly above that attained in the late sixties. Per capita supplies, however, are substantially lower. Significant shifts have occurred in the relative importance of the several food crop groups. Estimated production of plantains and legumes are at about the same level now as in the late sixties; cereal production has fallen by over 40 percent, and root crops increased well over 50 percent.

In his May 1987 address to the nation, the President of Uganda outlined Uganda's Economic Policy Package for Reconstruction and Development. He stated that as far as the government was concerned, emphasis would be placed on two major areas which are very critical to economic recovery:

1. The restoration to full utilization of productive capacities of existing units especially in the agricultural and industrial sectors.

2. Rehabilitation of the economic and social infrastructure would be achieved by concentrating on eight key areas of both private and public sector investments and improvements. One of the major emphases in the policy recovery package is on production incentives. Prices for agricultural products were increased by five times the May 1987 level for some crops. By putting emphasis on such incentives, the GOU recognizes the need for Ugandans to bear more of the burden for economic recovery, particularly farmers, rather than depending mainly on foreign assistance.

As stated in the FY 88-90 Concept Paper the USAID/Kampala strategy is to assist in the development of those areas which will yield steady, long term growth. The Ugandan farmers are relatively innovative, produce a variety of crops and livestock, and are quite responsive to prices and technological development that will enable them to increase productivity. If the proper information is made available to them, they can become more productive. This project, which was initiated in 1983, aimed at restoring the capacity of a number of Uganda agricultural institutions to develop and deliver agricultural skills and methodology to the agricultural community.

B Phase 1 of the Manpower for Agricultural Development Project (1983-1988)

The goal of the project continues to be to assist the GOU to stimulate small farmer agricultural production. Its purpose is to assist the GOU to rehabilitate, retrain and redirect its agricultural manpower and institutional capability in food crops production. Project activities have included refresher training of the teaching and research staffs; rehabilitation of research and training facilities and renovation of equipment; support for individual research proposals; retraining of extension staff; and the establishment of linkages between research and extension activities. Project sites are Makerere University Faculty of Agriculture in Kampala, the University Farm at Kabanyolo, the Ministry of Agriculture headquarters at Entebbe, and Serere Research Station.

The MFAD project was authorized in FY 83 as a \$9 million, five year project. Since late 1984 Ohio State University has been the prime contractor charged with the responsibility of implementing the project on behalf of USAID and the GOU. In March 1985, the project was amended, increasing the life of project funding level to \$13.1 million, for an expansion of technical assistance and participant training.

However, a coup in May 1985 led to a suspension of project activities which did not resume until ten months later in May 1986. The 1985 coup and subsequent 10 month suspension of project activities did not have much effect on the present

financial competence of the implementing agencies. However, the new NRM government has instilled a greater degree of integrity in the government and is serious about providing assistance to those sectors (such as agriculture) that will lead the country out of its economic doldrums. In this respect, it is fair to say that the financial competence of the implementing institutions has improved as a result of the above mentioned events. To address the needs of the country after many years of war related destruction and years of neglect, the new NRM government (which took over in January 1986) made near-term relief and rehabilitation of war-damaged areas a top GOU priority. Thus, USAID agreed to take \$3.2 million from this project (new LOP of \$9.9 million) and redirect these funds to support activities consistent with this new priority. As a result, the technical assistance staff was reduced and the project focused more sharply on activities related to food crops. Also, an additional MAF research station (Kawanda) requiring rehabilitation as a direct result of the 1985/86 civil war, was added to the project.

An evaluation of Phase I of the project was made in November 1987. Findings indicate that, in spite of the 10 month interruption, significant progress has been made in rehabilitation of facilities at the University Farm at Kabanyolo and the Kawanda Research Station and that completion of present plans by the end of the project would bring both facilities to a reasonable level of operation, although additional work is needed at all sites. Delivery of farm and laboratory equipment has been long delayed causing delay in research activities. However, delivery is expected by the end of the current project so that both locations would be operational. Rehabilitation of the Faculty of Agriculture building being done by a private contractor is far behind schedule and may not be completed by end of Phase I. Trained manpower for future maintenance of restored facilities is not assured, by the end of Phase I.

The retraining of staff has been carried out as planned with 32 University and 35 Ministry staff having received short-term training in the United States or at one of the IARCs. Plans for needed additional academic training and for curriculum development, are being developed for implementation under the second phase of the project.

A food crop research strategy and plans for implementation of a research program are being developed. The strategy and plans will be reviewed and refined by all concerned agencies before the end of Phase I of the project, through the initiation of annual work plans and semi-annual review sessions.

The end of project status specified in the original project paper for the first phase has been largely attained.

Outputs have been achieved with the exception of linking the research and extension systems. However, additional steps must be taken to realize the benefits from what has been accomplished thus far. The University and research staffs require further strengthening through additional academic training for younger staff members to replace staff who will be retiring in the near future and to provide for recruitment to expand staff to handle larger student enrollments or expanded research requirements. Assistance is needed for the Department of Agricultural Economics to train staff and provide assistance since it is one of the weakest departments in the Faculty. Curriculum review and modification are needed to meet the training needs, particularly for those now engaged in research or new recruits that have received no graduate training. Extensive updating or retraining of extension workers will be required to equip them to perform the more exacting duties they will be expected to perform in the future. The refurbished and re-equipped research facilities and the limited additional training of the research staff provide the basis for initiation of the research plan which will establish stronger linkages with the extension service and the University.

C. Phase II of Manpower for Agricultural Development Project (88-93)

In Uganda, the task of rehabilitation, retraining, and redirecting the country's manpower and institutional capabilities in food crops and production is enormous and requires a long term commitment. This has led to the need to extend the project. In addition to the need to address this requirement for a long term commitment, the MFAD project is also being extended to make up for the momentum lost by the 10-month gap in project implementation and the decrease in project funding. The project evaluation pointed out that the project has made good progress in achieving its objectives but due to a number of reasons, more time and resources are necessary to fully achieve what the project set out to accomplish.

The recent evaluation report strongly recommended the Project be extended five years to August of 1993. Therefore, this Phase II is a logical progression of work initiated in Phase I to develop and establish a training/research/extension complex capable of generating appropriate technologies, gaining farmer acceptance and improving food crop productivity. Activities undertaken to achieve this end in Phase II will differ from those in Phase I but the goal and purpose of the project are unchanged.

Due to limited resources, USAID under Phase II will concentrate project resources upon those departments in Makerere University that are critical to its overall strategy. These are the departments which are related to food crops.

As teaching staff are sent to the U.S. for advanced education, U.S. faculty replacements will be brought in to assist with teaching, updating curriculum and departmental research strategies and programs. As detailed in Annex A, the Logical Framework major aspects of the project can be summarized as follows:

Goal - To assist the Government of Uganda in its recovery program to stimulate small farmer agricultural production.

Purpose - To assist Government of Uganda to rehabilitate, retrain and redirect its agricultural manpower and institutional capability in food crops production.

End-of-project status - An improved capacity for institutional collaboration in training, research and extending technologies that will more effectively utilize farmers' resources in increasing food crop production.

Outputs - Achievement of the end-of-project status specified above will require development of the following outputs:

- 1) A strengthened and better trained University staff and improved curriculum for training and upgrading the future cadre of high level agricultural professionals including researchers and extension workers.
- 2) A strengthened research capability resulting from staff training and improved research facilities.
- 3) Results of on-station experiments and on-farm trials indicating means of improving performance of total farming systems and increasing food production.
- 4) Verified technological packages, developed through farming system research methods, that have been adopted by at least a limited number of farmers.

Primary emphasis of the project will continue to be on developing means of increasing the production of food crops for both the domestic market and for export to regional markets. Support therefore will be extended to work on any major food crop. However, efforts will focus on developing commodity food crop research teams and other means of increasing production of maize and oilseeds - particularly sunflower and soyabeans or other grain legumes.

#### 1. University Faculty of Agriculture and Forestry Component.

Strengthening the research and extension services in

Uganda must depend, in the long run, upon the education programs provided by MU-FAF. There is immediate need to provide graduate education for the very large number of research workers that have only an undergraduate degree. There is also the equally urgent need to update and upgrade the training of the much larger number of extension workers who have had practically no opportunity to improve or even maintain their level of professional capability. Educating future replacements for present research and extension staffs must also be provided. There is, therefore, a most urgent need for the development of a long term training plan detailing overseas educational needs of the University and research staffs; the development of curriculum for training researchers and extension workers in-country; identifying needs and opportunities for short-term training; and arranging for such short-term training in-country or overseas. Although the Ministry of Agriculture is vitally concerned with this activity and will participate in its development, responsibility for initiating development of the long range training plan rests with the University, which is expected to work closely with the Ministry.

Within this project, funds in the amount of approximately \$2.05 million will help implement the Strengthening African Agricultural Research and Faculties of Agriculture (SAARFA) concept. This funding will be used to strengthen one of the subject matter departments within the Faculty of Agriculture and Forestry. The Department of Agricultural Economics has been targeted as the department to receive these funds. This grant will enable the Faculty of Agriculture and Forestry through the Department of Agricultural Economics to become more effective in supporting agricultural growth and also to be more actively involved in East Africa's regional agricultural activities. Funding for this SAARFA sub-component within the University component has now been added to the total funding of the five year MFAD extension.

Assistance to the Agricultural Economics Department is seen as a complementary effort to the African Economic Policy Reform Program (AEPRP) activity currently under preparation, as well as other Mission efforts. Both the GOU and Mission see the need for additional regional and analytical studies to focus more attention on the development of Uganda's domestic marketing system and foreign exchange earnings potential through external trade. The Department will begin playing a role in regional market and trade analysis in concert with other institutions involved with trade analysis and policy formulation.

A. Development of University staff.

1) Long-Term Education

The project will provide 20 years of overseas education for 8 Phd candidates. This will include 2 candidates from the Agricultural Engineering Department, 2 from Soils Science, 3 from Crop Science and 1 from Animal Science. Each candidate will need 2.5 years of class work in the U.S. and will return to complete his research and other requirements for a degree in Uganda. With regard to all degree work under this project, Makerere will supervise the research work in Uganda with consultant help, and award the degree when this is feasible. For many of the Phd candidates, however, the degree will be awarded at the overseas University. Support costs for this in-country research will be provided using project dollar funds and local currency.

Under the SAARFA sub component four candidates for Ph.D degrees in Agricultural Economics would each receive three years of education in the U.S.

Four candidates for MSc. training in Agricultural Education/Extension will be provided training for 1 1/2 years each in the U.S. or African countries.

Like the Ph.D candidates, the MScs. will return to Uganda to complete requirements for their degrees which will be awarded by Makerere, to the extent possible.

Training for 12 Msc candidates at Makerere to fill vacant positions will be financed with local currency made available by the GOU as part of its local contribution. The details of these candidates to be trained will be defined in the training plan.

2) Short-Term Training

Funds for a total of 24 months of out-of-country short-term training will be provided by the project. Specifications for the use of these funds will be developed and included in the Long-term Training Plan to be developed jointly by the University and Ministry of Agriculture representation within 6 weeks following the formal approval of Phase 2 of the project. Funds are also provided for attendance at international

professional meetings by University and Ministry research staffs. Allocation of these funds will be jointly determined by University and Ministry representatives.

B) Technical Assistance.

1) Long-Term Advisors.

A total of 8.00 person years of Technical Assistance will be provided to replace staff members assigned to overseas education and to expand the University curriculum. This total includes 3 years each for the Crop Science Department and the Agricultural Education/Extension program, as well as 2 years for Soil and Water Conservation TA. One of these individuals will be designated by OSU as the Chief of Party to be in charge of the contract. It is currently planned that each advisor will also supervise at least two MSc candidates.

Six person years of technical assistance will also be provided under the SAARFA sub-component created by AID/Washington to replace teaching staff going for agricultural economics overseas education.

One Rehabilitation Assistant will be assigned for 1.5 person years to manage rehabilitation for the University (mainly at Kabanyolo). He will also provide on-the-job training. One-third of the second Rehabilitation Assistant's time (six person months) will be allocated to rehabilitation at Makerere University.

A Rehabilitation Supervisor is also being funded under the project for 2 years. He will supervise all the rehabilitation work being planned at the University and the Ministry Research Stations.

It is also planned that extensive efforts will be made to get trained Ugandans working in the U.S. and other countries to "return home" possibly to fill the above technical assistance positions. To the extent needed the project will pay all travel/transport costs of the returning Ugandan family. If the returning Ugandan can replace currently planned Technical Assistance, funding saved could be used for other project activities.

2) Short-Term Technical Assistance.

Up to 12 person months of short term assistance will be provided to assist in the areas of curriculum development, research, farm management and other areas.

An additional eight person months will be provided under the SAARFA sub component to assist in developing the agricultural economics curriculum and improving trade and policy analysis.

C) Rehabilitation and/or Construction Analysis.

Up to \$440,000 will be provided from the project's other costs line item to complete rehabilitation and possible construction of facilities at the Makerere campus and Kabanyolo Farm. Also, approximately 16-25 million shillings in local currency may be allocated (if funds are available) for construction of a multi-purpose building at Kabanyolo and for a building to support the development of a new department (e.g. food science). There is also a critical shortage of housing for University staff which may also be constructed using local currency, if funding is available and this proves feasible.

As detailed in the Rehabilitation List and Housing (Annex D), three houses will be either rehabilitated or new ones constructed in year 1 to handle the three additional consultants needed for the University. Another three houses may be required in year 2 to cover three additional consultants, depending on the departure of rehabilitation specialists and the arrival of the new consultants.

It is also planned that other houses will be built, especially for returning Ugandans. If only the cost of financing one long term consultant can be saved as a result of utilizing returning Ugandans, then ten houses can be built using the \$600,000 available, plus local currency.

The proposed rehabilitation work at Makerere University, Kabanyolo farm, Kawanda and Namulonge research stations are well described in Annex D as well as the MU/FAF report on rehabilitation needs at above sites. Currently, all efforts are being made to rehabilitate existing senior staff houses. However, the need for housing for counterparts (local) is also very real, both for possible returning Ugandan and current staff. All major new construction will be carried out under host country contracting guidelines in accordance with chapters 1 and 2 of AID HB 11 for design and construction services respectively. As foreign exchange funds are limited, use of local currency will be maximized from PL-480/Commodity import generations. REDSO Engineering will assist the Mission and the Host Country in developing S.O.W. for design services and in advertising, evaluating and selecting design and subsequently construction services.

611(E) Certification: The host country will have the ability to maintain the structures by the end of Phase II. See Annex J.

## 2. Ministry of Agriculture Research Component.

### A) Development and Implications of National Agricultural Research Organization (NARO).

The working group on Agricultural Research, established by the joint GOU/World Bank/USAID Task Forces on Agricultural Services, released a report in March 1987 which includes several recommendations which relate specifically to the organization and program content of the food crop research activity. The working group was chaired by a representative of the Bank of Uganda and was composed of representatives of the Ministries of Agriculture and of Animal Industry and Fisheries, USAID and ISNAR. The report was extensively reviewed and submitted to the President's Economic Council for action. The project evaluation team report of November 1987 incorporated the conclusions of the working group report as part of

its recommendations. While the final decision on disposition of the recommendations in the report may not be known for sometime, the guidelines presented in the report will be observed in this project. The report recommends that the research system be organized into a semi-autonomous, self accounting National Agricultural Research Organization (NARO) under a National Agricultural Research Board appointed by the President and chaired by a Minister responsible for agriculture. The Board would be responsible for reviewing and approving the research program. The report also proposes rationalization of the research system and redistribution of research mandates. Namulonge Research Station would be assigned responsibility for research on beans, maize, soybeans, yams and sweet potatoes. Since it is now planned that Research on the latter four crops will be transferred immediately, on-station research under the extended project would be concentrated at Namulonge initially and at Serere later for the oil seed crops, if security permits.

While it is important that NARO be established, it is not essential to project success. Therefore, pending the establishment of NARO and whether or not it is established, a number of recommendations were made which will guide the planning and implementation of the research program developed under this project. The relevant recommendations from the Task Force Report, which will be implemented under this Project extension, are summarized below.

Coordination of all research stations or institutes into a research network with each assigned a commodity or functional mandate and rehabilitation of all facilities to operational levels.

Designation of research officers to work with some of the extension staff in a few selected areas especially in diagnostic work and on-farm trials.

Collaborative research with NARO and Makerere University.

Increased participation of IARC's in introducing improved materials and technologies.

Commodity research teams will include social scientists and/or agricultural economists in

identifying and assessing constraints to production and the viability of "packages of technology". On farm trials, incorporating the farming systems methodology, will be a part of the process for developing any recommendations. Such trials will be conducted by teams composed of economic and natural science researchers and extension workers collaborating with farmers to determine the economic viability and acceptability of improved varieties and cultural practices.

B) Research activities and Technical Assistance.

The research program developed under this project will be adaptive or applied research utilizing farming systems research methodology. The food crop research strategy and long range research plan developed under Phase 1 will indicate the general direction and outline of the program. Annual research proposals, developed and coordinated with proposals of Makerere University, will specify programs to be carried out each year. Annual work plans will be reviewed and modified if necessary at mid-year. Research will be confined to questions relating to food crops and focused primarily on maize and oilseeds (sunflowers, soybeans or other grain legumes).

1) Long-Term Advisors.

Three professional technical advisors will be provided for about four years each (12.00 person years total). These will include an Agricultural Research Advisor, a Crop Research Advisor and a Soils Fertility Specialist.

The Agricultural Research Advisor will assist and advise the Chief Agricultural Research Officer at Entebbe, (until NARO is established) in planning, coordinating and implementing the national research effort of the Ministry of Agriculture. He will also be the Deputy Chief of Party for the consultant team and will be in charge of the research program and the rehabilitation work. He will perform a similar function for the Director of NARO after it is established. He will also provide general direction to the team of technical advisors on research. He will be responsible for developing annual research proposals and assuring

that they are consistent with established guidelines including application of farming systems research methods and provision for joint research/extension development of field trials.

The Crop Research Advisor will be responsible for advising and assisting Ugandan counterparts in designing, implementing, analyzing and reporting on station experiments and on-farm trials intended to identify and validate improved varieties and cultural practices, focusing mainly on maize and oilseeds. In addition, the specialist will assist in designing, implementing and evaluating the research program in certain food crops mainly maize and oilseeds. This consultant will be the joint coordinator of these programs with Ugandan counterpart. The consultant will essentially run the program during his counterpart's absence such as training abroad.

The Soils Specialist (Soil Fertility Advisor) will assist and advise the Chief Agricultural Research Officer (or the Director of NARO) and provide assistance to improve the management and operation of the Soils Laboratory. However, his primary responsibility will be to work with Ugandan counterparts in developing a research program to identify and assess factors affecting soil fertility and revise measures to conserve and increase fertility.

One long term Rehabilitation Assistant will be provided to complete the rehabilitation work at the Kawanda Research Station. The Rehabilitation Supervisor previously mentioned will manage the rehabilitation work at the Namulonge Research Station and also do on the job training.

2) Short Term Advisors.

Specialized short term technical assistance for about 15 person months will be needed for a variety of agriculture research requirements to include: maize, oilseeds, machinery testing and repair and other specialized areas. As these are identified the terms of reference will be prepared and Winrock International will be asked to provide the technical assistance needed.

## Development of Ministry Research Staff.

### 1) Long-term Education

The project will provide financial support for up to 25 years of academic education of PHD Research candidates. This is expected to cover overseas training for 10 candidates; as now planned 2 each would be in the fields of agronomy and plant genetics, 3 in soil science and 1 each in plant pathology and entomology and 1 in agricultural extension. All class work will be completed in the U.S. but research and thesis preparations will be done in Uganda under Makerere University Professors' supervision. The degree will be awarded by Makerere. The above plan is subject to change after the Ministry's training plan is completed.

The project will also provide up to 15 years of overseas education for 10 Msc candidates who cannot be given adequate academic training in Uganda. Four of these candidates will be from specialized areas of soil science, two to be trained in farming systems methodology, two in Agricultural engineering and two in extension. It is expected that they can complete formal class work in 1 1/2 years and will return to Uganda to complete their research under Makerere supervision

Education for 23 Msc candidates for Ministry of Agriculture at Makerere will be financed with local currency made available by GOU as part of its local contribution. As planned now, six of these will be from the subject areas of crop science, 5 from plant genetics, 4 from soil science, 3 from plant pathology, 3 from entomology, and 2 from agricultural economics. This plan may change after the Ministry's training plan is completed.

### 2) Short-term Training

Up to 40 months of short term out-of-country training will be provided. This may be used for short-term training at IARC headquarters, in the U.S. or elsewhere. The areas in which training will be given, the timing and requirements for participation will be incorporated in the Training Plan to be developed by Makerere and the Ministry

of Agriculture. Similarly, the Ministry and University will determine how the funds in the budget will be used to pay for attendance at international professional meetings. Costs of in-country workshops or short-term training will be paid with local funds.

D) Rehabilitation and/or Construction of Research Facilities.

Up to \$500,000 will be provided to complete the rehabilitation of facilities at Namulonge and Kawanda Research Stations to include rehabilitation of three houses at Namulonge for the consultants (see Annex D). Since there is a critical need for additional houses for staff at the research stations, considerations will be given to construct houses using local currency, if this proves feasible and local currency is available. An additional \$100,000 has been set aside for the rehabilitation/construction of NARO headquarters facilities at Kawanda. Additional rehabilitation and other work may be done at Serere, if security permits. If security permits funds could be transferred from the contingency line item to agricultural construction to finance the rehabilitation of Serere Research Station where the project may fund the research on oil seed and food crops in a different environment.

3. Ohio State University Contribution

Ohio State University is interested in establishing a long-term institutional relationship with Makerere University. To accomplish this objective, it intends to promote collaborative activities over and above those which will be supported by USAID and the GOU. These activities will complement, but not replace, activities supported by USAID and the GOU.

Ohio State University will use its best efforts to provide funding to promote academic and research linkages between itself and Makerere University. In order to create the linkages, it will form a liaison committee consisting of members of academic departments with appropriate counterpart departments at Makerere University's Faculty of Agriculture and Forestry. It is anticipated that a similar liaison committee will be established at Makerere University. These committees will be responsible for identifying individuals at each institution to participate in collaborative activities and to promote them within both of the universities.

Ohio State University funding will come from various sources. These sources exist to promote academic and research activities at the University. The University will use its best efforts to provide support for linkage building activities, including funding for Makerere University faculty and researchers from the Ministry of Agriculture, funding for joint research between Ohio State University faculty and Makerere University faculty/Ministry of Agriculture researchers, surplus bibliographic materials, including books and scientific journals, and funding to promote interchange of faculty between the two universities, including support for liaison committee activities.

A budget which outlines these activities follows. It divides the funding commitment into firm and tentative categories. Firm funding is that which can be readily obtained without the active participation of individual faculty members. Tentative funding is that which cannot be accessed without the active participation of individual faculty members.

OSU Proposed Budget (\$000)

I.	Reasonably Firm		\$1,025
	- Training	200	
	- Collaborative Research	200	
	- Bibliographic Materials	125	
	- Faculty Interchange	500	
II.	- Tentative		\$ 950
	- Training	300	
	- Collaborative Research	325	
	- Bibliographic Materials	125	
	- Faculty Interchange	200	
	Total		\$1,975

28x

4. Relevance of Project Activities to Bumpers Amendment:

As a result of enactment into law of Section 209 of the FY 86 Supplemental Appropriations Act, commonly referred to as the Bumpers Amendment, the use of Development Assistance funds must now be scrutinized to ensure that its use does not violate this new law. The August 14, 1986 Information Memorandum for the Administrator from Howard Fry, GC, explains the practical implementation of Section 209 as far as AID should be concerned. Fry's interpretation of Section 209 combines the statutory and applicable Senate Appropriations Committee report language of the provision.

According to Fry, the key elements of the Bumpers Amendment that would be relevant to this project are that "in connection with" the growth and production of an agricultural commodity for export in Uganda, no MFAD project funds can be used where Uganda's exports would compete with export of similar commodities grown or produced in the U.S., except

- (1) where the assistance given to Uganda is "not specifically and principally designed to increase agricultural exports" or
- (2) cannot "reasonably be expected" to have a "significant impact" on the export of a similar U.S. agricultural commodity, or
- (3) will not lead to "direct competition" with U.S. agricultural exports.

MFAD project funds will be used primarily on research and extension, as well as the education and training of Ugandans. This will all be related to increasing the production/availability of food crops. Maize and the oilseed crops--groundnuts, sesame, sunflower and soybeans will receive most of the attention. Therefore, research on soybeans would be the only crop that might be called into question regarding the Bumpers Amendment.

Assistance in soybean research and extension is designed to increase soybean production to meet domestic needs in Uganda and not for exports. For many reasons, surplus production for export will not be possible for the foreseeable future, if at all. The hectares allocated to soybeans has always been very limited, yields are currently very low and domestic demand for soybeans and soybean products will be substantial for many years.

In the early 1970's, there were just 6-7,000 hectares per year in soybean production and from 1981-83, there were only 5-6,000 hectares of soybeans grown annually. Thus, Uganda has never produced much soybean although demand has increased over the years. Through the crushing of cotton seed, the cotton industry used to adequately provide edible oil and seed cake (a livestock feed). But since the demise of the cotton industry in the mid-1970's, Uganda has not had a sufficient supply of either edible oil or livestock feed over the last decade. Increased production of soybeans along with other oilseeds can help meet this shortage. Thus, considering the strong and increasing demand for oil, seedcake and other soybean products, Uganda will not be able to export soybeans. The reason for increasing production of soybeans is because of its valuable contribution to human nutrition and the livestock industry, not because of its potential to generate export revenue.

As a small landlocked country, and considering the actual potential for increasing soybean production, Uganda could never produce enough soybean for anyone to reasonably expect Uganda to compete with U.S. exports of this product. This country simply does not have the comparative advantage to compete against any major producer such as the U.S. which produces over 55 million MT a year.

Therefore, it is quite clear there is not the remotest possibility of the MFAD project extension violating the Bumpers Amendment. Since on the one-hand it is not the intent of the MFAD project to help Uganda produce soybeans for export, it is also inconceivable that Uganda could ever produce and export enough soybeans to directly or indirectly compete against U.S. soybean exports.

5. Relevance of Project to Regional and Central Projects.

Mission still plans to accommodate the Natural Resource Management Project and Central S and T projects (SMSS, IBSNAT, NIFTAL and IFDC) to the extent that specific technical assistance and related aspects of these various projects can strengthen our other objectives in Uganda as well as MFAD project objectives. Related to this, the mission has included a soils scientist/soil fertility expert in the MFAD extension, as recommended in the TREAD Proposal prepared by S and T in October. Also included is short term assistance for other fertility work related to the IFDC Proposal. For other areas, especially NIFTAL research and production of innoculum, the IBSNAT

cropping systems and agrotechnology transfer activity, the project has only been able to include dollar funding in the MFAD Project for travel cost of short term consultants (12-15 per year) and shillings to cover in-country per diem and local cost. As planned, additional assistance from NRM on establishing the soil fertility lab at Kawanda and other soil resource assistance is planned as assistance to the IBSNAT effort. The specific short term requirements for each year will be defined in either the annual (January) or semi-annual (July) work plan and review sessions. An individual from the NRM/S&T Projects was invited to attend the initial annual review session in mid January with OSU/Minnesota/Experience Inc./Winrock International, GOJ and USAID. However, this person could not attend but will be invited again in July of each year of the project extension.

### III. COST ESTIMATES AND FINANCIAL PLAN

The total cost for the five year extension, including the GOU contribution will be \$26,700,000. Of this amount, AID is contributing \$15,000,000 and the GOU, \$9.7 million (dollar equivalent) which will be mainly in-kind and from PL-480 or commodity import generated funds. It should also be noted that during Phase II, Ohio State University will provide about \$2 million of assistance to Makerere University in support of a long term relationship with this University (See Section 2-C-4 for more details and information about their contribution). Over the entire 10 years, the project will cost \$41.855 million and AID will provide \$24.90 million of this total. Planned expenditures against these amounts during Phase II are outlined in Tables 1-2. There will be no significant change in the financial plan for Phase II, unless NARO is established. When it is, the GOU's contributions will be channeled through this organization. At this time, the details of the financial relationship between this project and NARO are not known. However, this project will be intimately involved in the establishment of NARO and one can only expect the financial situation on the GOU side to improve. After the establishment of NARO, arrangements will be made to ensure proper and sound financial practices are followed as they relate to project activities.

#### A. AID Contribution

There is no major change in the uses of AID funding for Phase II. Dollar funds will continue to be used for technical assistance, education/training, commodities and other costs (primarily related to rehabilitation of facilities). However, it is important to note that in order to conserve dollars, no dollars will be converted into local currency. This can be accomplished because of the availability of PL-480 and local funds generated from other AID projects to finance local costs. The detailed AID budget is located in Annex G.

Below is a table depicting the percentage distribution of AID funds over the 5 year extension among the two project components.

TABLE 1  
ANNUAL PROJECT COSTS  
(US \$000)

	PHASE I	PHASE II					TOTAL	TOTAL PROJECT FUNDING
		YR-1 FY 89	YR-2 FY 90	YR-3 FY 91	YR-4 FY 92	YR-5 FY 93		
<b>A.I.D. CONTRIBUTION:</b>								
1. TECHNICAL ASSISTANCE	5,357.0	791.0	1,243.0	1,744.9	1,611.1	1,143.0	6,533.0	11,890.0
2. TRAINING	800.0	451.0	787.0	632.0	409.0	58.0	2,337.0	3,137.0
3. COMMODITIES	2,261.0	166.0	375.0	400.0	246.0	85.0	1,272.0	3,533.0
4. OTHER COSTS <sup>a</sup>	1,482.0	853.0	854.0	874.0	629.0	235.0	3,425.0	4,907.0
5. INFLATION & CONTINGENCY	-	-	-	390.1	926.4	116.5	1,433.0	1,433.0
<b>TOTAL</b>	<b>9,900.0</b>	<b>2,241.0</b>	<b>3,259.0</b>	<b>4,041.0</b>	<b>3,821.5</b>	<b>1,637.5</b>	<b>15,000.0</b>	<b>24,900.0</b>
<b>G.O.U. CONTRIBUTION:</b>								
1. RESEARCH/TEACHING	2,400.0	415.0	415.0	500.0	500.0	335.0	2,165.0	4,565.0
2. REHABILITATION	140.0	415.0	415.0	335.0	335.0	165.0	1,665.0	1,805.0
3. PROJECT SUPPORT <sup>b</sup>	1,250.0	476.0	445.0	523.0	443.0	443.0	2,330.0	3,580.0
4. INFLATION & CONTINGENCY	1,465.0	131.0	515.5	733.5	1,055.5	1,104.5	3,540.0	5,005.0
<b>TOTAL</b>	<b>5,255.0</b>	<b>1,437.0</b>	<b>1,790.5</b>	<b>2,091.5</b>	<b>2,333.5</b>	<b>2,047.5</b>	<b>9,700.0</b>	<b>14,955.0</b>
<b>G.S.U. CONTRIBUTION:</b>								
	--	400.0	400.0	400.0	400.0	400.0	2,000.0	2,000.0
<b>PROJECT TOTAL</b>	<b>15,155.0</b>	<b>3,722.0</b>	<b>5,499.5</b>	<b>6,532.5</b>	<b>6,555.0</b>	<b>4,085.0</b>	<b>26,700.0</b>	<b>41,855.0</b>

<sup>a</sup>Includes \$120,000 for evaluation, audits, etc.

<sup>b</sup>If funds permit, \$300-415,000 of local currency may be used for construction of new MU Faculty facilities.

TABLE 2  
AID PROJECT COSTS BY COMPONENT  
(US \$'000)

	Year 1	Year 2	Year 3	Year 4	Year 5	TOTAL
<b>1. TECHNICAL ASSISTANCE</b>						
Research Component	428.3	633.0	720.0	700.0	651.5	3,132.8
University Component	362.7	610.0	1,024.9	911.1	491.5	3,400.2
Sub-Total	791.0	1,243.0	1,744.9	1,611.1	1,143.0	6,533.0
<b>2. TRAINING</b>						
Research Component	241.0	390.0	321.0	223.0	46.0	1,241.0
University Component <sup>a</sup>	210.0	397.0	311.0	186.0	12.0	1,096.0
Sub-Total	451.0	787.0	632.0	409.0	58.0	2,337.0
<b>3. COMMODITIES</b>						
Research Component	45.0	182.5	185.0	90.5	37.5	540.5
University Component <sup>a</sup>	121.0	192.5	215.0	155.5	47.5	731.5
Sub-Total	166.0	375.0	400.0	246.0	85.0	1,272.0
<b>4. OTHER COSTS</b>						
Research Component	251.5	582.0	334.5	227.0	87.5	1,382.5
University Component <sup>a</sup>	581.5	272.0	539.5	402.0	147.5	2,042.5
Sub-Total	833.0	854.0	874.0	629.0	235.0	3,425.0
<b>5. INFLATION &amp; CONTINGENCY</b>	-	-	390.1	926.4	116.5	1,433.0
<b>TOTAL PROJECT COST</b>						
Research Component	965.8	1,787.5	1,755.6	1,703.7	880.7	7,093.3
University Component	1,275.2	1,471.5	2,285.4	2,117.8	756.8	7,906.7
Grand-Total.....	2,241.0	3,259.0	4,041.0	3,821.5	1,637.5	15,000.0

<sup>a</sup>SAARFA subcomponent of \$2.05 is included in all of these items.  
Note: the detailed budget is in Annex G.

PERCENTAGE DISTRIBUTION OF AID FUNDS

	Percent of Element Cost
I. TECHNICAL ASSISTANCE	
Research Component	46.0%
University Component	54.0%
II. TRAINING	
Research Component	53.1%
University Component	46.9%
III. COMMODITIES	
Research Component	42.5%
University Component	57.5%
IV. OTHER COSTS	
Research Component	47.0%
University Component	53.0%
TOTAL PROJECT EXTENSION COST	
Research Component	47.3%
University Component	52.7%

A major difference in AID funding during the extension is the almost \$2 million financing of long term education and shorter term training (compared to \$800,000 during Phase I).

The cost estimates provided below (the details of which are in Annex G) are based on USAID's experience with implementation of Phase I. The technical assistance portion of the budget reflects an extension of the Ohio State University TA contract. A considerable amount of short-term TA has been added to the project and since the cost of technical assistance will be negotiated and fixed in the first year, inflationary and contingency factors were not applied against technical assistance. Otherwise, inflation was budgeted to be 5 percent per annum (compounded). Concerning contingencies, the factor used was increased from year to year because contingency funds are usually needed during the later years of a project. Therefore, a factor of 1.8 percent was adopted for the first year, a factor of 8 percent for the second through the third year, and a factor of 10 percent was used for the fourth through the fifth year.

## B. GOU Contribution

The planned GOU contribution during the five year extension will be approximately \$9.7 million which is about 36 percent of total costs during the extension. This proportion complies favorably with the 25 percent host country contribution requirement stipulated in FAA Section 110(a). The GOU contribution will come from the Ministry of Agriculture and Makerere University and will be provided from yearly GOU budgets, by in-kind contribution, and through government owned PL-480 and commodity generated funds. Categories of expenditure include for research and teaching, rehabilitation of facilities, and project support.

The GOU will cover the local costs associated with research work at three (possibly four) sites--Kawanda, Namulonge, Kabanyolo; the work at Variety Trial Centers, on-farm trials, and student teaching activities. In the rehabilitation area, the GOU will provide funds to finance the worker allowance program, the purchase of local rehabilitation supplies and for maintenance. Under project support, local funds will be used for local supplies, petrol, oil and lubricants, local hire TA support staff salaries, and expenditures for office support (primarily TA). Depending upon the decisions made regarding the construction or rehabilitation of houses for project advisors, local currency may be used to construct two staff houses (at Makerere) as well as a multi-purpose building at Kabanyolo and a building to support the development of a new Faculty of Agriculture department.

A 10 percent contingency factor was applied to budget estimates along with a 30 percent inflation factor for the second year and a 20 percent compounded inflation factor for the remaining years (which is consistent with the forecasts in recent GOU economic recovery program). The annualized GOU financial plan is presented in Table 1.

## C. Methods of Implementation and Financing

Given the conditions of the Ugandan economy, the GOU does not have nor it is expected to have in the near future, adequate foreign exchange to pay for project

services and then claim reimbursement. therefore, the direct reimbursement method of financing, Fixed Amount Reimbursement or other preferred methods of AID financing for services is not recommended for this project. AID's Direct Payment method is the only feasible alternative, has been used in the past and will be continued for MFAD implementation as follows:

- |                                 |                                    |
|---------------------------------|------------------------------------|
| 1. Technical Assistance         | Direct AID Contract                |
| 2. Education and Training       | Under Prime Contract               |
| 3. Commodity Procurement        | Prime Contract, Direct Aid, or PSA |
| 4. Evaluation/Financial Reviews | AID Direct                         |

The accounting/management procedures being utilized for disbursement of local currency were established by a PSC audit specialist. These procedures were reviewed by RFMC and an independent international auditing firm and were verified to be sufficient and adequate.

#### D. Financial Review and Audits

A financial review of the local currency accounts is planned within the first year of project extension, as part of Mission's overall monitoring and review of local currency generations and use. A funding line item Evaluation/Financial Review will cover the cost of the financial review, if local currency cannot be used. The need for subsequent financial reviews will be determined after the initial one, but will be conducted as required through the life of the project.

The need for audits of the Project will be reviewed with RIG/A/N each year and will be funded from the evaluation/financial review line item in the budget. If a non federal audit is needed, RIG will provide assistance to prepare the terms of reference and will assist Mission in conducting and reviewing the Audit report, as needed.

#### IV. IMPLEMENTATION PLAN

This section outlines (a) administrative responsibilities of the entities involved in the MFAD project extension; (b) role of the prime contractor and the procedures to extend this contract; (c) a procurement plan; and (d) a schedule of implementation actions.

##### A. Administrative responsibilities

The responsibilities of major implementing organizations are outlined below.

###### 1. Entities within the Government of Uganda

The Government of Uganda is the designated Grantee, and the Ministry of Planning and Economic Development, its authorized representative, will sign the Project Grant Agreement amendment on behalf of the Government. The two major implementing agencies of the project are the Ministry of Agriculture for the Agriculture Research component and the Makerere University, Faculty of Agriculture and Forestry for the Faculty of Agriculture strengthening aspect of the project. The current authorized representatives are Vice Chancellor, Dean of the Faculty of Agriculture and the Commissioner of Agriculture. They are expected to continue being responsible for day-to-day implementation of the project. The Secretary of Treasury is also a current representative and others can be designated by the Government, if needed.

###### 2. USAID/Kampala

The MFAD project will be monitored under the overall supervision of the Agriculture Development Officer of USAID, and will be assisted with day-to-day monitoring by a USAID hired PSC hired under the project for this work. After heavy involvement during initial implementation, USAID will be able to focus on monitoring overall implementation to ensure compliance with A.I.D. rules and procurement regulations.

##### B. Contractor for the Project

Using the special authority (AIDDAR 706.302-70(b)(3)) explained in a special memorandum from the Administrator concerning criteria for use of the "Impairment of Foreign Assistance Objectives", exception to competitive contractor selection is planned (See Annex H for a copy of this memorandum submitted to AID/W by message). Therefore, AID plans to continue with the current contract arrangements, whereby Ohio State will be the Prime Contractor with

subcontractors being the University of Minnesota, Winrock International and Experience Incorporated. OSU will be responsible for providing overall contract management and along with Minnesota will take on direct responsibility for the University and Faculty of Agriculture strengthening effort. They will implement the overseas training effort along with providing both long and short term university professors as consultants to the University.

The other two subcontractors will also play a vital role in project implementation. Experience Incorporated will continue their primary task of rehabilitating Kawanda Research Station and the Kabanyolo Farm, and will take on the added responsibility of rehabilitation of the new Namulonge Food Crop Research Station. Winrock International will take on a more active and direct role with implementing the Agriculture Research component of the Project, especially for short term consultants and replacing or providing new long term consultants for positions related directly to agriculture research. Winrock has a very good international network of scientists and is eminently qualified to handle the agriculture research component of the project.

#### C. Procurement Plan

A detailed procurement plan is provided in Annex E. However, the authorised source and origin will remain 941. As currently planned the procurement of equipment and commodities in the U.S. under the project will be handled by the University of Minnesota as a sub-contractor under the OSU Contract, by a procurement entity in Nairobi, and through the services of an IQC PSA. Details of this plan can be found in Annex E.

#### D. Implementation Actions

The following provides a listing of the major implementation actions to be undertaken during the Project:

Major Action	Timing
-- First Annual Review	January 1988
-- Completion of PP and Authorization	March

- Project Agreement Signed April
- PIO/T finalized for TA "
- Initial CP's met "
- Training Plan received and CP met "
- Terms prepared, team assigned by GOU and consultants identified for "
- NARO feasibility work "
- Joint Government/AID Quarterly Review "
  
- Terms prepared and consultant identified May to conduct food crop research and production strategy
  
- Contract between AID/OSU finalized June
- Detailed five year food crop research plan received and covenant met "
- Five year development plan for Makerere completed and Covenant met "
- First research and Agriculture extension service plan prepared "
  
- Joint Government/AID semi-annual review conducted July
  
- Initial draft of food crop research and production strategy Sept
- NARO team completes study and submitted to cabinet "
  
- Joint Government/AID quarterly review conducted October
  
- Cabinet decides on NARO and covenant met December
- Research and production strategy completed and covenant met "
  
- Joint Government/AID annual review January 1989
  
- Quarterly review held routinely throughout life of project Apr., July, etc.

## V. MONITORING AND EVALUATION PLAN

### A. Monitoring

Standard financial records, internal management reports and regular progress reports will provide information for monitoring expenditures and current financial status of the project. Quarterly reports will be provided by the consultant in consultation with project staff and will include the status of all aspects of the project. The Supervisor of Rehabilitation for example, will provide information on progress and current status of the restoration and construction activities.

Joint Government/USAID quarterly reviews of the project will be held. On at least a semi-annual basis the meeting will be attended by the Vice Chancellor of Makerere, Permanent Secretary of Agriculture and USAID Director. The consultants quarterly report will form the basic document for these reviews and will be supplemented by the USAID's Quarterly Implementation Report. Also, on a semi-annual basis joint meetings will include representatives of the head office of the contractor. In addition to the general reviews, the purpose of these semi-annual meetings is to review reports on training and research activities that occurred in the preceding six months and to review and coordinate reports and plans of work during the coming six months. The reports presented at both the quarterly and semi annual meetings together with minutes of the meetings, summarizing discussions and indicating decisions taken, will provide information for monitoring the progress and current status of ongoing work.

Monitoring the impact of the program on farm production, will require special arrangements to obtain baseline data and provide for systematic follow-up. Baseline data will be provided by diagnostic surveys of all target areas on which substation or variety trial centers (VTCs) at which experiments and on-farm trials are to be run. The diagnostic surveys will thus fill two purposes. The first will be to provide information on farm resources and production constraints necessary for effective research planning. The second will be to provide basic data for monitoring. Detailed records collected each season from farmers participating in the on-farm trials will provide continuing information on land-use, adoption of recommended practices, quantities and costs of inputs, yields and net returns. These annual data from the limited number of farmers participating in the on-farm trials will be supplemented with data from a second diagnostic survey conducted in the fourth year of the project in the same areas where the first was made.

CIMMYT farming systems research specialists are currently planning to provide assistance in planning the survey, training survey participants and analyzing the results.

B. Evaluation

USAID's current plans are that two evaluations will be conducted with the assistance of outside consultants. The first is planned in the second year of the project extension or the Summer of 1990 and a final evaluation in the fourth year, the Summer of 1992. Gray Amendment firms will be considered when contracting for these evaluations.

## VI. SUMMARIES OF ANALYSES

### A. Technical Analysis:

The technical analysis is an update of the original one which was done in 1983 and is more fully described in Annex F.

Based on available information to date, the project can be implemented with confidence in the form proposed. The proposal represents a cost effective project that is highly appropriate for the Ugandan situation. After careful consideration it has been concluded that an approach of using adaptive research and involving the MU/FAF is a good step towards improving the research scientists understanding and contact at the farm level.

#### 1) Project Elements:

The project has five main elements:

- a) Technical Assistance both for the Ministry of Agriculture and the Makerere University/Faculty of Agriculture and Forestry;
- b) Support for Reorganization of Agricultural Research;
- c) Support for food crop research with special emphasis on oilseed crops and maize. This will include on-farm testing and improved linkages with extension;
- d. Support for post-graduate training both abroad and in-country, specialized commodity training at the international agricultural research centers and training for technical personnel; and
- e) Further rehabilitation and equipping research facilities.

2. The following major aspects of the project are included in this five year extension:

- a) Technical Assistance: It is planned that a Crops Research Advisor, Soil Fertility Specialist and a long-term Advisor to the Ministry of Agriculture, who will work closely with NARO and the Commissioner of Agriculture, be funded under this project in addition to specific University professors to conduct courses and research. In addition, short-term Advisors will also be funded to assist in those areas where specific problems may arise. No major support for extension is

planned although assistance and direct linkages, especially for on-farm trials and demonstrations, will be assured by providing all the inputs needed for the on-farm trials and demonstrations.

- b) Reorganization of Agricultural Research: An important element of the project will be to establish the National Agriculture Research Organization. The reorganization being proposed, will require technical assistance to help establish agricultural research on a more sound footing in Uganda.
- c) Support for Research: Under this area, assistance is being provided for research planning and implementation and also on-farm testing. The main focus will be adaptive research, which will be carried out by the research specialists in close cooperation with the farmers and extension staff.
- d) Training: Technical Assistance advisors will work with the Dean and staff of the Faculty of Agriculture in the area of curriculum development and in forming and strengthening the post graduate program. Long term training is planned for several staff members of the Makerere University and the Ministry of Agriculture. Some short-term training will also be provided to the staff of the Ministry of Agriculture and that of Makerere University.
- e) Rehabilitation and equipping research facilities: Work will continue with rehabilitation and equipping of the research facilities, both in the Ministry and University.

**B. Institutional Analysis:**

The Institutions being considered in this project are identified here with more detailed analyses in Annex F.

- 1) The Research division of the Ministry of Agriculture
- 2) The Makerere University Faculty of Agriculture and Forestry.
- 3) The National Agricultural Research Organization (NARO).

Specific Aspects Included Under the Project for Research are:

- 1) A reorganization of research will be carried out and is one of the covenants for the Project Agreement.

4/4x

As several Ministries have ties to agricultural development/research in Uganda, support for the present Research Division in the Ministry of Agriculture will be phased out and will be transferred to the new National Agricultural Research Organization, if established.

- 2) The Faculty of Agriculture and Forestry of Makerere University will be upgraded and strengthened. There is need to have the curricula at the University reviewed and changes made. Also a staff development program which should be closely related to adaptive research needs to be developed. In order to assist in this, long-term Technical Assistance is being provided in these areas.
- 3) A recent task force recommended that there should be a reorganization of agricultural research and that all agricultural research should be brought together in one organization (NARO). This proposed organization would be able to provide the framework within which effective research can be planned, implemented, evaluated, reported and utilized in a manner that will effeciently utilize scarce resources. A target of about 0.5% of the gross domestic agricultural product, should be allocated for agricultural research in order to meet the resource needs of NARO.

After considerable discussion on the establishment of NARO, a Covenant has been included in the project to establish this organization. Funding has also been provided to renovate facilities at Kawanda as the NARO headquarters, to provide short term consultancy to establish NARO and to provide continued long term consultant assistance to NARO over the life of the project. As generally agreed however, while USAID/MA are in agreement that NARO should be established, food crop research can be considerably strengthened in Uganda through the existing system. While USAID feels that NARO should be established, it is not essential that it be established for good food crops research to be conducted.

### C. Financial Analysis

The Financial Analvsis in the original PP basically

remains unchanged and there are only a few aspects to update. The new NRM government has continued to hold agriculture as a priority for budgetary allocation. Makerere University has likewise fared well in budgetary allocations. But the biggest problem has been the disbursement of these funds which becomes an issue of recurrent costs. Mission's PSC Accountant also helped set up the accounts for Kabanyolo Farm which has upgraded the financial management capabilities of the Farm. These procedures and their implementation will be reviewed during the first financial review of the project.

A substantial portion of the GOU contribution in Phase II will be derived from PL-480 or other USAID project CIP local currency generations. These sources of funds were not available when the project started but Phase I has been able to tap these resources since early 1987. These funds will continue to be readily available and will be used to ensure that some regular Ministry of Agriculture and Makerere University operating costs are adequately covered. This is considered necessary because of the depressed state of the economy and the pressure placed on keeping the GOU budget deficit down to meet conditions in the recent World Bank/IMF recovery program.

Budgetary support is the only way many project related activities will be accomplished in the early years of Phase II. However, the dangers of dependency on only temporary external financing have been recognized. With this in mind, Phase II has been carefully designed to ensure that the GOU implementing agencies can properly manage the programs and facilities initiated through the MFAD project. Discussions are already underway with the Ministry of Finance on Budgeting for recurrent costs on an increasing basis over the Life of the Project. Ideally GOU Budgets should replace counterpart funds by the end of the project. This is recognized by the Ministry and will be built into the GOU budgets - as funds are available starting in July 1988. The project will also work on the creation of NARO to address the longer term needs and budgeting of agricultural research. Therefore, the question of sustainability and recurrent cost support has been properly considered and will be one of the main issues to be addressed throughout the Life of the Project.

**D. Economic Analysis**

The analysis in the original PP was updated in PP Supplement of March 1985. This update is still valid and no change is necessary in this analysis.

**E. Social Soundness Analysis**

The original social soundness analysis which was carried out during the Project Paper design is still relevant except for some minor revision.

With increased utilization of on-farm trials based on a farming system approach to technology transfer, Phase II will ensure that the socio-economic issues raised in the original PP Social Soundness analysis (Page 34) will be addressed more thoroughly.

There are several categories of direct and indirect beneficiaries from the proposed project. Benefitting directly from both the original project and the project as amended in this project paper supplement will be:

- senior professional staff (19) of the MOA and MU/FAF, who will benefit from education to the MSc and Phd level both overseas and in Uganda by doing their research in-country and getting their degrees at Makerere, where feasible. Another 35 are expected to get their MSc in-country including all course work from Makerere and research in Uganda.
- Students at Makerere (450 over the life of the project), who will have increased access to improved educational facilities in Kampala and at the University Farm;
- Workers and staff of research stations and the farm who will have improved research equipment.

In addition, several institutions within the GOU will benefit: the Ministry of Agriculture, at Kawanda and Namulonge stations and at headquarters, the Ministry, and the University Faculty of Agriculture facilities. Both the University and the Ministry will have the capacity, once again, to be leaders in agricultural research. More broadly, the education, training and research provided

as part of the project will be to re-equip a senior management cadre to be able to plan, set priorities and conduct research, extension teaching and planning in the agricultural sector.

It is through in direct impact over the long term that a much larger number of people will be affected by the changes proposed in the project. Indirect beneficiaries are all Uganda producers who eventually benefit from improved technologies developed as a result of a strengthened research capacity. The three research facilities selected for rehabilitation, Kawanda and Namulonge research facilities and the Kabanyolo Farm, will be equipped to focus on all major annual and perennial food crops and the diverse farming systems and agroecological zones throughout the country.

Even given the potential for these research institutions to function to capacity by the end of the project, secondary impacts from renewed research will not be felt for some time. The project will begin a process whereby a sound research orientation can lead to obtaining good research results. This impact will be enhanced as:

- (1) retraining includes appropriate methodologies to ensure that priority is given to research which involves close farmer-researcher collaboration in the study of production systems and testing of innovations;
- (2) retraining assists agricultural policy and planning administrative staff to establish better linkages between research institutions and the extension program;
- (3) retraining assists Uganda leaders to design agricultural policy and strategy which assures that research is tailored to domestic needs and the international market situation.

The individuals selected to benefit from proposed education and training activities are generally qualified agricultural scientists or administrators with the ability to make maximum use of training opportunities. It is worth noting that long term degree training will also strengthen Ugandan capacity in the fields of development economics, rural sociology and agricultural economics and in the biological science fields.

Through the research capacities which are built and the downstream linkages established between research and extension, the project has potential for significant spread effects and impact beyond project life.

Due to the circumstances beyond the project control, the project activities at Serere Research Station will initially be limited to the use of the trial centers in that ecological region. When security permits, the project will resume some of the activities which were identified in the original Project Paper with special emphasis on the oilseed crops and possibly sorghum and millet work.

#### F. Administrative Analysis

The administration of the project will basically remain as set forth in the original Project Paper with some minor alterations.

##### 1) Government of Uganda entities

The formal grant agreement amendment will be signed with the Ministry of Planning and Economic Development and not Ministry of Finance as in the past. However, the project implementation will take place under MU/MAF and the MOA as indicated in the social analysis (beneficiaries and impact). Due to the current security situation which is beyond the control of this project the only activities which will be initially carried out in Serere, are the trials at trial centers which are still secure. When the security improves in that area, the research at the Serere Research Station will resume with some support from the project.

Additionally, the GOU has plans to establish a semi-autonomous, National Agricultural Research Organization (NARO). This organization will be charged with the responsibility for staffing, planning, executing and managing all the government-financed agricultural research in an integrated, comprehensive and coordinated network. NARO would have its own governing body, whose chairmanship will be of either the Minister of Agriculture or the Minister of Animal Industries and Fisheries for alternate periods of years.

The following would be the composition of the Board as currently defined:

- (a) Chairman, Minister (as noted above)
- (b) Commissioners representing Ministries of Agriculture, Animal Industries, Fisheries and Forestry.
- (c) 2 distinguished Agriculture Scientists
- (d) Dean, Faculty of Agriculture, Makerere University
- (e) Dean, Faculty of Veterinary Medicine, Makerere University
- (f) A distinguished farmer
- (g) One senior representative of the Ministry of Planning and Economic Development
- (h) Chairman of the National Research Council
- (i) One representative of Agricultural industries
- (j) Director of Medical Services
- (k) Director General of NARO-ex-officio
- (l) Such other representation as the Board may find appropriate, but not to exceed a total Board membership of 18.

When it becomes operational NARO will be a semi-autonomous and self-accounting organization rather than conduct research under the Ministry of Agriculture.

#### B. AID

The USAID/Uganda involvement in the monitoring of this project remains basically the same. The additional USAID personnel, a Personal Services Contract (PSC) Assistant Officer recommended in the original Project Paper, is on board to assist the Agricultural Development Officer (ADO).

Additionally, through an extension of the contract with Ohio State University the Agricultural Research Advisor will assist and advise the Chief Agricultural Research Officer at Entebbe, and when NARO becomes operational, this same person or a replacement will move on to perform a similar function for the Director of NARO.

#### G. Environmental Considerations

- 1) General: The original Initial Environmental Examination (IEE) submission recommended a Categorical Exclusion (CE)

and AID/W approved the field recommendation (see PP page 39 of the original PP). During the preparation of the original Project Paper, the REDSO Environmental Advisor provided guidance in the management of pesticides for agricultural research. The Project Paper supplement proposes no new or different activities, just a continuation of pilot research and investigation activities.

Hence additional environmental review or analysis is not required for the purpose of amending the authorization of this project; pursuant to determination in the original Project Paper page 39.

## 2) Pesticide Management Review

During the redesign efforts of this PP Supplement, the Regional Pest Management Advisor determined that since the research Stations will use relatively large quantities of the pesticides and fungicides in the project down to the farmer level during on-farm trials, it will be necessary to monitor the use and the handling of the pesticides throughout the life of the project. It is, therefore, planned that farmers participating in on-farm trials who use pesticides will receive training in pesticide use and handling in the form of several workshops. Also two to three training of trainers sessions will be conducted as well with REDSO assistance.

Additionally, a variety of equipment e.g. back-pack sprayers, and safety gears such as masks, rubber gloves and boots etc. for demonstration purposes should be provided for the research stations.

A certain amount of local currency, therefore, will be budgeted for training both the trainers and farmers in pesticides use and handling under this project, especially if it is decided later that pesticides will be procured. If these pesticides are procured (either by local currency or dollars) the Regional Pesticide advisor will be contacted. Also, a new "Pesticide Management Guideline" is being prepared by the Regional Pesticide Advisors, which will provide guidance for use of pesticides for both research and on-farm demonstrations.

## VII. CONDITIONS AND COVENANTS

The conditions and covenants to be incorporated into the Grant Agreement Amendment for the extension of the MFAD project are listed as follows:

### A. Conditions Precedent to Disbursement for Training:

Prior to the disbursement of funds under the Grant for Training, or to the issuance by A.I.D. of documentation pursuant to which disbursement will be made, the Grantee will, except as the parties may otherwise agree in writing, furnish to A.I.D. in form and substance satisfactory to A.I.D.: A detailed life of project training plan which will be updated in January of each year which provides: 1) by name and discipline, details of overseas training to be conducted for both the University and the Ministry of Agriculture; 2) the number and disciplines of personnel to receive Msc degrees at the University in support of the Project; 3) details of how all Phd/MSC candidates to the maximum extent possible, will do their course work and conduct their research in Uganda, receive their degrees from Makerere and be properly supervised by University faculty/consultants; 4) a system established whereby candidates for overseas training will be bonded to provide up to three years of service for each year of overseas training received; and 5) a detailed budget (foreign exchange/local cost) and other aspects of the five year training effort of Phase II of the Project.

Prior to the disbursement of Grant funds for Training in subsequent years, or to the issuance by A. I. D. of documentation pursuant to which disbursement will be made, the Grantee will, except as the parties may otherwise agree in writing, furnish to A. I. D., in January of each year after FY 1988 for which Grant funds for training are to be provided, in form and substance satisfactory to A. I. D., an update of the detailed life-of-project training plan referred to above.

- B. The Government agrees within six months of signing Amendment Number Four to the Grant Agreement to:
1. Prepare a detailed long term (five years) Agriculture Food Crops Research Plan which will spell out: a) the upgrading of Namulonge to a food crop research Station; b) the priority and establishment of commodity focused research teams to include maize, oilseed crops and field beans; c) the specific work to be conducted at Namulonge, Kawanda, Serere research stations and Kabanyolo Farm, as well as at a minimal number of substations/variety trials centers; d) a program to accelerate on-farm research and the relationships between research and the extension service; e) the relationships between the Ministry of Agriculture and the Makerere University and the agriculture research to be conducted by each; f) other

details including foreign exchange and local currency requirements as well as annual/semi-annual reviews; and

2. Complete the draft "Proposed Five-Year Development Plan for the Makerere University Faculty of Agriculture and Forestry which will: 1) focus on a continued upgrading of the Faculty staff, facilities and curriculum over the life of project; 2) detail how certificate/diploma holders of MOA and MCM can receive credit for this training and thus can complete requirements for BSc/BA degrees without having to start freshers as; 3) show the USAID funding and indicate the required University/GOU financial and other donor assistance needed to return the Faculty to the level of excellence experienced in the 60's.
- C. The Government agrees within a year of the signing of Amendment Four to the Grant Agreement:
1. As recommended by the Agriculture Task Force, the Ministry of Agriculture will do its utmost to establish a semi-autonomous, self-accounting, National Agricultural Research Organization (NARO) or similar semi autonomous organizations with a National Agricultural Research Board which reviews and approves the research program;
  2. To provide the first plan (and subsequently each year until the end of project) of how the extension service is being given increased support (budget, etc.) to strengthen research and extension linkages and to insure that research results are disseminated to farmers to increase production;
  3. To develop a long term food crops production strategy which includes the research and production plans needed to support this strategy.
- D) The Government (NARO and Ministry of Finance) agrees:
- To develop a plan beginning with the GOU 1989/90 budget year, which by the fifth year of the project will cover the full local recurrent cost of the research program without donor assistance.

PROJECT DESIGN SUMMARY  
LOGICAL FRAMEWORK FOR PHASE II

Life of Project  
From FY 1993 to FY 1993  
Total U.S. Funding \$15.0 m - Phase II  
\$24.9 m - Total  
Date Prepared 12/87

ANNEX A

Project Title & Number UGANDA-MANPOWER FOR AGRICULTURE DEVELOPMENT (617-0103)

NARRATIVE SUMMARY		OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Program of Sector Goal: To assist the GOU in its recovery program to stimulate small farmer agricultural production		Measure of Goal Achievement: Food crop production by small farmers has increased by percentage attributable to revised agricultural research system	Production Statistics	Assumptions for achieving Goal <u>Targets:</u> Next investment on parallel basis is to up grade extension capability to link rehabilitated Ag. research to small farmer producer
Project Purpose: To assist the GOU to rehabilitate, retrain and re-direct its agricultural manpower and institutional capability in food crops production		Conditions that will indicate purpose has been achieved: End of Project Status. The agricultural research capability of Uganda in food crops has been restored through retraining, education, re-equipment, and rehabilitation and recommencement of major agricultural research initiatives in food crops	Project Evaluations	Assumptions for achieving purpose: 1. Existing human resources adequate to carry on Ag. research 2. Training of extension workers is possible to form basis of linkage with research
<u>Outputs:</u>		<u>Magnitude of Outputs</u>		<u>Assumption for achieving Outputs:</u>
1. Retrained, trained and educated staff		1. - 22 - Phd, 14 - MSc, 35-Msc/MU	Project evaluations, controller's records, receiving reports, Implementation reports	1. - Trainable personnel available 2. - Research stations available 3. - MAF Makerere collaborate 4. - Security situation remains relatively stable
2. Research stations rehabilitated, re-equipped & re-supplied		2. - 4		
3. Research priorities established formally or informally		3. - One system		
4. Joint research coordination system		4. - One system		
5. Research linked with extension		5. - 2 teams of 10 persons plus 100 extension workers trained		
6. Faculty of Agriculture re-equipped		6. - 2 locations		
7. Ministry of Agriculture re-equipped		7. - One location		
<u>Inputs:</u>		<u>Implementation Target (Type &amp; Quantity)</u>	Controller's record, Ministry of Ag. records, Makerere records, PP Supplement Annexes	<u>Assumptions for providing inputs:</u>
1. Technical Expertise	U.S x GOU	579 p/m		1. GOU has local currency to provide to project. Technical Assistance can be recruited in face of difficulties
2. Training	x x	80 p/m in US, 64 p/m o/s Uganda		2. GOU has built in its recurrent expenditures in the budget the support for the Ag. activities after the PACD
3. Research Stations	x x	4		
4. Equipment & Materials	x	\$ 4.7 million		
5. Operating Costs	x	\$2.3 million in UShs		

6/1

## 50(2) - PROJECT CHECKLIST

Listed below are statutory criteria applicable to projects. This section is divided into two parts. Part A includes criteria applicable to all projects. Part B applies to projects funded from specified sources only: B(1) applies to all projects funded with Development Assistance; B(2) applies to projects funded from Development Assistance loans; and B(3) applies to projects funded from ESF.

CROSS REFERENCES: IS COUNTRY CHECKLIST UP TO DATE? HAS STANDARD ITEM CHECKLIST BEEN REVIEWED FOR THIS PROJECT? No  
Yes

## A. GENERAL CRITERIA FOR PROJECT

1. FY 1988 Continuing Resolution Sec. 523; FAA Sec. 634A. If money is sought to be obligated for an activity not previously justified to Congress or for an amount in excess of amounts previously justified to Congress, has Congress been properly notified. Yes
2. FAA Sec. 611(a)(1). Prior to obligation in excess of \$500,000, will there be (a) engineering, financial or other plans necessary to carry out the assistance, and (b) a reasonably firm estimate of the cost to the U.S. of the assistance? (a) Yes  
(b) Yes
3. FAA Sec. 611(a)(2). If legislative action is required within recipient country, what is basis for reasonable expectation that such action will be completed in time to permit orderly accomplishment of purpose of the assistance? None required
4. FAA Sec. 611(b); FY 1988 Continuing Resolution Sec. 501. If project is for water or water-related land resource construction, have benefits and costs been computed to the extent practicable in accordance with the principles, standards, and procedures established pursuant to the Water Resources Planning Act (42 U.S.C. 1962, et seq.)? (See A.I.D. Handbook 3 for guidelines.) N/A

- FAA Sec. 611(e) If project is capital assistance (e.g., construction), and total U.S. assistance for it will exceed \$1 million, has Mission Director certified and Regional Assistant Administrator taken into consideration the country's capability to change, maintain and utilize the project effectively?
- Yes, See Annex J
6. FAA Sec. 209. Is project susceptible to execution as part of regional or multilateral project? If so, why is project not so executed? Information and conclusion whether assistance will encourage regional development programs.
- N/A
7. FAA Sec. 601(a). Information and conclusions on whether projects will encourage efforts of the country to: (a) increase the flow of international trade; (b) foster private initiative and competition; (c) encourage development and use of cooperatives, credit unions, and savings and loan associations; (d) discourage monopolistic practices (e) improve technical efficiency of industry, agriculture and commerce; and (f) strengthen free labor unions.
- This project will rehabilitate the Uganda's agricultural research capability thus improving the technical efficiency of agricultural production
8. FAA Sec. 601(b). Information and conclusions on how project will encourage private U.S. participation in foreign assistance programs (including use of private trade channels and the services of U.S. private enterprise).
- Some of the equipment private enterprise in the U.S.
9. FAA Secs. 612(b), 636(h). Describe steps taken to assure that, to the maximum extent possible, the country is contributing local currencies to meet the cost of contractual and other services, and foreign currencies owned by the U.S. are utilized in lieu of dollars.
- All local project cost will be finance with GOU contributed local currency
10. FAA Sec. 612(d). Does the U.S. own excess foreign currency of the country and, if so, what arrangements have been made for its release?
- NO

11. FY 1988 Continuing Resolution Sec. 521. If assistance is for the production of any commodity for export, is the commodity likely to be in surplus on world markets at the time the resulting productive capacity becomes operative, and is such assistance likely to cause substantial injury to U.S. producers of the same, similar or competing commodity? NO
12. FY 1988 Continuing Resolution Sec. 559. Will the assistance (except for programs in Caribbean Basin Initiative countries under U.S. Tariff Schedule "Section 807," which allows reduced tariffs on articles assembled abroad from U.S.-made components) be used directly to procure feasibility studies, prefeasibility studies, or project profiles of potential investment in, or to assist the establishment of facilities specifically designed for, the manufacture for export to the United States or to third country markets in direct competition with U.S. exports, of textiles, apparel, footwear, handbags, flat goods (such as wallets or coin purses worn on the person), work gloves or leather wearing apparel? NO
13. FAA Sec. 119(g)(4)-(6). Will the assistance (a) support training and education efforts which improve the capacity of recipient countries to prevent loss of biological diversity; (b) be provided under a long-term agreement in which the recipient country agrees to protect ecosystems or other wild-life habitats; (c) support efforts to identify and survey ecosystems in recipient countries worthy of protection; or (d) by any direct or indirect means significantly degrade national parks or similar protected areas or introduce exotic plants or animals into such areas? No
14. FAA 121(d). If a Sahel project, has a determination been made that the host government has an adequate system for accounting for and controlling receipt and expenditure of project funds (either dollars or local currency generated therefrom)? N/A

15. FY 1988 Continuing Resolution. If assistance is to be made to a United States PVD (other than a cooperative development organization), does it obtain at least 20 percent of its total annual funding for international activities from sources other than the United States Government? N/A
16. FY Continuing Resolution Sec. 541. If assistance is being made available to a PVD, has that organization provided upon timely request any document, file, or record necessary to the auditing requirements of A.I.D., and is the PVD registered with A.I.D.? N/A
17. FY 1988 Continuing Resolution Sec. 514. If funds are being obligated under an appropriation account to which they were not appropriated, has prior approval of the Appropriations Committees of Congress been obtained? N/A
18. FY Continuing Resolution Sec. 515. If deob/reob authority is sought to be exercised in the provision of assistance, are the funds being obligated for the same general purpose, and for countries within the same general region as originally obligated, and have the Appropriations Committees of both Houses of Congress been properly notified? N/A
19. State Authorization Sec. 139 (as interpreted by conference report). Has confirmation of the date of signing of the project agreement, including the amount involved, been cabled to State L/T and A.I.D. LEG within 60 days of the agreement's entry into force with respect to the United States, and has the full text of the agreement been pouched to those same offices? (See Handbook 3, Appendix 6G for agreements covered by this provision). It will be

**B. FUNDING CRITERIA FOR PROJECT**

**1. Development Assistance Project Criteria**

a. FY 1988 Continuing Resolution Sec. 55  
(as interpreted by conference report)  
If assistance is for agricultural development activities (specifically, any testing or breeding feasibility study variety improvement or introduction, consultancy, publication, conference, or training), are such activities (a) specifically and principally designed to increase agricultural exports by the host country to a country other than the United States, where the export would lead to direct competition in that third country with exports of a similar commodity grown or produced in the United States, and can the activities reasonably be expected to cause substantial injury to U.S. exporters of a similar agricultural commodity; or (b) in support of research that is intended primarily to benefit U.S. producers?

a. The project finances research to increase crop production, however, these crops are not principally and specifically for export, therefore, can not be expected to cause injury to us, exporters. (b) The project benefits small farmers in rural Uganda by increasing their level of production

b. FAA Secs 102(b), 111, 113, 281(a).  
Describe extent to which activity will (a) effectively involve the poor in development by extending access to economy at local level, increasing labor-intensive production and the use of appropriate technology, dispersing investment from cities to small towns and rural areas, and insuring wide participation of the poor in the benefits of development on a sustained basis, using appropriate U.S. institutions; (b) help develop cooperatives, especially by technical assistance, to assist rural and urban poor to help themselves toward better life, and

The information generated will assist both farming cooperatives and rural poor to increase farm productivity thus help them to achieve a better life

otherwise encourage democratic private and local governmental institutions; (c) support the self-help efforts of developing countries; (d) promote the participation of women in the national economies of developing countries and the improvement of women's status; and (e) utilize and encourage regional cooperation by developing countries.

- c. FAA Secs. 103, 103A, 104, 105, 106, 120-21. Does the project fit the criteria for the source of funds (functional account) being used? N/A
- d. FAA Sec. 107. Is emphasis placed on use of appropriate technology (relatively smaller, cost-saving, labor-using technologies that are generally most appropriate for the small farms, small businesses, and small incomes of the poor)? The technological packages which will ultimately evolve from the rehabilitated agricultural research activities will emphasize labor using techniques.
- e. FAA Secs. 110, 124(d). Will the recipient country provide at least 25 percent of the costs of the program, project, or activity with respect to which the assistance is to be furnished (or is the latter cost-sharing requirement being waived for a "relatively least developed" country)? Uganda is a Relatively Least Developed country but the GOU's contribution exceeds 25 percent.
- f. FAA Sec. 128(b). If the activity attempts to increase the institutional capabilities of private organizations or the government of the country, or if it attempts to stimulate scientific and technological research, has it been designed and will it be monitored to ensure that the ultimate beneficiaries are the poor majority? Yes

- g. FAA Sec. 281(b). Describe extent to which program recognizes the particular needs, desires, and capacities of the people of the country's intellectual resources to encourage institutional development; and supports civil education and training in skills required for effective participation in governmental processes essential to self-government.
- The re-training of the trained professionals will stimulate the use of these intellectual resources in rehabilitation of their country's agricultural research capability.
- h. FY 1988 Continuing Resolution Sec. 53E  
Are any of the funds to be used for the performance of abortions as a method of family planning or to motivate or coerce any person to practice abortions?
- No
- Are any of the funds to be used to pay for the performance of involuntary sterilization as a method of family planning or to coerce or provide any financial incentive to any person to undergo sterilizations?
- No
- Are any of the funds to be used to pay for any biomedical research which relates, in whole or in part, to methods of, or the performance of, abortions or involuntary sterilization as a means of family planning?
- No
- i. FY 1988 Continuing Resolution. Is the assistance being made available to any organization or program which has been determined to support or participate in the management of a program of coercive abortion or involuntary sterilization?
- No
- If assistance is from the population functional account, are any of the funds to be made available to voluntary family planning projects which do not offer, either directly or through referral to or information about access to, a broad range of family planning methods and services?
- N/A

- j. FAA Sec. 601(e). Will the project utilize competitive selection procedures for the awarding of contracts, except where applicable procurement rules allow otherwise? Not for prime contract; but will compete other procurement of goods and services
- k. FY 1988 Continuing Resolution. What portion of the funds will be available only for activities of economically and socially disadvantaged enterprises, historically black colleges and universities, and private and voluntary organizations which are controlled by individuals who are black Americans, Hispanic Americans, or Native Americans, or who are economically or socially disadvantaged (including women)? None specifically known
1. FAA Sec. 118(c). Does the assistance comply with the environmental procedures set forth in A.I.D. Regulation 16? Does the assistance place a high priority on conservation and sustainable management of tropical forests? Specifically, does the assistance, to the fullest extent feasible:
- (a) stress the importance of conserving and sustainably managing forest resources;
  - (b) support activities which offer employment and income alternatives to those who otherwise would cause destruction and loss of forests, and help countries identify and implement alternatives to colonizing forested areas;
  - (c) support training programs, educational efforts, and the establishment or strengthening of institutions to improve forest management;
  - (d) help end destructive slash-and-burn agriculture by supporting stable and productive farming practices;
  - (e) help conserve forests which have not yet been degraded, by helping to increase production on lands already cleared or degraded;
  - (f) conserve forested watersheds and rehabilitate those which have been deforested;
  - (g) support training, research, and other actions which lead to sustainable and more environmentally sound practices for timber harvesting, removal, and processing;
  - (h) support research to expand knowledge of tropical forests and identify alternatives which will prevent forest destruction, loss, or degradation;
  - (i) conserve biological diversity
- Assistance complies with Reg. 16 procedures

in forest areas by supporting efforts to identify, establish, and maintain a representative network of protected tropical forest ecosystems on a worldwide basis, by making the establishment of protected areas a condition of support for activities involving forest clearance or degradation, and by helping to identify tropical forest ecosystems and species in need of protection and establish and maintain appropriate protected areas; (j) seek to increase the awareness of U.S. government agencies and other donors of the immediate and long-term value of tropical forests; and (k) utilize the resources and abilities of all relevant U.S. government agencies?

- m. FAA Sec. 118(c)(13). If the assistance will support a program or project significantly affecting tropical forests (including projects involving the planting of exotic plant species), will the program or project (a) be based upon careful analysis of the alternatives available to achieve the best sustainable use of the land, and (b) take full account of the environmental impacts of the proposed activities on biological diversity? N/A
- n. FAA Sec. 118(c)(14). Will assistance be used for (a) the procurement or use of logging equipment, unless an environmental assessment indicates that all timber harvesting operations involved will be conducted in an environmentally sound manner and that the proposed activity will produce positive economic benefits and sustainable forest management systems; or (b) actions which significantly degrade national parks or similar protected areas which contain tropical forests, or introduce exotic plants or animals into such areas? (a) No (b) No

u. PHA Sec. 118(c)(15). Will assistance be used for (a) activities which would result in the conversion of forest lands to the rearing of livestock; (b) the construction, upgrading, or maintenance of roads (including temporary haul roads for logging or other extractive industries) which pass through relatively undegraded forest lands; (c) the colonization of forest lands; or (d) the construction of dams or other water control structures which flood relatively undegraded forest lands, unless with respect to each such activity an environmental assessment indicates that the activity will contribute significantly and directly to improving the livelihood of the rural poor and will be conducted in an environmentally sound manner which supports sustainable developments?

- (a) No
- (b) No
- (c) No
- (d) No

p. FY 1988 Continuing Resolution If assistance will come from the Sub-Saharan Africa DA account, is it (a) to be used to help the poor majority in Sub-Saharan Africa through a process of long-term development and economic growth that is equitable, participatory, environmentally sustainable, and self-reliant; (b) being provided in accordance with the policies contained in section 102 of the FAA; (c) being provided, when consistent with the objectives of such assistance, through African, United States and other PVDs that have demonstrated effectiveness in the promotion of local grassroots activities on behalf of long-term development in Sub-Saharan Africa; (d) being used to help overcome shorter-term constraints to long-term development, to promote reform of sectoral economic policies, to support the critical sector priorities of agricultural production and natural resources, health, voluntary family

- a. YES
- b. YES
- c. PVD are not being used; this is a direct country-to-country grant project.
- d. YES

planning services, education, and income generating opportunities, to bring about appropriate sectoral restructuring of the Sub-Saharan African economies, to support reform in administration and finances and to establish a favorable environment for individual enterprise and self-sustaining development, and to take into account, in assisted policy reforms, the need to protect vulnerable groups; (e) being used to increase agricultural production in ways that protect and restore the natural resource base, especially food production, to maintain and improve basic transportation and communication networks, to maintain and restore the natural resource base in ways that increase agricultural production, to improve health conditions with special emphasis on meeting the health needs of mothers and children, including the establishment of self-sustaining primary health care systems that give priority to preventive care, to provide increased access to voluntary family planning services, to improve basic literacy and mathematics especially to those outside the formal educational system and to improve primary education, and to develop income-generating opportunities for the unemployed and underemployed in urban and rural areas?

e. YE

2. Development Assistance Project Criteria  
(Loans Only)

NA - grant funding

- a. FAA Sec. 122(b). Information and conclusion on capacity of the country to repay the loan at a reasonable rate of interest.
- b. FAA Sec. 620(d). If assistance is for any productive enterprise which will compete with U.S. enterprises, is there an agreement by the recipient country to prevent export to the U.S. of more than 20 percent of the enterprises's annual production during the life of the loan, or has the requirement to enter into such an agreement been waived by the President because of national security interest?
- c. FY 1988 Continuing Resolution. If for a loan to a private sector institution from funds made available to carry out the provisions of FAA Sections 103 through 106, will loan be provided, to the maximum extent practicable, at or near the prevailing interest rate paid on Treasury obligations of similar maturity at the time of obligating such funds?
- d. FAA Sec. 122(b). Does the activity give reasonable promise of assisting long-range plans and programs designed to develop economic resources and increase productive capacities?

3. Economic Support Fund Project Criteria

NA - DA - funded

- a. FAA Sec. 531(a). Will this assistance promote economic and political stability? To the maximum extent feasible, is this assistance consistent with the policy directions, purposes, and programs of Part I of the FAA?
- b. FAA Sec. 531(e). Will this assistance be used for military or paramilitary purposes?
- c. FAA Sec. 609. If commodities are to be granted so that sale proceeds will accrue to the recipient country, have Special Account (counterpart) arrangements been made?

5C(3) - STANDARD ITEM CHECKLIST

Listed below are the statutory items which normally will be covered routinely in those provisions of an assistance agreement dealing with its implementation, or covered in the agreement by imposing limits on certain uses of funds.

These items are arranged under the general headings of (A) Procurement, (B) Construction, and (C) Other Restrictions.

A. PROCUREMENT

1. FAA Sec. 602(a). Are there arrangements to permit U.S. small business to participate equitably in the furnishing of commodities and services financed? YES
2. FAA Sec. 604(a). Will all procurement be from the U.S. except as otherwise determined by the President or under delegation from him? YES
3. FAA Sec. 604(d). If the cooperating country discriminates against marine insurance companies authorized to do business in the U.S., will commodities be insured in the United States against marine risk with such a company? N/A
4. FAA Sec. 604(e); ISDCA of 1980 Sec. 705(a). If non-U.S. procurement of agricultural commodity or product thereof is to be financed, is there provision against such procurement when the domestic price of such commodity is less than parity? (Exception where commodity financed could not reasonably be procured in U.S.) N/A
5. FAA Sec. 604(g). Will construction or engineering services be procured from firms of advanced developing countries which are otherwise eligible under Code 941 and which have attained a competitive capability in international markets in one of these areas? (Exception for those No

countries which receive direct economic assistance under the FAA and permit United States firms to compete for construction or engineering services financed from assistance programs of these countries.)

6. FAA Sec. 603. Is the shipping excluded from compliance with the requirement in section 901(b) of the Merchant Marine Act of 1936, as amended, that at least 50 percent of the gross tonnage of commodities (computed separately for dry bulk carriers, dry cargo liners, and tankers) financed shall be transported on privately owned U.S. flag commercial vessels to the extent such vessels are available at fair and reasonable rates? Shipping will comply with requirements.
  
7. FAA Sec. 621(a). If technical assistance is financed, will such assistance be furnished by private enterprise on a contract basis to the fullest extent practicable? Will the facilities and resources of other Federal agencies be utilized, when they are particularly suitable, not competitive with private enterprises, and made available without undue interference with domestic programs? Yes
  
8. International Air Transportation Fair Competitive Practices Act, 1974. If air transportation of persons or property is financed on grant basis, will U.S. carriers be used to the extent such service is available? Yes
  
9. FY 1988 Continuing Resolution Sec. 504. If the U.S. Government is a party to a contract for procurement, does the contract contain a provision authorizing termination of such contract for the convenience of the United States? Yes
  
10. FY 1988 Continuing Resolution Sec. 524. If assistance is for consulting service through procurement contract pursuant to 5 U.S.C. 3109, are contract expenditures a matter of public inspection (unless otherwise provided by law or Executive order)? Yes

B. CONSTRUCTION

- |   |   |
|---|---|
| 1. <u>FAA Sec. 601(d)</u> . If capital (e.g., construction) project, will U.S. engineering and professional services be used?   | Code 000 firms will be eligible to bid engineering and professional services contracts. |
| 2. <u>FAA Sec. 611(c)</u> . If contracts for construction are to be financed, will they be let on a competitive basis to maximum extent practicable   | Yes   |
| 3. <u>FAA Sec. 620(k)</u> . If for construction of productive enterprise, will aggregate value of assistance to be furnished by the U.S. not exceed \$100 million (except for productive enterprises in Egypt that were described in the CP), or does assistance have the express approval of Congress? | N/A   |

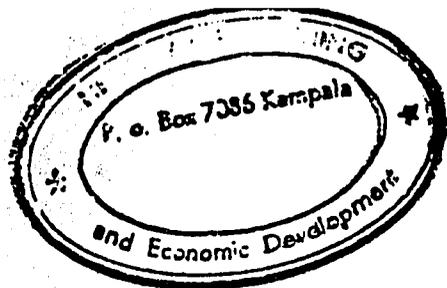
C. OTHER RESTRICTIONS

- |   |                 |
|---|-----------------|
| 1. <u>FAA Sec. 122(b)</u> . If development loan repayable in dollars, is interest rate at least 2 percent per annum during a grace period which is not to exceed ten years, and at least 3 percent per annum thereafter?  | N/A             |
| 2. <u>FAA Sec. 301(d)</u> . If fund is established solely by U.S. contributions and administered by an international organization, does Comptroller General have audit rights?  | N/A             |
| 3. <u>FAA Sec. 620(h)</u> . Do arrangements exist to insure that United States foreign aid is not used in a manner which, contrary to the best interests of the United States, promotes or assists the foreign aid projects or activities of the Communist-bloc countries?  | Yes             |
| 4. Will arrangements preclude use of financing:<br><br>a. <u>FAA Sec. 104(f)</u> ; FY 1987 Continuing Resolution Secs. 525, 540. (1) To pay for performance of abortions as a method of family planning or to motivate or coerce persons to practice abortions; (2) to pay for performance of involuntary sterilization as method of family planning, or to coerce or provide financial incentive to any person to undergo sterilization; | (1) - (4) - Yes |

- (3) to pay for any biomedical research which relates, in whole or part, to methods or the performance of abortions or involuntary sterilizations as a means of family planning; or (4) to lobby for abortion?
- b. FAA Sec. 483. To make reimbursements, in the form of cash payments, to persons illicit drug crops are eradicated? Yes
- c. FAA Sec. 620(g). To compensate owners for expropriated or nationalized property, except to compensate foreign nationals in accordance with a land reform program certified by the President? Yes
- d. FAA Sec. 660. To provide training, advice, or any financial support for police, prisons, or other law enforcement forces, except for narcotics programs? Yes
- e. FAA Sec. 662. For CIA activities Yes
- f. FAA Sec. 636(i). For purchases, sale, long-term lease, exchange or guaranty of the sale of motor vehicles manufactured outside U.S., unless a waiver is obtained? Yes
- g. FY 1988 Continuing Resolution Sec. 503. To pay pensions, annuities, retirement pay, or adjusted service compensation for military personnel? Yes
- h. FY 1988 Continuing Resolution Sec. 505. To pay U.N. assessments, arrearages or dues? Yes
- i. FY 1988 Continuing Resolution Sec. 506. To carry out provisions of FAA section 209(d) (transfer of FAA funds to multilateral organizations for lending)? Yes
- j. FY 1988 Continuing Resolution Sec. 510. Yes  
To finance the export of nuclear equipment, fuel, or technology?

- k. FY 1988 Continuing Resolution Sec. 511. For the purpose of aiding the efforts of the government of such country to repress the legitimate rights of the population of such country contrary to the Universal Declaration of Human Rights? **Yes**
1. FY 1988\* Continuing Resolution Sec. 516.; State Authorization Sec. 109. To be used for publicity or propaganda purposes designed to support or defeat legislation pending before Congress, to influence in any way the outcome of a political election in the United States, or for any publicity or propaganda purposes not authorized by Congress? **Yes**

DR



MINISTRY OF PLANNING AND  
ECONOMIC DEVELOPMENT  
P. O. Box 7086,  
KAMPALA

ED/C/USA/1.

5th January 1988

The Director,  
USAID,  
Kampala



Dear Mr. Podol,

This letter is a formal request from the Government of Uganda/GOU to USAID for an amendment and a five year extension of the Manpower for Agriculture Development/MFAD Project. As discussed in our joint review on Dec 21 and as developed with the Ministry of Agriculture and Makerere University, this Project is given high priority by the Government.

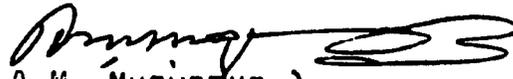
As taken from the project documentation, the project will include an addition of \$15.0 million for a total USAID project cost of \$24.7 million. We understand that \$2.5 million will be provided in your 1988 fiscal year with the remainder in subsequent years. As covered in the financial plan, a GOU contribution over the five year extension will be \$9.7 million, equivalent in shillings. Most of these funds are budgeted from commodity imports and PL-460 food aid sales. My Ministry will work with the University and the Ministry of Agriculture to insure that these funds are properly included in the GOU budget each year. The project has two major components of strengthening agriculture research mainly in Ministry of Agriculture and Forestry Development with special emphasis on the Department of Agriculture Economics. The major aspects being addressed by the project are:

- 1) technical assistance both for the Ministry of Agriculture and the Makerere University Faculty of Agriculture and Forestry; 2) support for reorganisation of agricultural research; 3) support for research, including on-farm testing and improved linkage with extension; 4) funding for post-graduate education both abroad and in-country as well as short term training; and 5) further rehabilitation and equipping of research and University facilities.

- 2 -

This is formally to request USAID approval of the project and the provision of grant agreement for final negotiation so that funding can be provided for the project extension implementation.

Sincerely Yours,



( A.M. Mugwanya )

AG. PERMANENT SECRETARY

**MAKERERE**

P.O. Box 7062 Kampala Uganda

**UNIVERSITY**Tel: Gen. 542471/556661 Cables: "MAKUNIKA"  
Direct: 542803**FROM THE VICE-CHANCELLOR****B. George Kirya, M.B.Ch.B. (E.A.), M.Sc.(Birm.), Dip.Bact.(Manc.)**

Your Ref .....

15th January, 1988

Our Ref ..... 0510.305.06

Dr. Richard Podol,  
on Director,  
I.D. Mission to Uganda  
Box 7007,  
LA.

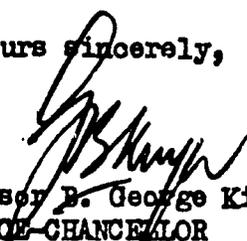


Dear Dr. Podol,

Thank you for your letter dated 30th November, 1987 and the enclosed Draft Proposal on the Manpower for Agriculture Development Project planning five year extension. Before I went away to Dar-es-Salaam last December, I left having requested my Deputy to communicate to you my full support for the proposals contained in the Draft Document.

The purpose of my writing to you is just to put on record that I am in full agreement with the planned five year extension as presented in the Draft Document. Let me once again take this opportunity to thank the USAID for their continued assistance to Makerere University.

Yours sincerely,

  
Professor B. George Kirya.  
VICE-CHANCELLOR

c.c. The Dean,  
Faculty of Agriculture,  
Makerere University.

B. HOUSING PLAN FOR MFAD AND SAARFA TAS

needs: MFAD TAS 11  
 SAARFA TAS 2  
 13

Present Situation: MFAD TAS

- Mu - Team Leader, Makindye House
- MA - Agricultural Research Advisor, Entebbe House
- Soil Fertility Advisor, Kabanyolo

Rehabilitation:

- Rehabilitation Supervisor - Housed at Kabanyolo
- Rehabilitation Specialist (Kabanyolo) - Housed at Kabanyolo
- Rehabilitation Specialist (Kawanda) - Housed at Kabanyolo

TAs Coming In: MFAD Team

- MA - Production Research Advisor, year 1-5
- MU - Soil Science, year 2-5
- Crop Science, year 1-3
- Soil and Water Conservation, Year 1-3
- Ag. Education and Extension, Year 1-3

SAARFA Team

- MU - Ag. Econ., year 1-3
- Ag. Econ., year 2-4

PROPOSED HOUSING PLAN BY LOCATION FOR PHASE II

MFAD TAs:

MU -  
 Makindye - Team Leader  
 Kabanyolo -  
                   Crop Science  
                   Soil and Water Conservation  
                   Ag. Education/Extension

MA -  
 Entebbe - Agricultural Research Advisor  
 Namulonge - Soil Fertility Advisor  
                   Crop Research Advisor

Rehabilitation -  
 Kabanyolo - Rehabilitation Specialist (Kabanyolo)  
                   Rehabilitation Specialist (Kawanda)

Namulonge - Rehabilitation Supervisor

SAARFA TAs:

MU -  
 Kabanyolo - Ag. Econ.  
                   Ag. Econ.

Housed Needed by Site:

Makindye - 1  
 Entebbe - 1  
 Kabanyolo - 8  
 Namulonge - 3  
                   13

Housing Rehabilitation and Construction Needs:

Kabanyolo - Rehab. - 3  
                   Const. - 1  
 Namulonge - Rehab. - 3  
                   7

Schedule for Completing Housing Rehabilitation and Construction:

	<u>July 88</u>	<u>July 89</u>
Kabanyolo-		
Rehab.	1	2
Const.	-	
Namulonge-		
Rehab.	3	

HOUSING ALLOCATIONS BY YEAR AND SITE\*

<u>Location</u>	Y E A R S				
	1	2	3	4	5
<u>Makindye:</u> Team Leader					
<u>Entebbe:</u> Ag. Res. Adv.					
<u>Kabanyolo:</u> Soil Sci.					
Crop Sci.**					
S&W Cons.					
Ag. Ed/Ext.					
Rehab. Spec.					
Rehab. Spec.					
Ag.Econ.SAARFA					
Ag.Econ.SAARFA					
<u>Namulonge:</u> Crops.Res.Adv.					
Soil Fert.Adv.					
Rehab. Sup.					

\* See Annex G, for budget details and changes in arrival of TA.  
 \*\* This position has now been dropped from the project.

-1-

A. Rehabilitation List And Housing Plan

Kabanyolo -

1. Machine Shed
2. Housing
  - Sr. staff - 8 Units
  - Sr. staff - 16 "
  - Post grad - 9 "
  - Labor line - 9 hses, 32 Units
  - Farm Tng block - 6 Units
3. Farm roads
4. Plant breeding lab
5. Crop protection lab
6. Ag. engineering bldg
7. Second green house
8. Harvesting lab

Namulonge -

1. Water system
2. Secure two bldgs for storage of USAID commodities
3. Carpenter, machine and mechanics workshop
4. Main office/lab. block

5. Housing

Guest house - 3 Units

Sr. staff - 12 Units

Grade 'AA' - 11 Units

Sr. staff - 10 Units

Headmen Hses - 6 Units

Skilled laborer hses - 20-6 Units

(See separate detail listing of Namulonge rehabilitation)

Kawanda -

1. Sr. staff housing - 16 Units (30% completed)
2. Jr. staff housing - 64 Units (20% completed)
3. Water svstem - 90% completed
4. Farm Workshops - 50% completed
5. Entomology workshop
6. Storage warehouses
7. Farm office
8. Seed storage warehouse
9. Soil physics bldg
10. Botanical warehouse
11. Fencing and gates
12. Farm roads

Prioritized Rehabilitation Listing  
for Namulonge Research Station

TA Housing - The rehabilitation of TA houses will be done by contract -

1. Two water pumps ordered and installed in bore holes to supply water to the two main storage tanks.
2. Install security doors and grills on two buildings to be used to store USAID commodities. (This may be contracted.)
3. Make carpenter shop, machine shop and mechanics workshop functional.
4. Main office/laboratory block.
  - a. Paint interior and exterior
  - b. Repair electrical system
  - c. Repair water, plumbing and sewer system
  - d. Repair roof and fascia boards
  - e. Repair glass in doors and windows
  - f. Replace mission locks

5. The following list of houses will basically need the same type of repairs as the main office/laboratory block. Some of the houses were looted more extensively than others, notable house number 1. House number 1 has a high priority in order to get the Station Director living on the station. Houses number 3A and 4 are presently being reserved for USAID/MFAD team members and will be contracted out. House number 15 of the grade "A" houses and several of the "AA" houses are being lived in by staff members working on animal research. These houses will not be rehabilitated.

- a. Three guest houses
- b. House number 1
- c. House number 3
- d. House number 2
- e. House number 7
- f. House number 8
- g. House number 5
- h. House number 6
- i. House number 9
- j. House number 13
- k. House number 11
- l. House number 12
- m. House number 14
- n. 17 grade "AA" houses - less animal research residents
- o. 19 junior staff duplex houses
- p. 6 headmen single unit houses
- q. 20 6-unit houses for skilled labors.

## Annex E - Procurement Plan

## A. Responsible Agency:

The Agencies of the Government of Uganda responsible for overseeing the procurement activities of the Project are the Ministry of Agriculture for the agricultural research component of the Project and Makerere University for the faculty strengthening component of the Project. Within the Ministry of Agriculture, the responsible agent will be the Commissioner of Agriculture or the Permanent Secretary of the Ministry of Agriculture. Within Makerere University the responsible agent will be the Dean of the Faculty of Agriculture or the Vice Chancellor of the University. The above Agents will be responsible for 1) approving or entering into contracts, 2) approving the expenditure of funds under project implementation letters and or project implementation orders, 3) sending receiving reports to USAID to acknowledge the receipt and condition of goods (or short shipment of goods) financed under the project; and, 4) communicating with AID and any AID financed contractors in an expeditious manner as required on matters related to procurement and project implementation.

## B. Commodity List:

The following is an illustrative list of commodities and the anticipated Source/origin of the commodities which will be needed to reach project objectives:

	<u>QUANTITY</u>	<u>END USER</u>	<u>PROB. S/O</u>	<u>Est.Cost</u>	<u>Year of Purchase</u>
<b>Vehicles:</b>					
Bus, 65 Pass	1	MU	Code 935	\$ 46,000	2
Minibus	1/2(1*)	MU/MOA	Code 935	\$ 42,000	1/2
Utility Vehicle 4WD	8(2*)	MOA	Code 935	\$104,000	1/3
Pick-up Trk, 4WD double cab	4**/3(1*)	MU/MOA	Code 935	\$105,000	1/3
10 TON Truck	1/2	MU/MOA	Code 935	\$120,000	2
Truck, 3T Lift*	1	MOA	Code 935	\$18,000	1
Motorcycles, 125cc	2/13(3*)	MU/MOA	Code 935	<u>\$22,500</u>	1/2
<b>SUBTOTAL</b>				<b>\$457,500</b>	
<b>Farm Equipment:</b>					
65 HP Farm Tractors With parts	1/2	MU/MOA	Code 941	\$54,000	3
Disc harrow	1	MOA	Code 941	\$4,000	1
Post hole diggers	1/2	MU/MOA	Code 941	\$4,500	1
Rotary slasher	3	MOA	Code 941	\$6,000	1

\* To be retained by OSU Team for project use.

\*\*Two vehicles will be replaced.

Field Cultivator	1/2	MU/MOA	Code 941	\$9,000	1
Front End Loader	1	MOA	Code 941	\$3,500	2
Grain Dryers	1/1	MU/MOA	Code 941	\$30,000	2
Commercial Lawn Mowers	2/6	MU/MOA	Code 941	\$6,400	1
Chain saws	1/2	MU/MOA	Code 941	\$1,200	2
Seed Cleaner	1	MOA	Code 941	\$7,000	2
Misc. farm tools		MOA/MU	Code 941	<u>\$11,000</u>	1
<b>SUBTOTAL</b>				<b>136,600</b>	

**Plot Equipment:**

Rototillers	1/3	MU/MOA	Code 941	\$6,000	3
Cone seeder	1/3	MU/MOA	Code 941	\$8,000	3
Highwheel Cultivators	2/10	MU/MOA	Code 941	\$700	1
Jab planters	1/5	MU/MOA	Code 941	\$300	1
100 M. Steel Tapes	1/3	MU/MOA	Code 941	\$1000	1
Balance scales, 2.5 KG	1/3	MU/MOA	Code 941	\$400	1
Wheelbarrows large	3/9	MU/MOA	Code 941	\$1,200	1
Precision Garden Planter	1/3	MU/MOA	Code 941	\$800	1
Plot Marker Flags	5000	MU/MOA	Code 941	\$500	1
Stakes, Garden	10,000	MU/MOA	Code 941	\$500	1
Soil Sample Bags	2,000	MU/MOA	Code 941	\$1,000	1
Scale, 200 KG	1	MOA	Code 941	\$1,000	1
Right Angle Prism	2/4	MU/MOA	Code 941	\$600	1
PH Kits	4/6	MU/MOA	Code 941	\$100	1
Misc. Plot Tools		MOA/MU	Code 941	\$1,000	1
First Aid Kits*	3/3	MU/MOA	Code 941	\$600	1
Snake Bite Kits*	3/3	MU/MOA	Code 941	<u>\$600</u>	1
<b>SUBTOTAL</b>				<b>\$24,300</b>	

**Laboratory Equipment:**

Project will fund \$70,000 worth of Lab equipment for Makerere University and \$70,000 worth of similar equipment for MOA. The list of Equipment will be developed by the respective institutions in collaboration with OSU. This equipment will all be purchased in the third and fourth years of the Project.

<b>SUBTOTAL</b>	<b>\$147,000</b>
-----------------	------------------

Laboratory Chemicals:

The Project will fund \$25,000 worth of Laboratory Chemicals for MU and \$22,000 for MOA. These commodities will all be purchased in the second third and fourth years of the project. Chemical needs of the University will be reviewed by the the Dean of the Faculty of Agriculture and OSU and the amount to be procured over the life of the Project will be revised as required.

SUBTOTAL \$147,000

Laboratory Supplies:

The Project will fund \$30,000 worth of Laboratory Supplies for MU and \$14,000 worth of Lab supplies for MOA. These items will be purchased in the second third and fourth years of the project.

SUBTOTAL \$44,000

Household appliances/equipment:

Generators, 16 KVA*	2	MOA/MU	Code 941	\$12,000	1/2
Household Furnishings* and Appliances*	2	MOA/MU	Code 941	<u>\$44,000</u>	1/2

SUBTOTAL \$56,000

Other Field Equipment:

Submersible pumps	4	MU/MOA	Code 941	\$28,000	1/3
-------------------	---	--------	----------	----------	-----

Office Equipment:

Personal Computers	3/2(1*)	MU/MOA	Code 941	\$25,000	2/3
4-drawer Files	8	MOA/MU	Code 941	\$1,200	3/4
Desks	5	MOA/MU	Shelf	\$750	3/4
Desk Chairs	5	MOA/MU	Shelf	\$250	3/4
Chairs	20	MOA/MU	Shelf	\$1000	3/4
Electric Typewriters	5(2*)	MOA/MU	Code 941	\$5,000	2/3
Cabinets	5	MOA/MU	Shelf	\$800	3
Photocopiers	4(2*)	MOA/MU	Code 935	\$8,000	2/3
Mimeograph Machines	4	MOA/MU	Code 941	\$2,800	3/4
Calculators w/tape	(2*)	MOA/MU	Code 941	<u>\$1,600</u>	3/4

SUBTOTAL \$46,400

Library books and Periodicals	MU	Code 941	\$75,000	3/4/5
-------------------------------	----	----------	----------	-------

Miscellaneous (Rehabilitation):

Plumbing Supplies	MU/MOA	Shelf & Code 935	\$90,000	1/2
Electrical Supplies	MOA/MU	Shelf & Code 935	\$95,000	1/2
Hardware, tools and paint	MOA/MU	Shelf & Code 935	\$260,000	1/2
Spare Parts	MOA/MU	Shelf & Code 935	\$80,000	1/2
Other	MOA/MU	Shelf & Code 935	\$55,000	1/2
SUBTOTAL			<u>\$580,000</u>	

\$230,000 will be spent in year 1 and \$350,000 in year 2.

Fertilizers:

Over the life of Project approximately 150 Tons of various fertilizers will be purchased by the IQC Contractor in the U.S. The fertilizer will be purchased in year 3 of the Project.

SUBTOTAL	<u>\$ 80,000</u>
Contingency:	\$ 160,200
TOTAL:	<u>\$1,971,000</u>

C. Purchasing Entities:

Several different entities will be purchasing commodity inputs for the project. They are:

1. Items identified above as to be purchased off the shelf or to be purchased in Kenya will be bought by a Nairobi based procurement Agent under a subcontract with OSU. These commodities include the hand tools, and some of the hardware and plumbing supplies needed to rehabilitate the physical facilities at the participating research stations and at Makerere University.

2. Motor Vehicles and the household appliances for furnishing the homes used by the Technical Assistance Team Members will be purchased by the USAID. The Vehicles will be bought through the US Central Purchasing Office in Japan. The household furniture and appliances will be purchased under the same arrangements as the household furniture purchased by the USAID with Operating Expense funds.

3. The personal computers, the educational materials, books and periodicals, the laboratory chemicals and some of the laboratory equipment and supplies will be purchased by the University of Minnesota under a subcontractual arrangement with OSU.

4. The remainder of the project commodities and equipment including the farm equipment, the generators, some of the office equipment and most of the laboratory equipment will be purchased by the PSA under IQC with REDSO/ESA.

#### D. Procurement Procedures:

The following procedures will be followed to undertake commodity procurements for the project:

1. For commodities to be purchased by the University of Minnesota on behalf of Ohio State University, PIO/Cs indicating the University of Minnesota in Block 9 of the PIO/C form and listing the items to be purchased will be prepared by a member of the Technical assistance team. The PIO/C will be cleared by the USAID Project Officer, the USAID Accountant and the RCMO (if available) and signed by the USAID Director and the appropriate Responsible Agent of the Government named above. The executed PIO/C will then be sent to SER/OP/COMS in AID/W with a memo requesting that a Bank Letter of Commitment in an amount equal to the estimated cost of the commodities be issued to the bank which will be designated by the University of Minnesota. This L/Com will be used to pay suppliers for commodities upon shipment of the goods. Either Direct payment (when fees for a particular procurement action will not exceed \$10,000) or a Direct Letter of Commitment (when PSA fees exceed \$10,000) will be used to pay the University of Minnesota for any procurement services fees. The OSU will be responsible for monitoring the procurement activities undertaken by its subcontractor, for necessary communications with the University of Minnesota and for timely reporting to AID and the appropriate GOU entity on the status of the procurement activity.

2. A PIO/C will be used to direct procurement by the Nairobi Based Procurement entity who will be under subcontract with OSU. The PIO/C will be drafted by a member of the TA Team and cleared by the same persons as clear the PIO/Cs for procurements by the University of Minnesota. Payments for the commodities and the commodity

related services purchased by the Nairobi based procurement entity will be made by the OSU under advances from the project commodity element made by the RFMC. The amount of the advances will be determined by the estimated cost of the commodities and services being purchased under the respective PIO/C but in no case will exceed \$50,000 at any one time. The OSU will clear each advance by submission of the commercial invoices from the suppliers of the goods, proof that payment was made to the suppliers, covered by a Voucher (AID Form 1034).

3. PIO/Cs will be also used to initiate procurement by the IQC PSA. For these procurements, the PIO/C will be initiated in the same way as described above. After issuance, the PIO/C will be sent to the REDSO Contracting Officer for negotiation of the PSA Fees and services. The REDSO will also initiate/establish appropriate financing mechanisms for the commodities and services ordered under these PIO/Cs.

4. The procurements of Project vehicles and of household furniture and appliances will be undertaken by USAID under mission issued PIO/Cs. Vehicles will be purchased through the central US Government Procurement Office in Tokyo. Household furniture and appliances will be purchased through the same channels are are used for OE funded property.

#### E. Source/Origin:

The Authorized Source/Origin for Commodities and Commodity Related Services for the Project is AID Geographic Code 941. The Project Vehicles, including motorcycles, will be purchased under the blanket right hand drive Source/Origin vehicle waiver issued by AID/W. An individual transaction waiver may be necessary for the 55 passenger bus and the Three 10 Ton Trucks if SER/OP informs USAID that right hand drive busses of that size are currently being manufactured in the US. Under the Foreign Assistance funding legislation, projects funded by The Development Fund For Africa are exempted from AID's normal source/origin restrictions. However the legislation also provides that preference be given to goods and services from the U.S. and then from other Code 941 Source/origin countries. AID/GC has promised guidelines for implementation of these provisions. Until these guidelines are sent, per the current instructions from AID/W, the project will follow AID's established policies. Thus, a Source Origin Waiver for 5 photocopying machines and approximately \$15,000 worth of tools plumbing and electrical fixtures based upon nonavailability from the authorized geographic code may be required.

**F. Receipt and Utilization:**

All commodities purchased under the project will be consigned to the Ohio State University/Manpower for Agricultural Development Project. OSU will enter into an agreement with a freight forwarder/clearing Agent in Kampala to clear and physically receive all project consignments. The USAID will assist OSU in obtaining the necessary customs clearances for these project commodities. All goods purchased for the project will be titled to the GOU institutions indicated above. Receiving reports acknowledging receipt will be prepared by the appropriate GOU responsible agency for all AID financed commodities purchased for the project. The items marked with an asterisk (\*) in the illustrative commodity list above will be for the use of the technical assistance team during the period they are in Uganda. At the completion of the work of the TA Team, use of these goods will revert to the indicated GOU entity.

**G. Shipping:**

The RCMO has requested a blanket determination of nonavailability for project goods shipped to Uganda through Mombasa and Dar es Salaam from all ports with the exception of US Gulf of Mexico ports. If this determination is forthcoming, the Project will be authorized to ship project commodities on any Code 941 flag vessel except for consignments shipped from US Gulf of Mexico Ports. Cargo shipped from those ports will be shipped on US Flag vessels. PIO/Cs will indicate the authorized flag registry for each particular order.

**H. Schedule of Procurement:**

Funds available to purchase commodities in the first two years of the project include \$100,000 remaining in the initial OSU contract and \$560,000 from the rehabilitation line item of the phase II budget. The total budget for commodity procurement for year 1 of the project is \$430,000. For year 2 the total is \$695,000. For the three subsequent years, \$731,000 is available.

Procurement of the miscellaneous plumbing, electrical, building and hardware supplies intended for use in the rehabilitation component of the project will be purchased as required by the progress of the rehabilitation efforts. However, because these items are invariably cheaper if purchased in the countries of origin, rather than off the shelf at retail level in Kenya, a lead time of at least 8 months from the date of issuance of a PIO/C should be allowed in order to provide for timely arrival at project site. Therefore, in order to ensure completion of the rehabilitation activities within the scheduled two years period, within 2 months of signing of the agreement the OSU technical advisor will develop a list of anticipated requirements of reconstruction materials for the project and draft a PIO/C for issuance to the IQC PSA to direct purchase of

these items. Needs that were overlooked or items which are made in Kenya or other regional sources can be the subject of a subsequent PIO/C issued to the Nairobi based procurement agent. The first year budget for the Rehabilitation supplies is \$230,000. The second year budget for this component is \$350,000.

Purchase of the other items identified for first year procurement will be initiated through the issuance of PIO/Cs to the appropriate purchasing agents identified above within five months of the signing of the agreement.

Purchase of items slated for purchase in the second and in subsequent years will be initiated during the first two months of the respective year.

## TECHNICAL AND INSTITUTIONAL ANALYSIS

## 1. Technical Analysis

A. Introduction

This section presents the technical aspects of the Project in relation to: a) conditions in Uganda; b) the body of relevant scientific knowledge; and, c) the desired beneficiary distribution. The Project is entering its second phase and builds upon the past three years' experience.

The Project, based on experience to date and experience in other countries, can be implemented with confidence in the form proposed. It represents a cost effective project that is highly appropriate for the Uganda situation at this point in time. Alternative approaches have been considered, such as giving primary emphasis agricultural extension, supporting the existing research system in the Ministry of Agriculture or giving primary emphasis to the MU/FAF. After careful consideration it has been concluded that an approach of using adaptive research and involving the MU/FAF is a good step towards improving the research scientists understanding and contact at the farm level, is sound and of immediate priority. In the longer run, a broader look will need to be taken at developing agricultural extension but the high priority for now must be with the approach presented in the Project.

The Project has a high potential for distribution of benefits to producers and consumer. The emphasis on adaptive research with well established priorities to overcome constraints at the farm level on food crop production should have a good cost/benefit ratio. The type of research projected should make efficient use of limited staff and limited resources. It should result in increased and more efficient production at the farm level with reduction in per unit production costs to provide increased income at the farm level while assuring adequate supplies of basic food commodities at reasonable consumer prices. Farmers throughout the world have shown that they readily adopt improved technology that is economically sound, does not incur undue risk, high start up costs or long time periods from planting to harvest and can be incorporated into their existing farming systems. The research/development envisioned in this Project is directed at readily adaptable technology which can be incorporated into the existing farming systems of the Ugandan farmers.

At the time of the initiation of the Project, the facilities at the research stations were in very poor condition having suffered from neglect in maintenance and replacements for many years. The Project had as one of its goals to rehabilitate two of the research stations - Kabanyolo for the MU/FAF and Serere for the Ministry of Agriculture. However, during the course of the project a civil war took place during which there was severe damage to the Kabanyolo Farm and civil disturbances are still occurring in the area of the Serere Farm so that site is not accessible at the present time. The Kabanyolo site has been secure for some time and rehabilitation work has been carried

\*By Dr. William K. Gamble, Team Leader of MFAD Consultant Evaluation/Re-design Team - December 3, 1987. Minor editorial changes were made by USAID and two other notes were added.

out but with more extensive repairs and replacement required than in the original plans. Due to unaccessibility of the Serere site, rehabilitation work was shifted to another major research center at Kawanda where reasonable progress has been made. Farm equipment has begun to arrive under Project support for the Kabanyolo Farm and equipment ordered for the Serere Farm is being held for use at other research centers. The same is true for the laboratory equipment.

In regard to the MU/FAF itself, in Kampala, rehabilitation work has been initiated and by the end of the first phase of the Project (September 1988) the rehabilitation should be well along and much of the laboratory supplies and equipment will be in place.

The research program both in the Ministry of Agriculture and in the MU/FAF did not progress to the degree projected in the first phase of the project. This slow progress has been a result of several complex factors. First, the internal civil disturbances and lack of security in many regions has made it difficult to re-establish and maintain research in many areas. Second, the organization of research is a small division within the large Ministry of Agriculture. Here it is impeded by civil service regulations that do not favor research and where the necessary leadership within the Ministry for research is lacking. Third, the delay in rehabilitation of facilities and delivery of equipment and supplies due to the interruption of the project for about 10 months and the uncertainty surrounding the future of the project during the civil war made it difficult to move ahead with a well planned program. And, fourth, the economic conditions of the Ugandan Government have been such that practically no support has been forthcoming for research and extension. The Ministry of Agriculture did meet its commitment as set forth in the Project Agreement to appoint a Chief Agricultural Research Officer, reporting directly to the Commissioner of Agriculture. Given the economic conditions of the country and the organization of the Ministry of Agriculture in relation to research and lack of leadership, the Chief Agricultural Research Officer has had little impact on the nation's agricultural research.

During the past three years, 65 staff members from the Makerere University Faculty of Agriculture and Forestry (MU/FAF) and the Ministry of Agriculture have travelled abroad (primarily to the United States) for retraining. This retraining has provided some upgrading of individual scientific skills but has served more broadly to reacquaint a significant number of staff with up to date information in their respective fields and to establish contacts with colleagues in their fields - a contact that had been missing for most of them for up to 15 years.

B. Project elements

The Project has five main elements

1. Technical Assistance both for the Ministry of Agriculture and the MU/FAF.
2. Support for Reorganization of Agricultural Research.
3. Support for research, including on-farm testing and improved linkage with extension.
4. Support for post-graduate training, both abroad and in-country, specialized commodity training at the international agricultural research centers and training for technical personnel.
5. Further rehabilitation and equipping research facilities.

1. Technical Assistance Personnel - In both the research division of the Ministry of Agriculture and in the MU/FAF there are excellent opportunities for technical assistance personnel to make very significant contributions. Although, during the first phase of the project, a large number of the Ugandan staff had the opportunity to travel abroad and re-establish contacts with their scientific counterparts in other countries, they still suffer from the many years of isolation from the international scientific community and full knowledge of the advances in agricultural research that are applicable to Uganda. Also, while Uganda had a well established export crop research program at the time of independence and into the early 1970's, it never fully established a food crop research program by the time the unstable and poorly managed government took over in the early 70's.

Hence, there is more to be done than re-establish a program. An effective food crops research program must be established. The use of Technical Assistance Personnel is essential over the next five years of the Project to help develop a sound research program which puts emphasis on problem solving and adaptive research.

It is recommended that the commodity programs of maize and oilseed crops be given priority attention for technical assistance with one advisor for each. Both of these crops have high internal demand and opportunity for substantial increases in output. In addition, the basic food crop, banana, is only maintaining adequate production levels through shifting production to new lands. This cannot continue for long and is already encroaching on forest and marginal lands. Priority attention must be given to soil fertility problems for this basic food crop and one advisor for this work is recommended.

Alternate means of maintaining soil fertility must be explored as well as the most effective use of the country's large rock phosphate resource. Of course, soil fertility problems occur in other basic food crops and these will need attention as a part of the research/development program.

Note:

\*As finally agreed with MOA and as defined in the Project Rationale and/(Section II), only one food production advisor will be provided to handle both maize and oilseed crops.

Description

In the MU/FAF there is a need for a long term advisor to the Dean to advise curricula and staff development. There is also the need for experienced teaching and research personnel to give guidance to members of the Faculty, many of whom have little practical research experience, and to help fill important gaps in the post-graduate teaching program.

In addition to the long term technical assistance, there is a need for short term technical assistance on specific problems that may arise. One obvious area is in research/extension linkages. Here, given limited resources, the initial emphasis should be on helping the research staff understand the constraints at the farm level and making certain they continue their research through on farm testing. It is in this area of linking the researchers with the farmers that priority should be given the great many problems of the extension staff in level of training, lack of support for transport, low incentives, many non-production type responsibilities, no major support for extension is recommended within the Project.

## 2. Support for Reorganization of Agricultural Research

In a few areas farmers have been selected by a team of University personnel and extension field staff to conduct on-farm trials. The extension staff working along with the researchers will lay out these trials. Ultimately the extension staff will be responsible for monitoring the progress of these trials.

The organization of research will be an important concern which will require technical assistance in the Project. The experience to date in Uganda has shown that the present organization for research does not provide the conditions which favor a productive research system. Research is a small division in the large Ministry of Agriculture where it is seriously impeded by bureaucratic procedures and rules of civil service. Linkages with the university are almost non-existent. Incentives and recognition for productive research are not present nor do there appear to be means for them in the present system. A major change in organization for research is required.

A new organization is proposed which will be discussed under institutional analysis. The organization will require technical assistance to help establish it as an efficient and effective organization to provide the framework, guidance and incentives for productive agricultural research as the basis for agricultural development. As has been noted before, the present organization of research within the Ministry of Agriculture has proven to be unproductive and unresponsive to the needs of the country. Also, it has not shown a responsiveness to provide the required support to scientists. In a review of the research system it was found that many researchers had spent up to 15 years without promotion, while individuals with similar qualifications in other agencies had received regular consideration for promotion on the basis of service and merit.

3. Support for research, including on-farm testing and improved linkage with extension - The Technical Assistance Personnel will have an important role in assisting Ugandan staff in research planning, implementation, monitoring and evaluation, including on-farm-testing. Constraints to production. To date, there has not been sufficient attention given by research staff to understanding the production

constraints at the farm level. Therefore, much of the research that has been done has had minimal impact at the farm level. The research staff must lead and participate in on-farm-studies to determine what are the production constraints. Not all of these can be resolved through biological research.

A number of the constraints may be in the policy and pricing area, availability of inputs, transport and marketing. However, it is the responsibility of the agricultural research scientists, including a strong input by agricultural economists, to identify the problems and push for action by those responsible.

It is very important, particularly given Ugandan scarce resources and many years of stagnant research, that critical research problems be identified and a real set of priorities be established. The research staff, to date, has considered its responsibility to carry out research but it has had very little awareness of how well adapted the research results are at the farm level. A new awareness must be brought to research that it must be verified at the farm level. This verification (on-farm-testing) must be carried out by the research scientists in close cooperation with the farmers and extension staff. As has been noted before, the emphasis should be on adaptive research. In the international agricultural research centers and in national agricultural research programs there have been many scientific advances in varietal improvement and cultural practices that should be tested and adapted to Ugandan conditions. This adaptive research can cut the time required for the generation of technology in Uganda to a minimum.

The support will be limited to those areas where technical assistance is being provided as noted under sections 1 and 2 above.

4. Support for post-graduate training, both abroad and in-country, specialized commodity training at the international agricultural research centers and training for technical personnel - This Faculty was once the strongest and best recognized in all of East Africa. While it still has a reasonable number of well trained staff, its curricula needs revision and up-dating, a staff development plan is needed as well as its implementation and there needs to be better linkage between the MU/FAF and research in the Ministry of Agriculture. Also, as in the case of the Ministry of Agriculture research, the MU/FAF staff need to get closer to the real problems of agricultural production in the country and train the students in constraint analysis and in conducting research which is tested and verified at the farm level.

The MU/FAF needs a Technical Assistance Advisor to work with the Dean and staff on a long term basis to bring curricula reform to the Faculty, implement a staff development program, improve the post-graduate program so that it is more relevant to the country's needs and the graduates' future work. The importance of curricula reform and the need for more relevant post-graduate work was noted by many

present staff members of the Ministry of Agriculture during the review of the first phase of the project. They noted too many courses, non-relevance and lack of supervision of research by Faculty staff members.

Technical assistance needs to be provided to the MU/FAF on the advantages and disadvantages of the establishment of additional departments. In particular, careful attention needs to be given to the proposal to establish a Department of Agricultural Education and Extension. Involved in this matter is the question as to what role the Faculty should have in extension and whether all responsibility should be lodged in one department or whether each department should have some involvement in extension training.

There is need for up-grading the staff at MU/FA through additional post-graduate training and a similar situation exists for the research staff in the Ministry of Agriculture. In this latter case approximately one-half of the "research" staff only have the first degree which is not considered a research degree. Priority must be given to the up-grading of research staff with postgraduate degree training. Finally, in regard to training, and of very high importance, is the need for training of technical staff in maintenance and repair of equipment. In many projects short term benefits are negated through the lack of maintenance and repair of essential equipment that has been supplied under the project. Early and consistent attention must be given to this training both within Uganda and outside the country in special training institutes.

5. Further rehabilitation and equipping research facilities - The continued work on rehabilitation of the research facilities and re-equipping them, as well as providing essential transport for research workers, is absolutely essential for the success of the Project. To carry out the required rehabilitation and re-equipment of the research facilities will require continued technical assistance by the type of individuals now filling the Rehabilitation Management positions.

## 2. Institutional Analysis

- A. The Research Division of the Ministry of Agriculture.
- B. The Makerere University Faculty of Agriculture and Forestry.
- C. The National Agricultural Research Organization (NARO).

The extension service in Uganda like that in most developing countries is overstuffed. At present there are about 3000 extension workers who do not have adequate support needed to provide services to the farmer. Extension agents are vastly underpaid, are not given the right incentives, lack transportation and most of all lack the right training. Recognising the magnitude of this problem, this project in Phase II will not try to solve these problems but will try to use some of the extension agents who otherwise would be doing nothing, to assist in adaptive research and on-farm demonstrations.

The first two of these have been the cooperating institutions in the first phase of the Project. The Research Division of the Ministry of Agriculture has been disappointing in its performance and in demonstrating its capability to perform the required tasks as set forth in the Project. A recommendation is being made to shift the support from the Ministry to a new National Agricultural Research Organization. The Makerere University Faculty of Agriculture and Forestry had a history of good performance prior to the general problems occurring through the country in the 70s and 80's. In

recent years, during the first phase of the project, it has shown some evidence of recovery but performance has been disappointing. However, with new leadership and with new Technical Assistance as being recommended under the Project, the MU/FAF is capable of performing the tasks which are projected for it.

A. The Research Division of the Ministry of Agriculture - The Research Division is a small unit within the Ministry of Agriculture and is headed by a Chief Agricultural Research Officer (CARO) who reports directly to the Commissioner of Agriculture. The Division has three main research stations, Kawanda, Namulonge and Serere. The Kawanda Station near Kampala, originally was the headquarters of the Research Division with the specific mandate for research on agricultural problems of southern and western Uganda. The main laboratories for soil research are at this station and until now it has served as the headquarters for the maize and bean research. During the Colonial period the Kawanda Station was established as a coffee research station and continues to serve that crop.

Namulonge, which is also near Kampala was originally established for cotton research but since 1972 has diversified its research programs to include animal husbandry research and research on some annual crops in mixed farming systems. It is planned that the maize program will be shifted from Kawanda to Namulonge.

The Serere Research Station was established to serve the northern and eastern parts of Uganda with emphasis on sorghum and millet. It also has a livestock unit.

Each of these 3 stations is headed by a Director who is to report to the Chief Agricultural Research Officer.

There are five sub-stations with mixed programs. They are operating at a minimal level and their functions have been confused by the several changes in organization of the responsible ministries. These sub-stations are:

- 1) Kituza - for robusta coffee, cocoa, sugarcane and oil palm;
- 2) Buginyanya - for arabica coffee, wheat, barley and potatoes;
- 3) Kigumba - for maize, cotton and animal breeding;
- 4) Kalengyere - for potatoes, maize, wheat, barley and vegetables;
- 5) Ngetta - for cotton, animal production and other annual crops.

Each sub-station is headed by an Officer-in-Charge responsible to the Director of one of the main stations.

There are, on record, over 65 Variety Trial Centers (VTCs) in the country where adaptability trials are conducted for crop varieties and agronomic techniques developed at the main and sub-stations. Each main or sub-station is responsible for a certain number of the Variety Trial Centers. Many of the VTCs are attached to other departmental institutions; e.g., District Farm Institutes (DFIs), agricultural colleges and departmental farms. The majority of these are now operating at a very low level of maintenance and it is generally concluded that there are by far too many VTCs.

Uganda at the time of independence and in the first decade of its independence had a well developed export crop research program (coffee, cotton and tobacco) but had done little in terms of food crop and livestock production research. Starting in the early 1970's, due to general political and economic mismanagement, just at the time of a start on food crop and livestock production research, deterioration of the economy set in which had a negative affect on agriculture as well as the total economy. The country's scientific community was cut off from the rest of the world so it could not gain from that resource while at the same time it was not supported to generate new knowledge. Hence, food crop and livestock production stagnated and in fact declined in terms of per capita production during the 1970's and early 1980's.

As the country tried to build a research program starting in the mid-80's it found itself still confronted with tremendous economic problems that prevented it from providing support for agricultural research and development. Research facilities had deteriorated, equipment was not operational, transport was non-existent and the staff was lacking in up to date scientific information and contacts with colleagues outside the country. This situation was confounded by the organization for research which was only a small section in a large and bureaucratic ministry impeded by civil service regulations that were not appropriate to provide the needed incentives for scientists. The Ministry of Agriculture, because it is a large organization with many responsibilities and large numbers of staff was not prepared to give special attention or priority to one group (research). Further, research for livestock has shifted back and forth between ministries as has research for forestry and fisheries. Since research, the engine needed to drive development, was not given the needed incentives and support, agricultural development continued to stagnate. This has been the case through-out the first phase of the Project - stagnation and inefficient use of available staff.

It is the recommendation of the Project design that a reorganization of research be carried out and that this be a requirement (covenant) for Project support. The Ministry of Agriculture is not able to perform the intended function. Further, farmers are concerned about their total farm unit, not just crop production. In Uganda, the split

between several ministries - livestock and animal health, agriculture and forestry - makes it very difficult to have a well coordinated and effective research program that maximizes the use of limited resources - human, financial and physical.

Given the above recommendation and intent to tie support in the second phase of the Project to the establishment of a new research organization, support for the present Research Division in the Ministry will be phased out and will be transferred to the new National Agricultural Research Organization (NARO).

B. The Faculty of Agriculture and Forestry of Makerere University - This Faculty had an enviable reputation in East Africa and abroad until the mid-70's when it like most other institutions in Uganda went into decline, lost many senior staff and suffered deterioration of facilities and equipment. It has managed in recent years to hold a reasonable number of staff with good basic qualifications. However, its curricula is in need of review and reform, it needs a staff development program and it needs to be more closely related to the research problems of the country with linkages to research and extension in other organizations.

The Faculty in the past had a strong post-graduate program and which played an important role in training research and extension staff for Uganda and other East African countries. It has lost much of that leadership role but now is working to rebuild its capacity in post-graduate education.

Its research farm, Kabanyolo, was once among the best in East Africa but it too suffered from neglect and the effects of the civil war. Rehabilitation is proceeding and its location makes it ideal as a teaching and research farm. Here students can gain practical experience and the staff can provide leadership in research. As has been noted under the technical analysis, the staff of the MU/FAF have, to a large extent lost contact with the real needs of the producers and this contact must be regained.

The MU/FAF should play a key role in training of research staff at the MSc degree level for research and extension and for leadership in other agricultural organizations. In selected fields it should offer the PhD degree and have the capacity to share in the supervision of doctoral dissertation research for Ugandan students who have taken their course work abroad.

The Project is designed to overcome a number of weaknesses in the MU/FAF. The elements in the design are; a) the provision of Technical Assistance in the review and revision of the curricula and in the preparation of staff development plans; b) the provision of visiting professors; c) post-graduate fellowships for selected staff; and, d) support for research, equipment and supplies.

There is need to give increasing attention to the simultaneous and

integrated development of research, higher education and extension. Efforts directed solely at research institutions will not have the desired impact. The university system should make critical contributions to research and extension, by providing graduates adequately prepared for both these careers, and by collaborating in research.

C. The National Agricultural Research Organization (NARO) - From January to March, 1987, a Task Force of Ugandan and overseas consultants under the sponsorship of the Ugandan Government and the World Bank with some USAID support reviewed the agricultural research (crops, livestock, forestry and fisheries). It was the conclusion and recommendation of this Task Force that there should be a reorganization of agricultural research (agriculture in the broad sense) and all agricultural research should be brought together in one organization, NARO.

The Task Force, as had others before it, found the present system to be: a) very inefficient in use of resources - human, physical and financial; b) operating without well defined priorities; and, c) little evidence of any impact on agricultural production.

The overall objective of agricultural research must be to make the research process efficient, responsive and effective in contributing to national agricultural development. As has been demonstrated in those countries making good progress in their agriculture, there is a need to maximize the use of limited resources and to have strong linkages between all the organizations concerned with research and development. As has been stated in a recent World Bank/International Service for National Agricultural Research (ISNAR) document "Guidelines for Strengthening National Agricultural Research Systems in Sub-Saharan Africa", there is a need for each country to be able to respond to the challenges of agricultural development with the capacity to - introduce, screen, test and adapt technologies to its various micro-environments and where feasible generate new technology. In order to do this it has been found in many African countries most efficient and effective to bring its various research units related to agriculture together into one integrated agricultural research system which comprises:

- a) all organizations in the country, including the universities, having the capacity to conduct research relevant to agricultural development;
- b) their human, physical and financial resources, documentation and information, specific policies, plans, and research programs;
- c) the linkages between the various organizations involved in research and teaching related to agriculture;
- d) their relationships with the clients of research: producers, extension services, policy makers and planners, development parastatals, and technical assistance organizations.

The systems structure consists of the organizational framework within which research is carried out. This organizational framework can take various forms but many African, Asian and Latin American countries

have found, and more are finding, that a semi-autonomous or autonomous organization, with a board of trustees, and a scientific advisory committee is the most effective form of organization. Such an organization was recommended by the Task Force on Agricultural Research in Uganda in March, 1987.

The establishment of a NARO requires careful planning and political support from the highest levels. All parties who will be affected need to participate in the planning process and while certain compromises will be necessary, the overall benefit must be recognized. A Task Force is required to draft an Act or Decree for the establishment of a NARO and its Board of Trustees. This Task Force should also determine the location of its headquarters, the physical requirements for its headquarters (which should be kept to a minimum and use of existing facilities should be given first priority), the time frame and phasing for the consolidation of agricultural research (in the broad sense) into NARO, its initial organization, staffing and conditions of service. Also, the qualifications for the Director of NARO and the procedure for selection and appointment of the Director. The Task Force, comprised of Ugandan and overseas consultants, should be appointed either by the Minister of Planning or the Office of the President.

In addition to support for NARO from the public sector, there should be a potential for supplementary funding from the private and estate sectors as well as from some of the parastatal organizations concerned with agricultural commodity marketing.

The benefits from NARO should be:

- a) effective coordination of all research with more efficient utilization of human, financial and physical resources;
- b) establishment of mechanisms and procedures for effective planning and management of research;
- c) increased productivity from research scientists as a result of improved morale, working conditions and increased opportunities for professional advancement;
- d) avoidance of duplication of research efforts;
- e) flexibility and effectiveness in financial and administrative procedures;
- f) better monitoring, evaluation and reporting of research; and,
- g) assurance of the involvement of national planners and producers in the planning and evaluation of research.

An organizational change by itself will not make research more effective to serve agricultural development. The proposed organization can provide the framework within which effective research can be planned, implemented, evaluated, reported and utilized in a manner that will efficiently utilize scarce resources. However, it still requires a consistent supply of resources at an adequate level. In recent years Uganda has neither supplied resources consistently nor at an adequate level. A target should be established for at least

0.5% of the Gross Domestic Agricultural Product to be allocated (and provided) for agricultural research. Although no empirical information is available on the economics of research in Africa, a strong case can be made on the basis of insights from Africa's history, which includes many examples of successful application of new and imported technology. A National Agricultural Research Organization which brings together the various entities engaged in agricultural research into a unified system gives the focus, visibility and critical mass for research which can attract resources and produce the results needed for development.

Note: After considerable discussion on the establishment of NARO, a Covenant has been included in the Project to establish this organization. Funding has also been provided to renovate facilities at Kawanda as the NARO headquarters, to provide short term consultancy to establish NARO and to provide continued long term consultant assistance to NARO over the life of the Project. As agreed with OSU Team, however, while we are all in agreement that NARO should be established, food crop research can be considerably strengthened in Uganda through the existing system. While USAID feels strongly that NARO should be established, it is not essential that it be established for good food crop research to be conducted.

M F A D  
REVISED USAID EXPENDITURE BUDGET \*

	Year 1** FY 89	Year 2 FY 90	COMMENTS *****	Year 3 FY 91	Year 4 FY 92	Year 5 FY 93	TOTAL
<b>I. TECHNICAL ASSISTANCE</b>							
<b>A. Long-Term TA</b>							
<b>1. Research Component</b>							
a. Prod. Research Advisor	-	-	delayed 2 yrs	200.0	200.0	212.5	612.5
b. Ag. Research Advisor	100.0	178.0		200.0	200.0	211.0	889.0
c. Soil Fertility Advisor	100.0	186.0		200.0	200.0	203.0	889.0
Sub-Total.....	200.0	364.0		600.0	600.0	626.5	2,390.5
<b>2. University Component</b>							
a. Soil Science	-	-		-	-	-	- : dropped
b. Crop Science (3 yrs)	-	-	: delayed 2 yrs	200.0	178.0	186.0	564.0
c. Soil & Water Conserv. (2 yrs)	-	-	: delayed 1 yr	200.0	178.0	58.7	436.7
d. Ag. Educ/Extension (3 yrs)	-	186.0	: delayed 1 yr	200.0	178.0	58.7	622.7
e. Agric Economics (6 yrs)	105.5	186.0	: only 1 TA	375.0	342.0	178.0	1,186.5 : 2nd TA arrives in Yr 3
Sub-Total.....	105.5	372.0		975.0	876.0	354.1	2,682.6
<b>3. Rehabilitation</b>							
a. Rehab. Supervisor (2 yrs)	121.8	178.0		-	-	-	299.8
b. Rehab. Specialist (1.5 yrs)	92.4	85.0		-	-	-	177.4
c. Rehab. Specialist (1.5 yrs)	92.4	85.0		-	-	-	177.4
Sub-Total.....	306.6	348.0		-	-	-	654.6
<b>B. Short-Term TA</b>							
<b>1. Research Component</b>							
	75.0	45.0		45.0	25.0	25.0	215.0
<b>2. University Component</b>							
Consultants for Ag Econ	39.0	39.0		24.8	10.1	10.1	134.9
<b>3. S&amp;T NRM Project</b>							
	-	50.0		25.0	25.0	-	128.0
Sub-Total.....	178.9	159.0		75.0	75.0	-	200.0
				169.8	135.1	35.1	677.9
Tech. Assist. Sub-Total.....	791.0	1,243.0		1,744.8	1,611.1	1,015.7	6,405.6
<b>II. TRAININGS</b>							
<b>A. Long-Term</b>							
<b>1. Research - PhD</b>							
	75.0	175.0		243.0	195.0	38.0	726.0
<b>Research - MSc</b>							
	150.0	175.0		50.0	-	-	375.0
<b>2. University - PhD</b>							
	100.0	200.0		170.0	80.0	-	550.0
<b>University - MSc</b>							
	50.0	75.0		25.0	-	-	150.0
<b>University - PhD-Ag Econ</b>							
	50.0	100.0		100.0	90.0	-	340.0
<b>3. OSU Fee Remission</b>							
	-40.0	-40.0		-40.0	-40.0	-40.0	-200.0
Sub-Total.....	385.0	685.0		548.0	325.0	-2.0	1,941.0
<b>B. Short-term</b>							
<b>1. Research Component</b>							
	36.0	60.0		48.0	48.0	48.0	240.0
<b>2. University Component</b>							
Ag Econ Dept	18.0	30.0		24.0	24.0	-	96.0
	12.0	12.0		12.0	12.0	12.0	60.0
Sub-Total.....	66.0	102.0		84.0	84.0	60.0	196.0
Training Sub-Total.....	451.0	787.0		632.0	409.0	58.0	2,337.0

\* Revised Mar. '88--all delayed Tech Assist. and reductions on the next page are relative to earlier budget projections and details of \$3.06 million in Year 1 and \$4.9 million in Year 2.

\*\*Each year denotes the year funding will be expended but from prior year's obligation

	YEAR 1	YEAR 2	COMMENTS	YEAR 3	YEAR 4	YEAR 5	TOTAL
<b>III. COMMODITIES</b>							
A. Research Component	10.0	112.5	: reduced 50% in yr 2	112.5	45.0	-	280.0
B. University Component	20.0	112.5	: reduced 50% in yr 2	112.5	100.0	-	345.0
C. Books, Journals etc.	-	-	: delayed	25.0	25.0	25.0	75.0
D. Transportation, w/spares	70.0	140.0		120.0	66.0	50.0	446.0
E. Commodities for MU/Ag Econ	66.0	10.0		30.0	10.0	10.0	126.0
Commodities Sub-Total.....	166.0	375.0		400.0	246.0	85.0	1,272.0
<b>IV. OTHER COSTS</b>							
<b>A. Rehabilitation *</b>							
1. MU/FAF Main Campus	60.0	40.0		-	-	-	100.0
2. Kabanyolo Farm	80.0	100.0		-	-	-	180.0
3. Kawanda Research Station	50.0	120.0		-	-	-	170.0
4. Namulonge Research Station	100.0	130.0		-	-	-	230.0
MU/Dept of Ag Econ Houses	160.0	-		-	-	-	160.0
Sub-Total.....	450.0	390.0		-	-	-	840.0
<b>B. Construction/Rehab</b>							
1. NARO HQ - Kawanda	-	-	: delayed 1 yr	100.0	-	-	100.0
2. TA Houses/Construction **	180.0	-	: eliminated in yr 2	305.0	175.0	60.0	720.0
D. Conferences, Workshops, etc.	5.0	10.0	: reduced 60 in yr 2	75.0	75.0	75.0	240.0
E. Project Support	198.0	394.0		394.0	319.0	100.0	1,405.0
F. Eval./Financial Review	-	60.0		-	60.0	-	120.0
Sub-Total.....	383.0	464.0		874.0	629.0	235.0	2,585.0
Other Costs Sub-Total.....	833.0	854.0		874.0	629.0	235.0	3,425.0
<b>V. INFLATION &amp; CONTINGENCY</b>							
A. Inflation	-	-	: No Inflation or	179.9	184.7	76.8	441.5
B. Contingency	-	-	: Contingency	176.3	703.2	32.7	912.3
C. MU/Ag Econ	-	-	: Funds	34.0	38.5	7.0	79.5
Sub-Total.....	-	-		390.2	926.4	116.5	1,433.3
<b>GRAND TOTAL .....</b>	<b>2,241.0</b>	<b>3,259.0</b>		<b>5,500.0</b>	<b>4,041.0</b>	<b>3,821.5</b>	<b>15,000.0</b>

\* USAID has been informed by the World Bank that IDA credit or financing could be made available for importation of commodities, equipment, and vehicles. Thus, much of the funding indicated above for commodities and rehabilitation could be made available for other project costs such as long-term TA if IDA credits are obtained.

\*\*Current plan is to build 5 or 6 new houses for returning Ugandans.

S A A R F A BUDGET<sup>1</sup>  
(000 US \$)

	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL
<b>I. TECHNICAL ASSISTANCE</b>						
<b>A. Long-term</b>						
Agric.economists (2)	211.0	375.0	342.0	178.0	-	1,106.0
<b>B. Short-term</b>						
Consultants	39.0	39.0	25.0	25.0	-	128.0
TA subtotal.....	250.0	414.0	367.0	203.0	-	1,234.0
<b>II. TRAINING</b>						
<b>A. Long-term</b>						
Graduate degree	50.0	100.0	100.0	90.0	-	340.0
<b>B. Short-term</b>						
Training subtotal....	12.0	12.0	12.0	12.0	12.0	60.0
	62.0	112.0	112.0	102.0	12.0	400.0
<b>III. COMMODITIES</b>						
<b>A. Equipment</b>	40.0	-	20.0	-	-	60.0
<b>B. Books/Journals</b>	10.0	10.0	10.0	10.0	10.0	50.0
<b>C. Transport w/spares</b>	16.0	-	-	-	-	16.0
Commodity subtotal...:	66.0	10.0	30.0	10.0	10.0	126.0
<b>IV. OTHER COSTS</b>						
<b>A. Housing</b>	160.0	-	-	-	-	160.0
Other subtotal.....	160.0	-	-	-	-	160.0
<b>IV. INFLATION &amp; CONTINGENCY<sup>2</sup></b>						
Inflation (5%)	-	8.1	17.1	21.6	4.7	51.5
Contingency (8%)	26.0	16.4	16.9	16.9	2.3	78.5
<b>GRAND TOTAL.....</b>	<b>564.0</b>	<b>560.5</b>	<b>543.0</b>	<b>353.5</b>	<b>29.0</b>	<b>2,050.0</b>
	=====	=====	=====	=====	=====	=====

<sup>1</sup>Extra funding has been requested from AID/W to strengthen the Dept. of Agricultural Economics but has been included in MFAD extension and will become part of Mission's OYB whether or not the extra funds are received.

<sup>2</sup>Does not include Long-Term TA.



LONG TERM TRAININGPROPOSED TRAINING SCHEDULE FOR MU AND MA

<u>Year</u>	<u>Leave</u>				<u>Return</u>			
	<u>MU</u>		<u>MA</u>		<u>MU</u>		<u>MA</u>	
	<u>MS</u>	<u>PhD</u>	<u>MS</u>	<u>PhD</u>	<u>MS</u>	<u>PhD</u>	<u>MS</u>	<u>PhD</u>
Sept 1988	2	6	6	3	-	-	-	-
Sept. 1989	10	6	7	4	-	-	6	-
Sept. 1990	2	-	7	3	-	-	7	-
Sept. 1991	2	-	7	-	-	6	7	3
Sept. 1992	-	-	6	-	-	4	7	4
Sept. 1993	-	-	-	-	-	2	6	3

Note: All long-term training is illustrative and will be reviewed and finalized as part of the submission of the training plan.

LONG TERM TRAINING FOR MINISTRY OF AGRICULTURE<sup>1/</sup>

<u>Production Agronomists</u>	<u>MS</u>	<u>PhD</u>
Sunflower	2	0
Maize	2	1
Oilseeds	2	1
<u>Plant Genetics</u>		
Sunflower	1	0
Maize	2	1
Oilseeds	2	1
<u>Soil Science</u>		
Soil Conservation	2 <sup>2/</sup>	1
Soil Fertility	2	1
Soil Classification	2 <sup>2/</sup>	0
Soil Microbiology	2 <sup>2/</sup>	1
<u>Plant Pathology</u>	3	1
<u>Entomology</u>	3	1
<u>Farming Systems</u>	2 <sup>2/</sup>	0
<u>Agricultural Eng.</u>	2 <sup>2/</sup>	0
<u>Agricultural Ext.</u>	2 <sup>2/</sup>	1
<u>Agricultural Econ.</u>	2	0
Total	<u>33</u>	<u>10</u>

## SHORT TERM PARTICIPANT TRAINING

60 person months for short term training and appropriate workshops and seminars.

1/Approved by CA and CARO/MA.  
2/MSc course taken abroad.

## PROPOSED TRAINING SCHEDULE FOR MA

Year	Leave		Return	
	MSc	PhD	MSc	PhD
Sept. 88	6	3		
Sept. 89	7	4		
Sept. 90	7	3	6	
Sept. 91	7		7	
Sept. 92	6		7	3
			7	4
			6	3

MSc degree candidates will receive 12-15 months formal training.

PhD degree candidates will receive 24-30 months formal training.

December 17, 1987

TRAINING PLAN FOR MAKERERE UNIVERSITY

	**MS	PHD
Soil Science	3	2
Ag. Engineering	2	2
Crops Science	3	3
Animal Science	1	1
Agricultural Economics	3	4
Agricultural- Education/Extension	4	
Total	16	12

PROPOSED TRAINING SCHEDULE

	88/89		89/90		90/91		91/92		92/93	
	MSC	PHD								
Agric. Econ.		2	2		1		2			
Crop Science		2	2	1	1					
Agr. Engineering		1	2	1			2			
Soil Science		1	1	1						
Animal Science			1	1						
Agr. Education/ Extension	2		2	2						

\*\*All of MSC except, the four in Education/Extension to be done in country.

(1) To be funded under SAARFA Project.

ANNEX J

611 (e) Certification

Under the MFAD Phase II, it is planned that about \$ 1.2million worth of construction will be done. This will include both new construction and rehabilitation of existing buildings.

Technical Assistance is also being provided under the project to train the Ugandans to maintain the buildings. The GOU is also planning to provide in their budget, adequate funds for the maintenance and upkeep of these buildings.

Therefore, it is the mission's opinion that the GOU will have the capability to utilize and maintain the buildings being rehabilitated and constructed under this project.



R. L. Podol  
Director, USAID/Kampala

Date  
22 MAR 88