

PROJECT DATA SHEET

1. TRANSACTION CODE

A = Add
 C = Change
 D = Delete

Amendment Number

DOCUMENT
3DE

2. COUNTRY/ENTITY

Kenya PD BRK 958

3. PROJECT NUMBER

15-0239

4. BUREAU/OFFICE

Africa

06

5. PROJECT TITLE (maximum 40 characters)

Instit. Devel. for Agricultural Training

6. PROJECT ASSISTANCE COMPLETION DATE (FACD)

MM DD YY
09 30 91

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

A. FISCAL FY 86 B. QUARTER 4 C. FINAL FY 86

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

A. FUNDING SOURCE	FIRST FY 86			LIFE OF PROJECT		
	B. FX	C. L/C	D. Total	E. FX	F. L/C	G. Total
AID Appropriated Total						
(Grant)	(2,000)	()	()	(2,000)	()	(2,000)
(Loan)	()	()	()	()	()	()
Other U.S.						
University of Illinois				2,080.7		2,080.7
Host Country					4,507.7	4,507.7
Other Donor(s)						
TOTALS				4,080.7	4,507.7	8,588.4

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) ARD	680					2,000	
(2)									
(3)									
(4)									
TOTALS						2,000		2,000	

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

620 630 968 690

11. SECONDARY PURPOSE CODE

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

A. Code XII R/AG TNG
 B. Amount 2,000 100 1,500

13. PROJECT PURPOSE (maximum 480 characters)

A) Create at Egerton College an agricultural education institution of excellence serving the needs of Kenya and Africa
 B) Establish permanent institutional relationships between Egerton College and a U.S. agricultural education institution.

14. SCHEDULED EVALUATIONS

Interim MM YY MM YY Final MM YY
 09 88 10 90

15. SOURCE/ORIGIN OF GOODS AND SERVICES

000 941 Local Other (Specify) Host Country

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

17. APPROVED BY

Signature
 Title Charles L. Gladson
 Mission Director

Date Signed MM DD YY
 07 08 86

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

MM DD YY

INSTRUCTIONS

The approved Project Data Sheet summarizes basic data on the project and **MUST** provide reliable data for entry into the Country Program Data Bank (CPDB). As a general rule blocks 1 thru 18 are to be completed by the originating office or bureau. It is the responsibility of the reviewing bureau to assume that whenever the original Project Data Sheet is revised, the Project Data Sheet conforms to the revision.

Block 1 - Enter the appropriate letter code in the box, if a change, indicate the Amendment Number.

Block 2 - Enter the name of the Country, Regional or other Entity.

Block 3 - Enter the Project Number assigned by the field mission or an AID/W bureau.

Block 4 - Enter the sponsoring Bureau/Office Symbol and Code. (See Handbook 3, Appendix 5A, Table 1, Page 1 for guidance.)

Block 5 - Enter the Project Title (stay within brackets; limit to 40 characters).

Block 6 - Enter the Estimated Project Assistance Completion Date. (See AIDTO Circular A-24 dated 1/26/73, Paragraph C, Page 2.)

Block 7A. - Enter the FY for the first obligation of AID funds for the project.

Block 7B. - Enter the quarter of FY for the first AID funds obligation.

Block 7C. - Enter the FY for the last AID funds obligations.

Block 8 - Enter the amounts from the 'Summary Cost Estimates' and 'Financial Table' of the Project Data Sheet.

NOTE: The L/C column must show the estimated U.S. dollars to be used for the financing of local costs by AID on the lines corresponding to AID.

Block 9 - Enter the amounts and details from the Project Data Sheet section reflecting the estimated rate of use of AID funds.

Block 9A. - Use the Alpha Code. (See Handbook 3, Appendix 5A, Table 2, Page 2 for guidance.)

Blocks 9B., C1. & C2. - See Handbook 3, Appendix 5B for guidance. The total of columns 1 and 2 of F must equal the AID appropriated funds total of 8G.

Blocks 10 and 11 - See Handbook 3, Appendix 5B for guidance.

Block 12 - Enter the codes and amounts attributable to each concern for Life of Project. (See Handbook 3, Appendix 5B, Attachment C for coding.)

Block 13 - Enter the Project Purpose as it appears in the approved PID Facesheet, or as modified during the project development and reflected in the Project Data Sheet.

Block 14 - Enter the evaluation(s) scheduled in this section.

Block 15 - Enter the information related to the procurement taken from the appropriate section of the Project Data Sheet.

Block 16 - This block is to be used with requests for the amendment of a project.

Block 17 - This block is to be signed and dated by the Authorizing Official of the originating office. The Project Data Sheet will not be reviewed if this Data Sheet is not signed and dated. Do not initial.

Block 18 - This date is to be provided by the office or bureau responsible for the processing of the document covered by this Data Sheet.

ACTION MEMORANDUM FOR THE DIRECTOR, USAID/KENYA

FROM: RAYMOND REEBURG, OFFICE OF PROJECTS

SUBJECT: INSTITUTIONAL DEVELOPMENT FOR AGRICULTURAL TRAINING
Project (615-0239)

DATE: July 8, 1986

Action:

Your approval is requested for a grant of \$2 million from the Foreign Assistance Act section 103 appropriation to the Government of Kenya for the Institutional Training for Agricultural Development Project (No. 615-0239). It is planned that the full amount will be obligated in FY 1986.

Background:

Future development of Kenya's agricultural sector is critically dependent on intensifying production. The limit of arable land and rapid population growth have combined to create serious pressures on existing cultivated land and on Kenya's ability to continue to feed itself. Because agriculture is the foundation of Kenya's economy, failure to intensify production and subsequent lagging growth could have potentially far-reaching effects. Intensification will require action and progress on several fronts including research, extension, agricultural services, use of improved inputs, access to credit, marketing and policy improvement. Impinging on all of these is the human resource base required to provide quality personnel to move the sector forward.

The need for trained agriculturalists with practically-oriented skills will continue to exist in Kenya in the foreseeable future. Egerton College has acquired, over the years, an excellent reputation for its practical curriculum. Its graduates are renowned throughout the public and private sectors as being among the best trained agriculturalists in Africa, particularly in the area of extension. With modest institutional support the Egerton program can be further enhanced, increasing its ability to provide high-quality agricultural manpower for Kenya and Africa.

Discussion:

The purpose of the project is to create at Egerton College an agricultural education institution of excellence serving the needs of Kenya and other African countries, which will be accomplished in part by the establishment of a permanent institutional relationship between Egerton College and a U.S. agricultural university. The project is in full conformity

WITH THE STRATEGY OF USAID/KENYA AND THE AFRICA BUREAU ON STRENGTHENING FACULTIES OF AGRICULTURE IN AFRICA.

The outputs of the project will include a revised curriculum review structure to include inputs from the private sector, relevant ministries, and alumni; new curriculum in the fields of agribusiness and agricultural management as well as revised curricula in other fields to adequately incorporate information on the socio-economic context of Kenyan agriculture, and in particular the role of the women farmers; Egerton college faculty and staff will be upgraded to staff the instructional program, conduct adaptive research, administer Egerton college management systems and programs, and to provide a wide range of support services; administrative personnel will be assisted in critical areas of university management, financial planning and budgeting, and institutional planning; a functional operations and maintenance plan will be developed and support staff trained to adequately implement the plan and maintain the facilities which are now in place; administration and management systems will be improved by the upgrading of computer capabilities, development of a wider range of computer applications and data management systems; continuing education and adaptive research programs will be developed to meet the broader in-service training needs of the Kenyan agricultural sector; and teaching and instructional materials on East African agriculture will be either procured from abroad or developed and produced at a new Educational Materials Center to be established under the project, in order to enhance the practical nature of the existing Egerton curriculum.

This project will benefit, primarily, the administration, faculty, staff and student body of Egerton College; and secondly, the agriculturalists, researchers, farmers, managers and others who will participate in the programs of the Agricultural Resources Center. Thirdly, more indirectly and in the longer term, the project will benefit Kenyan small-scale farmers, private firms and parastatal and public sector organizations which are associated with agricultural production, agro-processing and marketing with whom and for whom Egerton graduates work.

Financial Summary:

The total cost of the Project is \$8,588,700. Of this amount, A.I.D. will be providing \$2,000,000 in grant funds over the five year life-of-project. The Government of Kenya will contribute \$4,507,700. The University of Illinois at Urbana-Champaign will contribute \$2,080,700.

Technical Recommendations:

Social, technical, economic and administrative analyses have shown the project concept to be sound. The project was designed using the collaborative assistance mode. Egerton College and the University of Illinois have established good working relationships during the design phase and a close collegial long-term relationship is anticipated through this project. The Environmental Analysis resulted in a finding of categorical exclusion. The Africa Bureau's Environmental Officer concurred with this finding on December 3, 1985. The financial plans developed for the project are adequate to assure proper implementation and to meet the requirements of FAA Section 611(a).

Conditions Precedent and Covenants:

In addition to the standard conditions precedent such as specimen signatures, designation of authorized representatives, additional conditions precedent concerning commodity and equipment procurement are included in project documents.

Five other covenants are included, requiring that notices be published in the Gazette specifying that project funded commodities will enter Kenya free of all duty and taxes, insuring that adequate funds are budgeted to support project activities, requiring the assignment of counterpart personnel, requiring a five-year minimum assignment to Egerton College of persons trained under the project and requiring the establishment of an evaluation program as part of the project.

Responsible AID Officer:

The officer in USAID/Kenya responsible for the project is Maria Mullei of the Office of Agriculture. The responsible officer in AID/W is Thomas Lofgren, AFR/PD/EA.

Waivers:

The blanket source-origin waiver approved by the A.I.D. Administrator on May 7, 1986 to allow procurement of right-hand drive vehicles from geographic code 935 countries (copy attached) will be applicable to vehicle procurement under this project.

Justification to the Congress:

A Congressional Notification (CN) was sent to Congress on February 27, 1986.

Authority:

Delegation of Authority No. 140, revised, dated June 9, 1982 provides to Directors of schedule A posts authority to authorize a project if the project: does not exceed \$20 million in LOP funding, does not present significant policy issues, does not require waivers which can only be approved by AA/Africa or the Administrator, and does not have a project life in excess of 10 years. Authority to design and approve the project as a final phase of assistance to Egerton College was granted to the Mission in the Annual Budget Submission review on June 17, 1985. The PID for the Institutional Training for Agricultural Development Project was approved by you on November 26, 1985.

Recommendation:

That you sign the attached project authorization and thereby approve life-of-project funding of \$2 million in grant funds for the Institutional Development for Agricultural Training Project.

Approved: _____

Disapproved: _____

Date: _____

Drafted: PRJ:VMacDonald:DStauffer:emk

Clearance: RLA:KHansen
 PROG:JStepanek
 AGR:DLundberg
 RFMC:HCollamer

PROJECT AUTHORIZATION

NAME OF COUNTRY: Kenya
NAME OF PROJECT: INSTITUTIONAL DEVELOPMENT FOR AGRICULTURAL TRAINING
NUMBER OF PROJECT: 615-0239

1. Pursuant to section 103 of the Foreign Assistance Act of 1961, as amended, I hereby authorize the Institutional Development for Agricultural Training Project involving planned obligations of not to exceed two million dollars (US\$2,000,000) in grant funds to be obligated at one time during FY 1986, subject to the availability of funds in accordance with the AID OYB/allotment process, to help in financing foreign exchange and local currency costs for the project. The planned life of the project is five years from the date of initial obligation.

2. The project consists of a program of institutional strengthening in the areas of curriculum content and structure, administrative operations, staff development, and educational materials, which aims to ensure Egerton's preeminence as an agricultural education institution addressing the agricultural manpower needs of Kenya and other African countries. This will be accomplished in part through the establishment of a permanent institutional relationship between Egerton College and a major U.S. university under the project. A.I.D. will supply funds for technical assistance, project coordination, training, commodities, and evaluation in order to meet project objectives.

3. The project Agreement, which may be negotiated and executed by the officers to whom such authority has been delegated in accordance with A.I.D. regulations and Delegations of Authority, shall be subject to the following essential terms and covenants and major conditions, together with such other terms and conditions as A.I.D. may deem appropriate.

4. a. Source and Origin of Goods and Services

Except as stated in paragraph d below or as A.I.D. may otherwise agree in writing, commodities financed by A.I.D. under the project will have their source and origin in the Cooperating Country or in the United States. Except for ocean shipping, the suppliers of commodities or services shall have the Cooperating Country or the United States as their place of nationality, except as A.I.D. may otherwise agree in writing. Ocean shipping financed under the Grant will be financed only on flag vessels of the United States, except as A.I.D. may otherwise agree in writing.

B. CONDITIONS PRECEDENT

THE PROJECT AGREEMENT SHALL BE VALID AND FOLLOWING AID/AAI

prior to disbursement of the Assistance for commodities and equipment from the United States (except procurement of commodities and equipment by the contractor), or to the issuance by A.I.D. of documentation pursuant to which disbursement will be made with respect thereto, the cooperating country will, except as the parties may otherwise agree in writing, furnish to A.I.D., with respect to each such commodity and equipment purchase, in form and substance satisfactory to A.I.D., detailed specifications for such commodities and equipment.

B. COVENANTS

(1) The GOK agrees that notices will be published in its Gazette, as required from time to time, specifying that project funded commodities will enter Kenya free of all duties and taxes. These notices will be published upon receipt of requests from A.I.D. which will list the types and approximate quantities of commodities to be imported under the project.

(2) The GOK agrees that sufficient funds will be budgeted and made available throughout the project to support project operations.

(3) The GOK agrees to assign, as required throughout the project, all Egerton College administrative technical staff required to adequately carry out the project.

(4) The GOK agrees that it will make every effort to insure that persons completing project-financed training programs in the United States serve a minimum period of not less than five years in service at Egerton College.

(5) The Parties agree to establish an evaluation program as part of this project. Except as AID and the GOK may otherwise agree in writing, the evaluation program will include, during the implementation of the project and at one or more points thereafter:

MINION BURN

TO THE SECRETARY OF STATE
WASHINGTON, D.C. 20520
FROM THE
OFFICE OF THE ASSISTANT SECRETARY FOR
ACQUISITION AND ASSISTANCE MANAGEMENT
STATE DEPARTMENT

(P 105)
W A W
3/2/86
R/S

Not Available Document

TO: SAC, [illegible]
FROM: [illegible]
SUBJECT: BLANKET SOURCE/ORIGIN WAIVER FOR CERTAIN MOTOR VEHICLES FOR PROJECTS

1. ON MARCH 7, 1986, THE ADMINISTRATOR APPROVED A BLANKET SOURCE/ORIGIN WAIVER AND A WAIVER OF SECTION 502(1) OF THE FOREIGN ASSISTANCE ACT OF 1961, AS AMENDED, TO ALLOW PROCUREMENT FROM GEOGRAPHIC CODE 935 COUNTRIES OF THE FOLLOWING TYPES OF VEHICLES:

- A. RIGHT-HAND DRIVE, LIGHT DUTY VEHICLES OF 11,000 POUNDS GROSS VEHICLE WEIGHT RATING OR LESS;
- B. ONE WHEEL DRIVE MOTORCYCLES OF 125 CUBIC CENTIMETERS DISPLACEMENT OR LESS; AND
- C. OTHER RIGHT-HAND DRIVE VEHICLES AND MOTORCYCLES THAT ARE NOT AVAILABLE FROM THE UNITED STATES, AS DETERMINED CASE-BY-CASE BY THE COMMODITY SURVEILLANCE AND TECHNICAL SUPPORT DIVISION OF THE OFFICE OF ACQUISITION AND ASSISTANCE MANAGEMENT (M/SER/AAM/CST).

2. LIMITATIONS:

- A. THIS WAIVER COVERS ONLY SUCH VEHICLES THAT ARE PROCURED UNDER AID-FINANCED PROJECTS. NEITHER ADMINISTRATIVE, NOR NONPROJECT VEHICLES ARE INCLUDED.
- B. THIS WAIVER COVERS ONLY RIGHT-HAND DRIVE VEHICLES AND MOTORCYCLES WHICH ARE NOT MANUFACTURED IN THE UNITED STATES. OTHER REQUIREMENTS FOR NON-U.S. VEHICLES WILL HAVE TO BE JUSTIFIED AND APPROVED UNDER SEPARATE WAIVER AUTHORITY.
- C. THIS WAIVER IS LIMITED TO ONE YEAR FROM AUTHORIZATION DATE.

3. PROCEDURES:

UNDER THE BLANKET WAIVER APPROVED BY THE ADMINISTRATOR, THERE ARE TWO DIFFERENT PROCEDURES - ONE FOR VEHICLES WHICH HAVE ALREADY BEEN SPECIFICALLY IDENTIFIED AS NOT BEING MANUFACTURED IN THE U.S. AND A SECOND FOR THOSE

3-21	
3-28	
REU/50	
DIA	1
STATE	1
REU/EO	1
REU/A	1
REU/II	1
REU/O	1
PROG	1
REU	1
PIE	1
AGR	1
EXO	1
FER	1
DSO	1
TR	1
OTHER	1
23	

(A) EVALUATION OF THE BENEFICIAL EFFECTS OF THE ABOLITION OF THE

(B) IDENTIFICATION AND EVALUATION OF PROBLEMS OF CONSTITUTIONAL IMPORTANCE

(C) EVALUATION OF THE BENEFICIAL ADMINISTRATIVE IMPACT OF THE PLAN

RE: WAIVER

THE BOARD OF SUPERVISORS HAS APPROVED BY THE ADMINISTRATIVE ON MAY 7, 1988 TO ALLOW BENEFIT OF ELDERLY AND DISABLED VEHICLES FROM THE COUNTY OF BUTTE (COPY ATTACHED) WILL APPLY FOR THE BENEFIT OF VEHICLES UNDER THIS PROGRAM.

DATE

CHARLES B. CLAYTON
MISSION DIRECTOR

PREPARED BY: JIM MCDONALD; DISTRICT CLERK
CHECKED BY: R. L. HANSEN
PROJ: J. STEPHANER
ACR: D. LUNDBERG
RMC: H. COLLAMER

VEHICLES WHICH WILL HAVE TO BE REGISTERED UNDER THIS AUTHORITY
THEY SHOULD BE REGISTERED AS FOLLOWS:

1. FOR THE CATEGORIES OF VEHICLES IN PARAGRAPH 12 AND
13 ABOVE, WITH THE EXCEPTION OF AID/AFV, INSTEAD OF REGISTERING
FOR A FRONT-DRIVE VEHICLE, THE VEHICLE SHOULD BE REGISTERED
FOR THE PROPERTY OF THE UNITED STATES. THE REGISTERING
OFFICER SHOULD BE ADVISED THAT THE VEHICLE IS A
VEHICLE PURCHASED UNDER THIS AUTHORITY. THE
REGISTRATION WILL HAVE TO BE PROVIDED TO AID/AFV FOR PAYING
THE WAIVED DEFENSE IN COURT COSTS.

1. FOR THE CATEGORIES OF VEHICLES IN PARAGRAPH 10
ABOVE, IN THE DISCRETION OF AID/AFV, PURCHASES OF A USED
FOR A RIGHT-HAND DRIVE VEHICLE OR MOTORCYCLE THAT WAS
NOT MANUFACTURED IN THE UNITED STATES, THE
MISSION/BUREAU WILL SEND A REQUEST TO THE COMBINED
SURVEILLANCE AND TECHNICAL SUPPORT DIVISION OF THE
OFFICE OF ACQUISITION AND ASSISTANCE (AA/ASST) WITH
AID/AFV/AA/ASST) SPECIFYING THE TYPE OF VEHICLE NEEDED.
AID/AFV/AA/ASST WILL DETERMINE WHETHER ANY VEHICLES
MEETING THE SPECIFICATIONS ARE MANUFACTURED IN THE
UNITED STATES. IF THERE ARE NONE, THE REQUEST GIVER
AUTHORITY MAY BE USED TO COVER THE PROCUREMENT OF THOSE
VEHICLES FROM OUTSIDE THE UNITED STATES. AID/AFV,
MISSIONS/BUREAUS WILL MAINTAIN A RECORD OF THE NUMBER,
TYPE AND VALUE OF VEHICLES PURCHASED UNDER THIS
AUTHORITY. SHULTZ

PT
#6441

NNNN

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 PROJECT PLAN

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ACRONYMS

AID Agency for International Development
 ARC Agriculture Resources Center
 ASSP Agricultural System Support Project
 CF Counterpart Funds
 CMAC Curriculum Modeling and Advisory
 DPM Directorate of Personnel Management
 EMC Educational Materials Center
 FAA Foreign Assistance Act
 FTE Full-time Equivalent
 FE Foreign Exchange
 FY Fiscal Year
 GOK Government of Kenya
 IDAT Institutional Development for Agricultural Training Project
 LC Local Currency
 MENR Ministry of Environment and Natural Resources
 MOALD Ministry of Agriculture and Livestock Development
 MOEST Ministry of Education, Science and Technology
 OYB Operational Year Budget
 PID Project Identification Document
 POUU Program of Overseas University Collaboration (POUC)
 SECID South East Consortium for International Development
 TDY Temporary Duty
 UIUC University of Illinois at Urbana-Champaign
 USAID United States Agency for International Development

I. PROJECT SUMMARY

A. Recommendations

Approval and authorization should be made for a grant in the amount of \$2,000,000 over the five year period commencing in August, 1986, for the Institutional Development for Agricultural Training Project(615-0239).

The grantee will be the Government of Kenya represented by the Ministry of Finance. Egerton College, under the direction of the Ministry of Education, Science and Technology, will be the executing agency.

B. Project Description

This project will create at Egerton College an institution of excellence in training practically-oriented agricultural manpower for Kenya and Africa and will establish a permanent relationship between the University of Illinois at Urbana-Champaign and Egerton College.

The Institutional Development for Agricultural Training Project proposes to address the needs outlined above through four major project components:

1. curriculum development
2. administrative and management improvement
3. staff development/training
4. educational materials, research and outreach

Under the first component, curriculum development, a curriculum review mechanism will be set in place which encompasses both internal departmental committees and, Faculty and Academic Boards, and external advisory committees which include representation from the public and private sectors. Curriculum content will also be a subject for review between faculty and staff of Egerton College and UIUC, with the latter providing assistance as needed. UIUC will also provide technical assistance to conduct an initial manpower study and to prepare a survey for follow-up of Egerton graduates. The intent of this project component is to shape curricula which provide graduates with the knowledge and skills needed to meet the requirements of the agricultural public and private sectors.

The second component of staff development/training aims to upgrade the skills of Egerton faculty to meet the more advanced

teaching and research requirements of university degree programs, and to strengthen the managerial and administrative skills of staff to enable the college to operate efficiently and effectively in the face of rapidly increasing enrollment. Degree training in the U.S. will be provided for an estimated 10 faculty per year, with emphasis given to Ph.D training. Non-degree training will also be provided, primarily for supervisory administrative staff, who will work with counterparts of UIUC or another U.S. University as well as benefit from temporary technical assistance at Egerton provided by UIUC staff.

Administration and management will be improved through the computerization of financial and data management systems at Egerton College under the third project component. Thirty microcomputers will be installed, software procured, and staff trained in their use in such critical areas as payroll and personnel records, accounting systems, student records data base, and building and inventory files. A computer instructional center will be created for teaching students, and microcomputers will be available for faculty research as well. Administrative operations will be facilitated by the procurement and installation of printing and photocopying equipment.

The fourth project component of Educational Materials, Research and Outreach revolves around the Agricultural Resources Center (ARC) and two soon-to-be-opened Rural Development Laboratories which will serve as the college's vehicle for reaching out into the surrounding communities. An Educational Materials Center (EMC) will be established in conjunction with the ARC, whose function will be to procure where possible from abroad, or prepare as needed on-site, educational materials for use in the regular curriculum, continuing education programs, and the outreach activities of the college through the ARC. The EMC will be constructed and equipped, and staff recruited and trained in graphics and other aspects of educational materials production by UIUC staff. Egerton faculty from the various departments will be assigned on a half-time basis to assist with preparation of suitable educational materials.

Both Egerton faculty and students and UIUC faculty and students will participate in the adaptive agricultural research programs developed by the ARC. A key contribution will be made by UIUC faculty on sabbatical at Egerton College. Research will be undertaken at both the college's existing farms, and at new Rural Development Laboratories based around the college campus and around the Chemeron Field station.

The achievement of project objectives will be monitored on a continuing basis and will be assessed formally through two evaluations, one planned for the end of the second year of the project and one for the beginning of the final fiscal year of the 5 year project.

F. Financial Plan

A.I.D. will provide \$2 million of the estimated project cost of \$8.589 million; the balance will be provided by the Government of Kenya (\$4.508 million), and the University of Illinois at Urbana-Champaign (\$2.081 million). Obligation of the total A.I.D. contribution will take place in FY 1986.

11. PROJECT RATIONALE

A. Background

Future development of Kenya's agricultural sector is critically dependent on intensifying production. The limit of arable land and rapid population growth have combined to create serious pressures on existing cultivated land and on Kenya's ability to continue to feed itself. Because agriculture is the foundation of Kenya's economy, failure to intensify production and the subsequent lag in economic growth would have far-reaching effects. Intensification will require action and progress on several fronts including research, extension, agricultural services, use of improved varieties and corresponding inputs, access to credit, marketing and policy improvement. Impinging on all of these is the human resource base required to provide quality personnel to move the sector forward.

Egerton College is one of two institutions of higher education in Kenya devoted to the training of diplomates with the required technical skills to further the efforts of increasing productivity in the agriculture sector. The College has received strong support from the national leadership and considerable autonomy from government control in recent expansion efforts and in the overall management of its operations. It continues to maintain its reputation for producing a highly qualified and motivated graduate valued by both the public and private sectors. A quality and practical curriculum has been developed over the past decade. It is anticipated that modest additional investment in Egerton College will enable it to build upon its excellent reputation for practical training to meet many of the agricultural manpower needs of both Kenya and other African nations.

USAID participation at Egerton College began during the 1960s as part of a \$3.7 million multi-donor development activity which provided technical assistance, scholarships, commodities and construction to assist the GOK to transform Egerton from a two-year to a three-year college. In 1978, USAID began a major investment in Egerton College's physical plant and teaching faculty under the Egerton Expansion Component of the Agricultural Systems Support Project. A.I.D. inputs include major construction activities (\$23.6 million in loan funds) and technical assistance and training (\$10.2 million in grant funds to train faculty members to B.Sc., M.Sc. and Ph.D. levels) and to provide U.S. faculty members through a host country contract with SECID (Southeast Consortium for International Development) to teach and advise at Egerton College while Kenyan faculty were studying in the United

States. All technical assistance was completed in 1984. Most equipment has now been procured and put into place with some procurement actions and construction still in progress. Some 55 faculty members have been trained and all but four, who are completing their training, are living and working at Egerton College.

B. Current Status of Egerton College

Egerton College is a parastatal organization created by the Egerton Agricultural College Act of Parliament (Chapter 214 Laws of Kenya). The College is managed by a 17-person Board of Governors appointed by the Minister of Agriculture according to the Act. Membership on the Board encompasses (1) the Civil Service (MOALD, MOEST, MENR), (2) Faculties of Agriculture, Science and Veterinary Medicine at the University of Nairobi, (3) agricultural parastatal organizations, (4) agricultural private industry, and (5) the farming community. The College is represented on the Board by the Principal, who is the Chief Executive of the College responsible for its overall management.

Egerton College is situated on 4000 acres of land in Njoro, Nakuru District, Rift Valley Province. In addition to the main campus, the College has developed two farms--the Tatton Demonstration Unit (400 hectares) which serves as the main teaching and experimental farm with several crop and animal enterprises, and the Ngongonceri Farm (1110 hectares), which is run strictly on a commercial basis primarily to generate income for the institution while also serving demonstration purposes. Students use the facilities for practical training by special arrangement with the Farm Manager. The main enterprises on this farm are dairy, beef, sheep, wheat, barley and maize. In addition to the farms, the College operates the Guildford Dairy Institute, a small, modern and well-equipped dairy plant, which is the main laboratory for training in dairy technology. It manufactures a variety of dairy products for commercial sale and use in campus food service facilities.

The growth of Egerton College from a small agricultural school with an enrollment of 215 students at independence in 1963 to a college graduating 500 diplomates each year has been welcomed by the GOK. It is a reflection of the importance Kenya attaches to agricultural development and the role Egerton graduates play in this development and a recognition of the importance of institution building to developmental goals.

At present, approximately 1,500 students, drawn from Kenya and other African countries, are studying 16 different diploma programs with five degree programs to be added in 1986-87.

More degree programs will be added later. Student intake will progressively increase to 3,500 by 1989-90, with 2,500 degree students and 1,000 diploma students. At the same time, paralleling staff development, faculty research will increase and outreach will capitalize on the excellent opportunities provided by two Rural Development Laboratories to be created around the college campus and the Chemeron Field Station and the new Agriculture Resources Center.

1. Administration

The College is divided into two major divisions-- Academic and General Administration. The Academic division falls directly under the Academic Registrar, while the General Administration division is supervised by the Administrative Registrar. When the College attains university status these positions will be changed to Deputy Principals. The Principal of Egerton College has formal overall executive responsibility with final policy determination by the Board of Governors in consultation with the relevant ministries. He chairs several key academic and management committees. While day-to-day financial management is in the hands of department heads, the Principal is the key figure in all long-range financial planning, salary increments for faculty and staff, future directions of the College and major exceptions to the annual budget.

The academic division is composed of: (1) the Studies Office, (2) Library, (3) Tatton Demonstration Farm, (4) Student Affairs and (5) all academic departments. In addition to his/her specialized professional duties, each head of department or section is responsible to the Academic Registrar for day-to-day operations and supervision of the department's personnel.

The General Administration division is comprised of (1) Finance, (2) Medical, (3) Transport, (4) Personnel, (5) Estates and Maintenance, (6) Security and (7) Catering units. Heads of these sections and departments report directly to the Administrative Registrar. While the Catering and Medical units have considerable autonomy in their day-to-day affairs, many of the remainder are effectively staff offices of the central administration. In addition to these major sections, there are the Planning and Public Relations Office and an Internal Audit Section, which report directly to the Office of the Principal.

The organization of Egerton College is relatively simple and straight-forward. Much of the day-to-day management of the College is decentralized to the departmental or enterprise level. Once budgets and positions are established centrally, departments decide how to process the scheduling of major tasks, assign specific work duties, make normal expenditures, supervise personnel and solve problems.

2. Instructional Program and Student Flows

Egerton College is primarily a teaching institution producing graduates destined for the most part to serve in the lower levels of the national extension service or to teach agricultural education in the elementary or secondary school system. At present, the College academic programs are three years in duration. Each of the three academic years is divided into three academic terms. All academic programs lead to the award of the Egerton College Diploma. All of the programs have a heavy emphasis on practical skills which the students acquire through laboratory work, farm work, field work and practicums with private and public sector entities.

Academic qualifications have been steadily rising since expansion. Students who enter the College to pursue any diploma program must have completed a prescribed secondary school education and obtained a certain level of competency in subjects which are prerequisite for courses offered at the College. Candidates must have successfully passed the East African Certificate of Education or Kenya Certificate of Education examinations in combinations of the following subjects: biology, physics, chemistry or physical science or general science, English or Kiswahili, agriculture, geography, and mathematics. Preference is given to candidates obtaining the East African or Kenyan Advanced Certificate of Education or its equivalent in the relevant subjects, and/or those who successfully passed the examination in agriculture at the "O" level. In 1980 nearly three-quarters of the entering class was "A" level, implying an academically stronger student than in the past.

The college receives, on average, annually, 4000 letters of interest from potential applicants and between 2000 and 3000 actual applications annually. Approximately 500 new entrants per year are accepted.

Selection of students is made by a selection panel chaired by a representative of the Directorate of Personnel Management with members from the Ministry of Agriculture and Livestock Development and the Public Services Commission. The College is

represented by the Principal and the Academic Registrar. The primary task of the panel is to assure adequate geographic distribution of students. Within each District the panel must also assess the qualifications of the top candidates against a limited number of places for each diploma track. The number of entrants in each diploma track is established by the Egerton College Academic Board on the basis of existing facilities, staff and presumed demand for graduates.

In addition to the new students, Egerton reserves 10 percent of its total enrollments for certificate holders who are already serving in government positions. These applicants must have worked for the MOALD for at least two years. They are processed by the selection panel on the basis of a standard application form and relevant service records in the same manner as other candidates.

A capitation fee is paid by the GOK for the majority of students since most are sponsored by the Government and are, in effect, Government employees. In addition to the GOK sponsored students, the College has paying students, sponsored by other governments, international organizations, religious groups, commercial firms and by individuals. These students are generally accepted automatically if they meet entrance requirements.

3. Faculty and Staff

At present the College faculty has 132 full time members. Eleven have Ph.D.s, 43 M.Sc. degrees, 32 B.Sc. degrees, and 46 are diploma holders or support demonstrators. This teaching staff teaches more than 375 different courses with a heavy emphasis on field work and practical training.

The faculty teaching load has increased considerably as a result of the expansion. Student enrollment increased about 136 percent during the period 1978 to 1984. The number of sanctioned teaching positions rose 85 percent but the number of actual filled positions rose 67 percent and the number of positions of faculty rank (Assistant Lecturer or above) increased only 65 percent.

Given the large number of new faculty who have been hired and the normal turnover associated with retirements, external opportunities, etc., the teaching staff at Egerton is remarkably stable. Of the teaching staff employed in 1978, 67 percent are still employed by Egerton College. Further stability at the academic departmental and faculty level comes

from the continuity of leadership at the department head level. The practice of employing some of the best Egerton College graduates as demonstrators (or as Lecturers when they have obtained a higher degree) adds further stability to the teaching staff.

The College has a large support staff. There are presently over 1480 middle and subordinate grade support staff. These are managed by the Senior Executive Officer and are hired in response to departmental requests.

With University College status and increased enrollment, Egerton staff will necessarily expand rapidly. Planning for such expansion, department by department, has already been done, but requests for new staff have yet to be screened by the Academic Board. Recruitment has also begun by advertising. Expatriate staff will also be sought in fields of special need or shortfalls.

4. Curriculum

The College offers the following diploma courses: agriculture, animal husbandry, forestry, agricultural engineering (soil and water engineering or farm power and machinery), dairy technology, range management, farm management, agricultural education, agriculture and home economics, horticulture, food technology, animal health, ranch management, wildlife conservation and management, and agriculture and food marketing.

Recently President Daniel arap Moi has encouraged the expansion of Egerton College to include a university degree program. B.Sc. programs in Agricultural Education, Agriculture and Home Economics, Animal Production, Agricultural Engineering and Horticulture will be initiated in September 1986. Programs in Agricultural Economics, Dairy Technology, Natural Resources and Range Management, will begin in 1988-89 and third-phase additional degrees are contemplated in basic science and sociological/developmental studies.

5. Facilities

Egerton College now has an excellent, modern physical plant. Under the Egerton Expansion Component of the ASSP Project the following facilities were constructed with A.I.D. financing: administration buildings, teaching and laboratory facilities, agricultural resources center, staff houses, residence and dining halls, auditorium, nursery school, abattoir, water supply and sewage system, library, medical facilities, maintenance and storage facilities, and roads. An operations and maintenance plan is now being developed to

maintain the facilities and train appropriate staff. Egerton College currently has plans for the construction of additional facilities to meet the needs of the university program.

6. Research and Extension

Faculty members are carrying out only a limited number of research projects due primarily to limited equipment, inadequate published materials, small research budgets, and limited faculty time because of heavy teaching loads. The advanced training provided by the USAID-financed expansion project has stimulated faculty interest in research. Since 1984, one percent of the College operating budget has been devoted to faculty research. Research presently conducted from this fund is represented by approximately 20 projects a year, at an average funding level of \$2,000 each, with heavy emphasis on applied or adaptive research. A few other projects have attracted some external funding. Recently, a research publication series was begun to give added incentive to prospective researchers. Research is also recognized as an important instructional tool both in supplying material for the teacher and in training student assistants in investigative methods.

Links which facilitate research exist and are encouraged with the Ministry of Agriculture and Livestock Development, with two-way benefit: assistance for the Ministry and feedback for Egerton's further research guidance. More research links are planned with the International Agricultural Research Centers, particularly if Egerton becomes recognized as a regional education center.

In addition, the College is involved in community oriented programs, organizes and conducts courses for the other training institutions and bodies, and participates in national development commissions, and specialized agriculture oriented committees at national, provincial, district and divisional levels. The further development of the Agriculture Resources Center will greatly augment such outreach services, as will the full development of the Rural Development Laboratories surrounding the campus and the Chemeron Field Station.

C. Statement of the Problem

The investment to date in Egerton College has put in place an excellent physical plant and teaching faculty. However, there are still important investments and institutional linkages required if Egerton College is to achieve its potential of being an agricultural education institution of excellence serving the agricultural manpower needs of Kenya and other African countries.

During the next few years the required number of trained teaching faculty at Egerton will increase. Present teaching loads are reaching their maximum levels. This, combined with a planned curriculum expansion to encompass new university degree programs, will increase the demand for qualified teaching faculty. Furthermore, those already trained under the previous A.I.D. project will require additional training in order to stay abreast of developments in their respective fields and, in some cases, to prepare them for new teaching assignments under the university degree program. If these requirements are not met there will be a deterioration in both the faculty-student ratio and the quality of instruction at Egerton. Maintenance of the quality of the teaching faculty through upgrading, periodic refresher courses, and provision of research opportunities to stimulate interest and to expose faculty to the needs of Kenyan agriculture is essential to maintaining the quality and practicality of the Egerton curriculum.

A major revision of Egerton's curriculum last took place in 1977-78. Although minor changes are constantly being made at the department level, improved curriculum development and evaluation systems are imperative if Egerton is to provide up-to-date academic and in-service education programs relevant to the ever changing agricultural manpower needs of Kenya and other African nations. The linkages between Egerton and its clients need strengthening in order to provide faculty members feedback essential to successful review and revision of curriculum. A number of factors must be addressed:

1. maintenance of a practical orientation while expanding the College curriculum to encompass new university degree programs;
2. adjusting student intake and curriculum to meet the changing technical skill and general manpower needs of the Kenyan agricultural sector;
3. providing relevant practical experience to students doing field work as well as through on-the-job internships or attachments;
4. identifying procedures and technologies which will be important to those enrolled in Egerton's academic and in-service programs; and
5. determining the appropriate rate of expansion for research and outreach, as Egerton moves to university status and takes on an expanded role of public services to the agriculture sector in Kenya.

Administration is also an area where major improvements must be made in order for Egerton staff to manage the expanded physical plant and education requirements of the College. Improved performance in financial management, institutional planning and data management is needed if Egerton is to effectively utilize the limited budgetary resources at its disposal. Existing computer hardware is insufficient to the general administrative requirements of the College and there is no computer capacity for use in the educational program. The College has inadequate budgeting and management information systems for fiscal projections or for analyzing program alternatives. A large and complex physical plant with sophisticated equipment is now in place at the College. An operations and maintenance plan for the existing physical plant is now being developed. In order for this plan to be implemented and continue successfully, on-going training and upgrading of skill levels will be essential for the technical and managerial staff of the College.

Evaluations have also identified the lack of adequate educational materials, for students and faculty as well as for participants in the continuing education and extension programs, as a serious constraint to improved performance of Egerton's educational and outreach programs. Teachers spend a high proportion of their time lecturing when students could be acquiring this information from texts or library reading. Teaching materials based on East African agriculture, and Kenya in particular, are scarce and often out of date. While a large number of reference books were acquired for the library under the Agricultural Systems Support Project, the number of appropriate agricultural journals available for student and faculty use and the number of textbooks/instructional materials remains limited.

D. Linkages to Kenyan Strategy

The Kenyan Government has historically supported the Egerton College objective of producing agriculture graduates with a strong practical orientation. In the past the Government of Kenya has accepted the majority of Egerton graduates into the civil service. However, the Government has announced that not all future graduates will find employment in the public sector and it supports Egerton's efforts to adjust its educational program to better prepare graduates for employment by the private sector. For an institution which has trained almost exclusively for the public sector, this will be a significant shift.

Also of importance to the GOK is strengthening Egerton's role in providing in-service training to public and private sector agricultural employees. While important first steps

have been taken in this area, it is estimated that there is a considerable unmet demand for quality in-service training in advanced agricultural subjects, project planning, and skills updating. The programs of Egerton's Agriculture Resources Center will be expanded to provide more specialized in-service training and continuing education to public servants, agriculturalists, managers, administrators, farmers, researchers and others.

E. Relationship to USAID Program Priorities

Of A.I.D.'s four priority development pillars, this project responds to three - institutional development, private sector development and training/technology transfer. The project is also in conformance with specific AID policy guidance on agricultural research and faculties of agriculture which focuses upon expanding the capacity and improving the quality of higher agricultural education institutions in Africa. The policy guidance targets (1) improving the supply of trained scientists, teachers and agricultural managers who can conduct national agricultural research programs and link the results with extension personnel and farmers, and (2) the need for significant improvements in the management and administration of agricultural programs.

This project will address these specific issues and A.I.D.'s priority development concerns by (1) strengthening agricultural human resources in Kenya and improving the capability of a Kenyan agricultural education institution to provide quality professionals for Kenya and other African nations, (2) assisting Egerton College to regularly and frequently modify its curriculum to produce graduates who can meet the employment demands of the private agricultural sector; (3) providing the facilities for training a cadre of agricultural managers who can improve the management of both private and public agricultural programs and institutions; and (4) providing a regional center for in-service training, instructional materials development and a forum for the exchange of ideas and innovations among researchers, agriculturalists, agricultural managers, farmers and others so that agricultural productivity can be increased and technologies adopted.

This project will be linked with two other USAID/Kenya projects:

The Agricultural Management Project (615-0221) is designed to improve the management of organizations which act as intermediaries between Kenyan producers and final product markets. The project will be based at Egerton and a number

of seminars will be conducted at the Agriculture Resources Center. Egerton College staff will be seconded to work on the project. The motivations for the close linkage between this project and Egerton include a desire to strengthen Egerton's linkages to the private sector and to promote practical experience useful to the Egerton faculty in the development of an agri-business curriculum for the College.

The National Agricultural Research Project (615-0229) is designed to develop a national agricultural research system capable of providing the farmer with applicable new technologies. A number of training programs for this project will be conducted at the Agriculture Resources Center. More importantly, a research fund will be made available to researchers throughout Kenya. Egerton College faculty who wish to conduct adaptive/applied research relating to their areas of specialization can apply for and receive research grants from this fund.

F. Relationship to Other Donor Activities

The United States Government has been the principal supporter of Egerton College for the past seven years. The Swiss provide assistance to Egerton College's food technology program and the Federal Republic of Germany supplies approximately 40 scholarships per year for other African students to attend Egerton. However, one of the important objectives of this project is to broaden donor support for Egerton College.

Egerton College has, in the past, been viewed by other donors as USAID "turf". Both Egerton and USAID are making an effort to dispel this donor perception. A series of meetings have been held with various donors, i.e., Japan, FAO, UNDP, Germany, Canada, Ford Foundation, Rockefeller Foundation, Netherlands, Norway, to invite their participation in Egerton's development. The receptivity to date has been positive.

Areas of assistance that have been discussed include: advance degree scholarships for Egerton faculty, expanded use of and support to the Agricultural Resources Center, provision of equipment (particularly computer hardware and laboratory equipment), expanded facilities such as staff housing, water systems, etc., materials development capacity beyond the modes of support planned under this project, library augmentation, and research grants. Almost without exception, all have expressed keen interest. Egerton and USAID will continue to develop these relationships to assure the appropriate fit with this project (IDAT) and the educational philosophy that has made Egerton the success that it is.

In addition to concern for Kenya's development, USAID and other donors are interested in Egerton's potential to be a regional center of excellence for agricultural training in Africa. There are three dimensions of the current and planned Egerton program that lend themselves to a regional focus in addition to their applicability to Kenya. They are: (1) a center of excellence for academic degree training that includes the practical "hands on" approach, (2) expansion of the Educational Materials Center to provide relevant instructional materials, teaching aids, and extension information, for East Africa; and (3) further strengthening of the Agricultural Resources Center as a regional center for research and extension training and outreach, possibly tied into the International Agricultural Research Centers.

III. PROJECT DESCRIPTION

A. Project Goal

To develop and expand the pool of technical and managerial human resources for Kenya and Africa particularly in the agricultural sector.

B. Project Purpose

To create at Egerton College an agricultural education institution of excellence serving the needs of Kenya and other African countries and to establish permanent institutional relationships between Egerton College and the University of Illinois at Urbana-Champaign.

C. Project Components

Central to the project is the establishment of a permanent institutional relationship between Egerton College and the University of Illinois at Urbana-Champaign. This relationship will assist Egerton College in meeting its immediate and future institutional development needs through consultations, training and technical assistance in identified problem areas as discussed below under the specific project components.

This relationship will be built in several ways: through faculty and staff exchange visits/observation tours, through training of Egerton faculty and staff both at UIUC and on the Egerton campus through the medium of UIUC staff sabbaticals and technical assistance, and through a research program at Egerton College involving faculty and students from both institutions. Although these exchange visits, training, technical assistance and research programs will be temporary in nature and involve different individuals over time, permanence to the relationship will be given by the establishment of Liaison Committees on each campus with a Coordinator who serves as the chairperson of the committee.

The concept of a faculty liaison group is central to the development of enduring linkages; its use in Zambia and Pakistan by UIUC in similar institutional relationships has shown it to be instrumental in nurturing faculty interest and commitment. Coordination offices on each campus will be jointly financed by A.I.D. and the institution.

Additional staff may be assigned to work with the coordinator as needed; for example, UIUC will assign a part-time training coordinator to assist in implementing the training component of the IDAT project. The project components outlined below are discussed in depth in Technical Annex E.

1. Curriculum Development

Objective: The objective of the curriculum development component of the IDAT project is to develop a mechanism whereby the curriculum of the college is continually reviewed and revised to prepare graduates who will meet the manpower needs of both the public and private sectors of Kenyan agriculture.

Outputs: The project will institutionalize a mechanism for systematic curricular review and revision which builds upon the existing structure of departmental course committees, 4 faculty boards, a Curriculum Monitoring and Advisory Committee, the Academic Board and the Board of Governors. New External Department Advisory Committees will be established for each department, and external representatives to the Curriculum Monitoring and Advisory Committee will be appointed from public and private sectors, to evaluate the curriculum and to help determine both employment trends and job requirements as a guide to future curriculum revisions.

This committee structure is anticipated to become functional within twelve months.

A second output will be a revised curriculum, which reflects the need to prepare students for jobs in the private as well as the public sector in such areas as agri-business and agricultural management, and increases the relevance of the education provided by incorporating information on the Kenyan socio-economic context, including the role of women farmers in Kenyan agriculture.

Other outputs will be an initial manpower study to provide an updated and reliable data base for curricular and degree planning, and periodic review and tracer studies of the actual employment experiences of Egerton graduates.

Inputs: The only input for this project component is technical assistance, whose cost will be shared by all contributors to the project.

2. Administrative/Management Improvement

Objective: This project component aims to address identified areas in need of improvement in the administration of Egerton College including: data management, financial management (specifically forward budgetting and a system of financial control), information

dissemination and management of administrative facilities. The strengthening of the administration and management of Egerton College is essential for its development into an educational institution of excellence which will assist in meeting the needs for trained agricultural manpower in Kenya.

Outputs: The non-academic support services will be fully computerized, providing improved information management in all areas and allowing for data-based planning. Trained staff will utilize the computer based data management systems. A computer instructional center will be established and staffed by an instructor and a maintenance technician.

The permanent linkage system between Egerton and Illinois will provide a mechanism for joint review of any institutional issues needing attention and for making recommendations to address them.

The printing and photocopying centers established under the fourth project component will correct a serious weakness in administrative operations.

Inputs: A.I.D. will finance the purchase of microcomputers and software, as well as technical assistance for setting up the systems and training staff in their use. Egerton College will finance computer maintenance and staff for the center. UIUC will finance the salaries of its staff who will provide technical assistance to Egerton College in the areas of administration and management.

3. Staff Development/Training

Objective: The objective of the staff development component of the project is to upgrade the skills of faculty and administrative/managerial staff in preparation for the increased scholarly demands to be placed on the faculty with the addition of university degree programs to the curriculum in 1986, and the increased administrative workload arising from an anticipated doubling in student enrollment over the next several years.

Outputs: A minimum of ten faculty per year will participate in degree training at the University of Illinois at Urbana-Champaign or other institutions in the U.S. Emphasis will be given to training masters degree holders to the Ph.D level. Non degree training will be provided to a select group of approximately seven

supervisory administrative and managerial staff through study-tours in the U.S. during which Egerton staff will be assigned to work with UIUC counterparts. Administrative and managerial staff will also be trained on the Egerton campus by UIUC staff on sabbatical leave. In addition, approximately 30 staff will receive training on microcomputers in such areas as payroll, student record-keeping, budgeting, and physical inventories.

Inputs: AID will provide funding for tuition, stipends, and U.S. travel of training participants and contribute to the cost of operating coordinating offices on each campus. A.I.D. assistance for this project component is valued at \$1.36 million.

Egerton College's contribution to training will be in the form of partial salaries of staff in training, international travel of participants and training, and a portion of the cost of operating a coordination office on its campus.

UIUC will provide 10 tuition fee waivers per year, salaries of staff conducting non-degree training, and will contribute to the operation of the coordination office on its campus. Estimated value of these contributions is \$574,500.

4. Educational Materials, Research and Outreach

Objective: The educational materials, research and outreach activities of the project will contribute toward making Egerton College an institution of excellence which meets Kenya's need for trained agriculture manpower by: 1) upgrading the educational material resources used in the regular curriculum, continuing education program, and the outreach activities of the college through the Agricultural Resources Center; and 2) developing adaptive research and continuing education programs which address identified needs of the community surrounding the college.

Outputs: An Educational Materials Center will be constructed in conjunction with the Agricultural Resources Center, equipped with printing and audio visual equipment, and staffed. By the end of the project, staff trained under the project will have procured from abroad as appropriate, or produced in the EMC, new educational materials. An adaptive research program will have been developed in which faculty and students participate, and continuing education programs will be conducted at the ARC, both having as a goal outreach into the community surrounding the college.

Inputs: Teaching aids, vehicles, and technical assistance will be financed by A.I.D.. Egerton College will finance the costs of construction of a building, equipment, and staff for the Educational Materials Center, as well as expendable supplies and local currency costs of the sabbatical/research program. UIUC will contribute to this project component approximately \$1.24 million in the form of salaries of staff on sabbatical at Egerton who will participate in the research program and in the development of educational materials.

D. End of Project Status

Successful implementation of project components is expected to lead to the following achievements:

- establishment of a permanent relationship between Egerton College and the University of Illinois at Urbana-Champaign;
- graduates better qualified technically and having a better understanding of the socio-economic context of Kenyan agriculture to meet the manpower needs of the public and private agricultural sectors;
- high demand for student placement at Egerton;
- high faculty attraction to Egerton and high faculty/staff retention and satisfaction;
- functioning educational materials center, and adaptive research and outreach programs through the Agricultural Resources Center and its subdivisions.

IV. IMPLEMENTATION ARRANGEMENTS

A. Introduction

The administration of this project will involve Egerton College, the Ministry of Agriculture and Livestock Development, the Ministry of Education, Science and Technology, the Ministry of Finance, USAID, and the University of Illinois at Urbana-Champaign. The implementation arrangements include coordinated plans for short-term technical assistance involving primarily sabbatical arrangements for administrative and teaching staff, training, student and faculty exchange programs, and commodity procurement.

The collaborative assistance method (HB14, App.H) is being used to design and implement this project. It allows maximum participation of the U.S. educational institution and host country in the design of the program and permits project implementation to respond to changing requirements throughout the life of the project.

B. Administrative Arrangements

1. Government of Kenya

The following agencies will have administrative responsibility for the project:

a. Egerton College

Egerton College will be the major implementing agency for the project, assisted by the University of Illinois under a host country contract. Egerton College will be responsible for establishing a curriculum review structure that includes new External Departmental Advisory Committees and the appointment of external public and private sector representatives to the Curriculum Monitoring and Advisory Committee. It will also be responsible for selecting staff for training, paying international travel costs and partial staff salaries during training, and requiring that staff who receive degree training remain at the college for five years following the completion of training.

Egerton will prepare documentation for procurement of project commodities, clear articles from customs arriving from abroad, transport all commodities purchased in-country and overseas to the college, install equipment where necessary, and provide for operation and maintenance. Suitable facilities will be made available for project sponsored training at Egerton, and space and staff provided for the Educational Materials Center.

Egerton will arrange travel and housing accommodation for visiting faculty and staff, and cover other in-country costs of the sabbatical/research program. A coordinator will be appointed for the project who will ensure that the institutional linkage with the University of Illinois proceeds smoothly.

b. Ministry of Education, Science and Technology

The Ministry of Education, Science and Technology (MOEST) will be responsible for monitoring the project and will participate in its evaluations.

c. Ministry of Agriculture and Livestock Development

The Ministry of Agriculture and Livestock Development (MOALD) will participate in Egerton College's curriculum development activities and will cooperate with Egerton College as it develops research and outreach programs. This Ministry will also monitor the project in general and will participate in its evaluations. Although Egerton's new University College status will change the previous direct accountability from MOALD to MOEST, the close functional relations between MOALD and Egerton will continue because of the college's critical importance in agricultural training, research and outreach.

2. USAID

USAID and Egerton College will be jointly responsible for monitoring and evaluating the progress of the project. USAID will review and approve all contracts and commodity procurement plans and will assist Egerton College in the contracting process as needed. Contracting for evaluation services will be the full responsibility of USAID.

3. University of Illinois

The University of Illinois will be responsible for providing advisory services on a technical assistance or sabbatical basis; developing faculty and student exchange programs; assisting with curricular development; devising a means of acquiring and producing teaching/learning materials and training EMC staff; developing, monitoring and faculty/staff participant training programs, implementing and procuring project micro-computers and software. The University will also be responsible for preparing periodic reports on the progress of the project, and will cooperate in the evaluations of the project initiated by USAID and Egerton College..

C. Implementation Plan

Implementation plans for the four major project components over the first years of the project are presented below. Following the collaborative assistance mode, detailed implementation plans will be prepared each year following an in-dept review of progress made to date and agreement on the targets for the next year.

1. Curriculum Development Plan

The selection and appointment of the external representatives to the departmental advisory committees and the Curriculum Monitoring and Advisory Committee will be initiated early in the first year of the project. It is expected that within a period of 12 months, the curricular review structure composed of the committees discussed in Annex E-A-3 will be functioning.

Further implementation of the curriculum evaluation process will occur via the faculty linkage structure discussed earlier. Departmental representatives from Egerton College and the University of Illinois, during their exchange visits in the first two years of the project, will discuss broad curricular questions, giving particular attention to course structure and content, the use of advisory committees and related matters. Continuing faculty interaction will provide the mechanism to share problems relating to the curriculum at the departmental and administrative levels. Technical assistance may be required to address general or major concerns that may arise outside of the normal linkage interchange. In this case, resource persons can be identified and involved as needed. The determination of these needs will be made jointly by Egerton College and the University of Illinois project coordinators.

An immediate need is the development of a manpower and employment study focusing on Kenyan agriculture. Development of exit and follow-up study questionnaires should also be developed during Year One of the project. Surveys of Egerton College graduates should then also be scheduled by June, 1987. Technical assistance from UIUC will assist in developing these instruments and in carrying out the manpower study. It is estimated that six person-months of effort, distributed over a 12 month period, would be required to effectively design, implement, analyze, and report the results of a manpower and employer study. Development of the "exit" and "follow-up" questionnaires could be simultaneously carried out by the same individual who is assisting with the manpower study.

The curriculum evaluation process being recommended effectively draws on the views and perspectives of the public and private sectors in Kenyan agriculture. It also draws on the partnership being developed between Egerton College and the University of Illinois, through which curriculum problems and solutions can be shared.

2. Staff Development Plan

Each department on campus has conducted a thorough assessment of its staffing patterns and needs and prepared a staff development plan which includes a prioritized listing of training needs. These training plans and lists of nominees must now be reviewed by the Academic Board, which serves as the final screen in the participant selection process.

a. Academic Training

Once a participant has been approved by the Academic Board, an application for admission to a U.S. university will be submitted to UIUC. UIUC's training coordinator will select the most appropriate program at UIUC or elsewhere and arrange for placement. Assistantship opportunities at the University of Illinois, at U.S. institutions maintaining formal linkage relationships with Egerton College, and at other U.S. universities will be vigorously pursued, with the clear intent of maximizing limited foreign exchange resources for training by greatly reducing funds allocated to tuition and fees.

An initial and major objective is to take full advantage of the ten tuition and fee waivers that the University of Illinois has allocated annually to the project. A few high priority participants, who have been fully approved by the Egerton College Academic Board, will be placed at the University of Illinois to begin post-graduate study in January, 1987. Others will be processed for June and August enrollment, so that by the end of 1987 at least the first ten participants will be making progress toward their degree objectives. Assuming that placement will progress at that pace, a total of 20 participants will be enrolled in post-graduate programs by the end of 1988. At that time a joint Egerton/Illinois review and assessment will be appropriate to monitor progress and set priorities/objectives for the balance of the five year plan.

b. Administrative Training

During the first half of 1987 computer skills instruction of six to eight weeks' duration will be provided at Egerton,

conducted by two University of Illinois staff members. This will be primarily for clerical and administrative support personnel in administration, text processing, finance and student records. Also to be included in this training will be some campus administrative officers in managerial positions. During the second half of 1987, three to four weeks of individualized training and counterpart attachments in institutional management at UIUC have been proposed for senior Egerton managerial staff from the following administrative offices: student affairs, finance, purchasing, food service, residence halls, conference services, health service and other selected units. It is proposed that during the first half of 1988, student records personnel and the Registrar (Administrative) will go to UIUC for three to four weeks of advanced training in computer applications. Finally during the second half of 1988, a UIUC staff member will be on a four to eight week TDY assignment at Egerton to institutionalize the use of computers for administrative and support services.

Campus level administrators and department heads will go to the University of Illinois individually and in groups as part of the linkage program or gateway relationship. These visits will also double as observational tours and will provide the opportunity for training in management and administrative procedure at the departmental, college or campus level. Work in close one-to-one relationship with an Illinois counterpart will also be a means through which administrative and management training will be conducted. These exchange visits will begin in early 1987.

Implementation & the IDAT training will follow an iterative process in accordance with the collaborative assistance mode, whereby at each annual project review Egerton and UIUC review progress of training to date and develop a revised training plan for each upcoming year.

Table 2 in Annex E-A-2 provides an illustrative implementation sequence for training.

3. Plan for Administrative Improvements

The training program for administrative staff was outlined above. In addition to training, improvement in administrative operations is to be achieved by computerization of support services.

The specifications for needed computer equipment and software have already been developed. The procurement of these commodities will be handled by the University of Illinois under

its contract with Egerton College, and will be initiated as soon as the contract is signed. It is intended that computer equipment will be fully operational before the end of the second quarter of the project, at which time training in computer skills will begin. At that time, also, the University of Illinois will likely provide advisory assistance for start up management of the administrative computer services.

4. Plan for Educational Materials, Research and Outreach

High priority will be given the establishment, including physical facilities and equipment, of an Educational Materials Center (EMC) under the Agriculture Resources Center in the light of the urgent need for educational materials both for classroom use and outreach use.

Planning for the construction of the facility for the Educational Materials Center will be completed in the first quarter of FY87, with the actual construction estimated to be completed by the end of the first year. Planning for the program and staffing of the EMC will taken place simultaneously with construction. Both subject matter specialists and technicians will be selected, and a system developed for tapping into and using the specialized competence existing within the departments. Initially, disciplines will be combined for subject matter representation, but each specialist shall be assigned half-time to EMC and half-time to his/her own department.

Illinois will offer in-service training at UIUC in material writing and production for EMC personnel, and will include such training for Egerton faculty pursuing advanced degrees at Illinois.

Production of educational materials will begin as facilities, equipment and staff are assembled, now targeted for the first quarter of FY 1988. To get an early start and to have an immediate impact, however, the Vocational Agricultural Service of the University of Illinois will identify materials existing in the U.S. that can be replicated for use in Kenya with little or no change and without copyright complications. This search will be undertaken in the first half of FY 1987.

During the second quarter of FY 1987, the Egerton Library's resources and use will be reviewed by an Illinois advisor, who will then devise a plan for improvement to meet the demands of Egerton's rapid expansion. This plan will be implemented during the remaining years of the project.

The first step in implementing the research component of the project will be the establishment of a Research Policy Committee, now anticipated to be organized shortly after the signing of the project agreement. A local currency research fund will also be established during the first quarter of the project. The Research Policy Committee will then review research proposals and make recommendations for funding. Applied - adaptive research will be emphasized, making use of two new Rural Development Laboratories (field testing areas), one around Egerton and the other around the Chermeron Field Station. These research projects will be undertaken either as individual efforts or as collaborative efforts between Egerton faculty and students and University of Illinois faculty on sabbatical and graduate scholars on exchange. The sabbatical program is planned to begin in 1987 with 6 faculty members, and the student scholar program in 1988 with 5 students. In the remaining years of the project the level will be 10 sabbaticals per year and 5 student scholar participants. The University of Illinois will prepare a brochure to be circulated among the land grant universities in the U.S., which advertises and recruits sabbatical-leave holders to Egerton for research and advisory services.

Planning will be initiated early on in the project to make full use of the Agriculture Resources Center's facilities for continuing education. When funds become available, implementation should begin in the outreach plan carefully devised in 1985 by a faculty committee to extend knowledge-based services to the area around Egerton by a mutually agreeable division of labor with the relevant ministries operating in the area. Both Egerton and UIUC staff will participate in this program planning and implementation.

5. Procurement Plan

Procurement of project commodities will be undertaken as soon as possible, with some actions begun prior to the signing of the project agreement. Detailed specification of project commodities and procurement plans must be reviewed and approved by A.I.D; in addition, AID's Office of Information Resource Management must approve the plan for the purchase of computer equipment in Washington. Procurement of microcomputers and related software will be undertaken by UIUC in the U.S. under contract to Egerton College. It is anticipated that this procurement may take 5-6 months to be completed.

Egerton College will have responsibility for procuring project vehicles, printing and photocopying equipment, computer maintenance services, and computer and other expendables. The

procurement of project vehicles will be initiated immediately so as not to cause delay in the implementation of the research programs in which they will be utilized. Printing and photocopying equipment will be purchased locally and are targeted for installation no later than the second quarter of FY 1987. Computer maintenance services and spare parts will be procured on as-needed basis for the first two years of the project, and then under contract with a local firm for the final three years. Expendable supplies for the computers and other office functions will be purchased locally by Egerton College as needed.

6. Waivers

The procurement of right hand drive vehicles for the project will be carried out under the blanket vehicle waiver approved by the A.I.D. Administrator on March 7, 1986.

D. Implementation Sequence

In conformity with the collaborative assistance method, the implementation sequence for Years One and Two is presented in detail on pages 28a, b and c. Sequence details will be developed by Egerton College, the U.S. university and AID annually.

Figure 1 Implementation Sequence - FY 87/88

ACTION	SEQUENCE							
	FY 87				FY 88			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
<u>Linkage</u>								
1. Appointment Liaison Committees and Coordinators.	X							
2. Preparation for and exchange of liaison committees.	xxx	xxx						
3. Departmental Exchange	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
<u>Administration and Management</u>								
1. Purchase and installation of administration micro-computer		xx	xxx					
2. Appointment of Director of Computing service	xxx							
3. Staff Training at Egerton in basic 8-week computer course			xxx					
4. On-the-job training for other faculty and support staff			xxx	xxx	xxx	xxx	xxx	xxx
<u>Faculty/Staff Development</u>								
1. Academic Board select faculty for degree training	xxx				xxx			
2. U.S. placement activities for FY 88 and FY 89 begin		xxx	xxx	xxx		xxx	xxx	xxx
3. Trainees depart for FY 88 and FY 89 (FY 87 trainees begin in Q4 of FY 86)				x				x
4. Workshops/seminars in Kenya for Egerton faculty as needed	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx

ACTION

FY 87

SEQUENCE

FY 88

Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4

5. Advanced training at UIUC for selected staff from finance, student records, etc. xxx xxx xxx xxx xxx xxx xxx

6. Observation/counterpart assignment at UIUC for senior administrative staff. xxx xxx xxx xxx xxx xxx xxx

Curriculum Development and Evaluation

1. Naming of internal and external committees xxx

2. Planning and execution of manpower study xxx xxx xxx xxx

3. Exit questionnaire of graduates and graduate-placement studies xxx xxx

4. Continuous monitoring and evaluation xxx xxx xxx xxx xxx xxx xxx

Educational Materials, Research and Outreach

1. Organization of EMC xxx

2. Begin construction planning/program for EMC building x xxx xxx xxx

3. Staffing and establishment of departmental linkages xxx

4. UIUC search for usable existing materials with Kenyan applicability xxx xxx

5. Purchase/delivery of equipment for quick copy centers xxx xxx

6. Purchase/delivery of equipment for EMC xxx xxx xxx

7. Planning/production of educational materials xxx xxx xxx xxx xxx

ACTION

SEQUENCE

	FY 87				FY 88			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
8. Organization of ARC for expanded mission								
a. naming of research policy committee	xxx							
b. establishment of research fund	xxx							
c. establishment of Rural /Development Laboratories.	xxx							
d. Planning/conduct of continuing education and outreach	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
9. Sabbatic faculty selected and arrive	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
10. Graduates scholars selected and arrive				x	xxx	xxx	xxx	xxx
11. Development of plan for library improvement		xxx						
12. Implementation of library plan			xx	xxx	xxx	xxx	xxx	xxx

V. FINANCIAL ANALYSIS AND PLAN

A. Financial Analysis - Reasonableness of Cost Estimates

The IDAT Project utilizes the collaborative assistance mode of design and implementation with the ultimate goal of developing an enduring partnership linkage between the principal institutions, Egerton College and the University of Illinois. Both institutions have committed to cost-sharing to a greater extent than is commonly the case in conventional technical assistance projects. Technical assistance requirements are based on UIUC experience with other institution development projects in Africa and South Asia. Because there is no provision for long term in-country technical assistance staffing, estimates for this input can be less complex and more precise.

Estimates for training illustrate the shared goal of academic collaboration. The University of Illinois has committed to provide ten tuition - fee waivers each year of the life of the project. Egerton College has developed a training compensation package for its faculty which includes partial salary support in local currency and a limited trainee stipend while in the U.S. paid from foreign exchange funds. These estimates can be made with considerable precision.

Additional efforts will be made to obtain graduate assistantships at UIUC and at other U.S. universities with which Egerton College has formal linkage arrangements. Expectations of Egerton College based upon prior relationship with linked institutions guided assumptions that an average of fifteen assistantships per year is reasonable.

It was further recognized that special situations will arise where waivers or assistantships are not possible for a limited number of training programs. It is estimated that up to seven traineeships will require foreign exchange financing.

Commodity estimates are based upon knowledge of U.S. product prices for international procurements. These were supplemented by quotations from local suppliers for commodities recommended for local purchase.

B. Financial Plan

1. Summary Cost Estimates

As indicated in Table 1 below, the total estimated cost of this project is \$8.6 million. The AID contribution to the Project is \$2.0 million, or 23% of the total cost. The contribution of the Government of Kenya to the project is estimated at \$4.5 million, or 52% of the total cost. The contribution of the University of Illinois is \$2.1 million or 24% of the total cost.

TABLE 1 SUMMARY COST ESTIMATE AND FINANCIAL PLAN
(\$000 OR EQUIVALENT)

USE	SOURCE				
	AID FX	UIUC FX	TOTAL FX	GOK LC	COMB TOTAL
Technical Assistance	198.2	165.1	363.3	231.2	594.5
Training	768.8	419.5	1188.3	1181.4	2369.7
Commodities	230.5	-	230.5	610.6	841.1
Construction	-	-	-	156.2	156.2
Sabbatic/Scholar	99.0	1242.0	1341.0	1626.0	2967.0
Coordination Offices	518.2	155.0	673.2	292.5	965.7
Evaluation	90.0	-	90.0	-	90.0
Subtotal	1904.8	1981.6	3886.4	4097.9	7984.3
Inflation(5%FX;10%LC)	95.2	99.1	194.3	409.8	604.1
TOTAL	2000.0	2080.7	4080.7	4507.7	8588.4

TABLE 2 SUMMARY COST ESTIMATE BY PROJECT COMPONENT & FINANCIAL PLAN
(\$ 000 or EQUIVALENT)

USE	SOURCE				
	AID FX	UIUC FX	TOTAL FX	GOK LC	COMB TOTAL
I CURRIC DEV	86.3	20.5	106.8	67.5	174.3
II ADMIN IMPROV	196.6	144.6	341.2	97.5	438.7
III STAFF DEV/TRNG	1287.0	574.5	1861.5	1473.9	3335.4
IV EDUC MATS, RES& OUTREACH	244.9	1242.0	1486.9	2459.0	3945.9
V EVALUATION	90.0	-	90.0	-	90.0
SUBTOTAL	1904.8	1981.6	3886.4	4097.9	7984.3
VI INFLATION	95.2	99.1	194.3	409.8	604.1
TOTAL	2000.0	2080.7	4080.7	4507.7	8588.4

2. Estimated Expenditure by Contributor

The above table indicates estimated expenditures in foreign exchange and local currency by project component. A discussion of these expenditures by each contributor follows.

A. A.I.D. Contribution

The AID contribution will finance only foreign exchange costs. These include the following:

- Short term technical assistance by UIUC faculty and staff
- Degree and short term training of Egerton College faculty
- Microcomputers and associated software
- Teaching materials
- Vehicles
- Project coordination office operations
- Project evaluation (and/or audits as needed)
- International Travel (foreign exchange costs)

Of the \$2 million A.I.D. financing, \$198,200 (9.9%) is for technical assistance, \$768,800 (38.4%) for training, \$230,500 (11.5%) for commodities, \$518,200 (25.9%) for project coordination, \$99,000 (5%) for the sabbatic/scholar program \$90,000 (4.5%) for evaluation, and \$95,200 (4.8%) for inflation. Although the need for an audit is not foreseen at this time, sufficient funds are available in the evaluation budget should an audit become necessary

A detailed estimate of the AID foreign exchange contribution to the project is included in Table 6, Annex E-B.

B. Government of Kenya/Egerton Contribution

The GOK contribution will finance only local currency costs of the project. These include:

- Salaries and travel costs of Egerton College faculty sent for training
- Personnel
- Printing, photographic, audio visual and copying equipment for the Educational Materials Center
- Construction of the Educational Materials Center
- Local currency costs of the faculty/student exchange program and the sabbatic research program

Of the GOK's \$4.51 million (local currency equivalent) contribution, \$1,626,000 (36.1%) has been allocated for the sabbatic/scholar program, \$1,181,400 (26.2%) for training, \$231,200 (5.1%) for technical assistance, \$156,200 (3.5%) for construction, \$610,600 (13.5%) for commodities, \$292,500 (6.5%) for linkage/liaison activities, and \$409,800 (9.1%) for inflation.

This project will be obligated with the Ministry of Education, Science and Technology. Obligated funds will be placed in the Egerton College line item within the Higher Education sub-vote of the MOEST budget. Funding information has already been provided during the forwarding budget exercise which took place in October 1985 for inclusion in the Kenyan fiscal year 1986-87 budget commencing July 1, 1986.

A detailed estimate of the Kenya contribution to the project is included in Table 7, Annex E-B.

C. University of Illinois Contribution

The University of Illinois contribution will finance:

- 10 Tuition and fee waivers for Egerton College faculty per year at UIUC
- Salaries of faculty on sabbatic leave at Egerton College (approximately 10 per year)
- Faculty release time for counterpart training, liaison and linkage activities

The University of Illinois contribution of \$2.1 million consists of 50 tuition and fee waivers over the life of the project and training valued at \$419,500 (20.2% of UIUC contribution), \$1,242,000 for salary of faculty on sabbatical leave (59.7%), \$165,100 (7.9%) for technical assistance, \$155,000 for linkage/liaison activities between UIUC and Egerton (7.4%), and \$99,100 (4.8%) for inflation.

A detailed estimate of the University of Illinois contribution to the project is included in Table 8 Annex E-B.

Tables 2-4 in Annex B provide a projection of expenditures by fiscal year for the various contributors to the project. Detailed FX/LC and unit cost information by fiscal year is presented in Tables 6-8 in Annex B.

3. AID Obligation Schedule

The AID contribution to the project will be obligated in FY 1986. This obligation represents the level included in the OYB presentation to Washington. The project will be implemented over five years.

4. Methods of Implementation and Financing

The method of implementation for this project will be host country contracting, using direct payment/reimbursement. Following A.I.D. acquisition regulations, USAID/Kenya will approve all contracts under this project. The authorized geographic code for source/origin or nationality of goods and services is code 000 and the cooperating country, with the exception of vehicles, which will be obtained from code 935 sources. The blanket waiver for the procurement of right-hand drive vehicles will be applied for this project.

The goods and services to be provided through AID's \$2.0 million contribution to the project will be arranged through host country contracts.

Egerton College's ability to contract and procure commodities and related services has been established in earlier AID financed projects, e.g., Project 615-0169, Kenya Agricultural Systems Support - Egerton College Expansion Component. Egerton College is fully familiar with AID procurement procedures and has acceptable systems for procurement of commodities and services. Egerton College has the necessary staff in place to review and approve invoices and to provide a full accounting for expenditures. The college also has an adequate administrative organization to keep concerned ministries (MOEST and MOALD) currently informed on all aspects of the project.

A host country contract with the University of Illinois at Urbana - Champaign will be used to acquire technical assistance and training services. This contract will also provide for the procurement of micro-computers and related software and a limited amount of educational materials. AID procurement regulations will be followed by UIUC. A detailed listing of the computer equipment and software to be procured using AID-contributed funds is provided in Support Document 3 of Annex E. This contract will be financed on the basis of direct reimbursement by AID of allowable expenditures made by the contractor.

Other project commodities, including printing and photocopying equipment, expendable supplies, and vehicles, will be procured by Egerton using host country contracts. AID will provide assistance as needed with the procurement of project vehicles, which will be initiated prior to the signing of the implementation contract with UIUC in order not to delay initiation of linkage and research activities. Construction of the Education Materials Center will also be arranged by Egerton using host country contracting procedures.

AID will directly arrange and finance required evaluation and audit services.

VI. PROJECT MONITORING AND EVALUATION

The project will be monitored on an ongoing basis by USAID's Agriculture Office and by the Ministry of Education, Science and Technology through reports prepared by UIUC, joint project reviews and site visits. USAID/Kenya will conduct quarterly reviews of progress toward achievement of project output targets. In addition, two evaluations have been scheduled: one at the end of the second year and one at the beginning of the final year during which progress toward achieving objectives will be assessed and needed adjustments recommended.

Indicators for evaluating the impact of the project on intended beneficiaries, and thus in achieving project objectives, are listed below.

Egerton Students:

Statistics of growth: enrollment by diploma and degree programs; percentage from foreign countries; new degree programs begun; numbers reached by continuing education through the ARC.

Existence of revised curricula, which includes relevant material on the socioeconomic context of Kenyan farmers, particularly the role of women farmers, and on different farming systems.

Annual survey of graduates by exit questionnaires.

Progress on a manpower survey to gain data for curricula relevant to careers in public and private sectors.

Computerization of student-related support services of the College administration.

Progress on production of classroom teaching materials and outreach aids by Educational Materials Center.

Existence of a long-range development plan for Library resources and services.

Egerton Faculty and Staff

Numbers trained at what levels in relation to goals set.

Existence of on-going training programs at Egerton and Illinois.

Number of women faculty having (1) opportunities for training/observation tours abroad or on campus and (2) access to research and outreach funds and programs.

Number of new research projects funded, including joint ones with Illinois and other U.S. collaborators.

Reports on faculty participation in new programs of the Agricultural Resources Center and its Educational Materials Center.

Record of faculty/staff involvement in professional opportunities arising from sabbaticals and advisory assistance from Illinois.

Institution - Building at Egerton

Curriculum development structure which includes advisory committees having external participation in place and functioning.

Financial management and student data information systems developed and managed using computers, which allow for easy expansion in the face of increasing enrollment.

A continuing institutional relationship between Egerton and the University of Illinois.

Kenya's Agricultural Sectors:

Graduates supplied to Kenyan employers: numbers, fields, etc.

Specific projects, as in research and outreach, which are aimed at off-campus clients or have governmental or private sponsors, including number and sex of participants.

Cooperative undertakings and special services with and to any governmental ministry or agri-business enterprise.

Services from the Agriculture Resources Center:

1. Individuals and groups served: who, in what way, in what positions, etc.
2. Publications/materials supplied by new Educational Materials Center, particularly for use at Egerton and for distributions to secondary schools, continuing education, and agri-business and governmental clients.

VII. SUMMARIES OF ANALYSIS

A. Technical Feasibility

Introduction: Linkage System for the Partnership

The Egerton-Illinois partnership will function through formal and informal linkages. Each institution will set up a Liaison Committee, comprised as each partner decides, and a Coordinator to manage and coordinate all partnership relations on each campus. Early on, the liaison committees will exchange visits - Egerton to Illinois and Illinois to Egerton - to gain acquaintance both personally and institutionally and to set priorities for future cooperative programs. Beyond this initial exchange, periodic follow-up visits on an "as needed" basis will be made to plan and carry out joint educational and research activities. Department-to-department representation and relations will be emphasized in such visits.

This system relies on the equality of the partnership without a Chief of Party in the host country, whose absence adds importance to the role of the Coordinator. At Illinois, the Coordinator will report to the Director of the Office of International Agriculture on a quarter-time basis. With the same reporting relations and time commitment, a designated Training Officer will deal with the training and staff development relations, in cooperation with the Coordinator, who will also be aided by a half-time teaching assistantship to be occupied by an Egerton degree candidate in residence at Illinois. Egerton will organize in roughly the same way as fits its need, possibly using the part-time services of a visiting Illinois professor on sabbatical or research leave, who would work part-time with the campus coordinator at Egerton.

This linkage mechanism is the chief means of making the project coherent, purposeful, and effective for both parties and the channel through which people, ideas, and experience will flow in two-way interchange.

1. Administration and Management

The overall administration of Egerton College has a strong implementing/accounting role, a sharply defined educational mission, a strong practical approach and adequate organization for its expanded role. Some major pending issues (see Annex E), both academic and administrative, exist for resolution at the top policy-making level but they are characteristic of any developing institution and no cause for concern.

Genuine problems are recognized as needing attention at a lower level in the auxiliary or support services of a non-academic nature. These problems will be addressed under the project.

Egerton College has a pressing need to modernize its administrative information management system. Over the next three years this need will become increasingly critical in the face of the proposed doubling of enrollment. While the current management plan follows generally accepted principles of business management and appears to meet all government requirements, the plan is operated by a "paper and pencil" technology. Options to improve this situation are few. Student enrollment, which is a major determining factor in administrative work load, is scheduled to double within three years, possibly requiring a doubling of administrative manpower and concomitant recurrent costs. It appears that the only feasible course of action to increase efficiency and thereby hold down recurring costs is to computerize as many functions as possible.

Computerization can be accomplished in one of two patterns: a single centralized, large computer or multiple, decentralized smaller computers. The latter pattern is recommended because of cost advantages, increased College control, a more reliable system and simplicity of operation. This choice is now possible because of recent advances in the miniaturization and simplification of micro-computers.

Some of the administrative functions that will be computerized under the project are:

1. All financial systems including budget, payroll/personnel, general ledger, debtor ledger, creditor ledger, and as many other similar ancillary functions as possible.
2. The student data system including a transcript history file, term registration file, and a grade collection and recording file.
3. A building, physical facilities and equipment inventory characteristics file.
4. All text processing activities related to administrative functions of the College.

A single brand of computer hardware will be installed to assure cross-campus compatibility, but at least two different size machines are needed. Large (40MB fixed disk storage) machines are needed for central operations such as payroll/personnel, accounting and student records. Smaller, compatible machines are also needed for some data entry and text processing activities. In addition, one of the larger machines which is needed for the Planning Office will be equipped to perform graphic and statistical functions. Departmental offices will also be equipped with one large and one small computer since they operate as an intergral part of the College administration.

Software (like the hardware) will be standardized to facilitate the transfer of activities both from machine-to-machine and from person-to-person. Specific software and hardware requirements for this decentralized, computer-based administrative/management systems are included in the technical annex.

To best train College staff to use this computer equipment, a modified "on-the-job training" approach will be used, one that will have the trainee in organized classes for half days and at his/her job the other half day. To train the most people in the shortest time, two classes will be conducted concurrently - one on text processing and one on database management. Instruction in these classes will be based on materials related to the trainee's normal job duties. The duration will be from four to six weeks or two to three weeks of full-time equivalent instruction.

The ability to print and photocopy documents is essential to the smooth flow of administrative activities. These activities can range from typing and distributing a memorandum to the faculty, to the printing of a final examination. Because of the size of the College and the security consideration of some of the materials, Egerton may wish to establish a central printing facility to serve the administrative needs of the campus. Initially, however, the printing center associated with the Educational Materials Center will be used for this purpose, until there is a demonstrated need for a second facility. Also, because of the physical size of the campus, a series of photocopying stations will be located at strategic locations over the campus.

2. Faculty and Staff Development

a. Academic Training

Each of the 12 subject matter departments at Egerton College has nominated faculty for post-graduate training in the U.S. The Academic Board of the College will review these nominations and have final authority in the participant selection process. Their credentials will be forwarded to the University of Illinois, where placement will be arranged in suitable academic programs.

While various types of degree and non-degree training can be sponsored through the project, it is clear that given the move to university status, highest priority will be given to upgrading the M.Sc.-holding faculty to the doctorate level. A unique feature of the project is that, in the case of most participants, training costs will be shared. The GOK will pay the cost of international travel, the University of Illinois will provide tuition and fee waiver or assistantships, and AID funds will be used to pay the participants' allowances for maintenance, health insurance and similar items.

Workshops and seminars can also be conducted in Kenya to assist Egerton faculty in dealing with problem areas such as teaching methodology, testing and evaluation, manpower surveys and related topics.

b. Administrative Training

The project design team worked with the Egerton College Planning Officer to identify and define the training needs of the administrative/clerical staff and the managerial staff of various support and service units in the College. Consensus emerged that administrative training should concentrate on two areas: computer skills and management skills.

Training in computer and data processing skills will be conducted at both Egerton and UIUC. Initially, a basic course of eight weeks will be given on the Egerton campus by two or more UIUC faculty. All administrative and managerial staff will receive this training, which will deal with their own problems and data sets, and be scheduled for April/May of 1987.

Sometime during 1988, selected administrative and support staff, particularly from student records and the finance office, will go to the UIUC for two to four weeks of more advanced training in computer applications. Staff responsible for management of stores, purchasing, health services, residence halls, estates, food service, transport and similar units will also go to UIUC or selected other U.S. universities for management training, most of which will consist of being attached to a UIUC counterpart for two to three weeks of observation and active involvement.

Campus level administrators and department heads will go to UIUC individually and in groups as part of the linkage or gateway relationship. These visits will also double as observational tours and will provide the opportunity for training in management and administrative procedure at the departmental, College or campus level. Work in a close one-to-one relationship with an Illinois counterpart will also be a means through which administrative management training will be conducted.

3. Curriculum Development and Evaluation

The curriculum development and evaluation process being recommended for Egerton College builds on current strengths for internal monitoring and review of existing curricula and provides for an on-going system of external review and up-dating of both the overall degree and diploma programs, as well as for individual curricula within departments. It provides an opportunity for input from external sources representing the agricultural sector in Kenya, and from Illinois faculty through the linkage program.

External Departmental Advisory Committees will review and evaluate courses and curricula, in light of employment needs and job requirements. Departmental course committees will consider this input and communicate their recommendations to the appropriate Faculty Board which determines policy on departmental course offerings at the diploma and B.Sc. level. The four Faculty Boards also review courses and curricula in a broader context. They also communicate with the Academic Board and the Curriculum Monitoring and Advisory Committee (CMAC) about matters requiring further action.

At the College level, the Curriculum Monitoring and Advisory Committee (CMAC) is a key policy formation committee in the curriculum evaluation and monitoring process. This eleven-member committee will consist of five external members, and will have lines of communication with the Faculty Boards, the Academic Board and informal communication with the Departmental Advisory Committees and the Board of Governors.

The CMAC also monitors course and curricular content, diploma and B.Sc. degree requirements, and assesses college teaching needs. Recommendations to the Academic Board regarding the allocation of new teaching resources to different departments are made from their evaluation of agricultural manpower needs of Kenya and how these needs should affect future student intake by department. A major function of CMAC

will be the planning and execution of manpower studies, as well as former-student and employer surveys. These studies are essential in gathering empirical data from which informed educational management decisions can be made. Recommendations regarding all phases of the diploma and B.Sc. programs are made to the Academic Board by the CMAC.

The Academic Board establishes academic policy, determines standards, evaluates programs and reviews course requirements. It makes policy recommendations to the Board of Governors.

This curriculum development and evaluation process will insure that Egerton College continues to meet the needs of Kenyan agriculture by providing well prepared diploma and B.Sc. graduates who have the technical and scientific knowledge, and practical experience to make a significant impact on food production in Kenya. Implementation of these recommendations will be the primary responsibility of the Academic Registrar and the heads of departments, assisted as appropriate through the Egerton-Illinois linkage program being developed. This linkage will provide an on-going mechanism to give input into the curriculum evaluation process at all levels. Technical assistance will be provided for the implementation of the more detailed manpower, follow-up and employment studies.

4. Educational Materials, Research and Outreach

The Educational Materials Center (EMC) and the research and outreach functions of the college will be coordinated through the Agriculture Resources Center (ARC) with overall direction and oversight being provided by the Director of the ARC. These different functions are discussed separately below.

Educational Materials Center

The development of an Educational Materials Center (EMC) is viewed as critical in the progress of Egerton College toward an agricultural education institution of excellence and a regional model for the development and production of teaching materials based on East African agriculture. Its establishment will significantly strengthen Egerton's internal and external programs of teaching, research, and outreach.

If properly set up, this center could produce quality teaching aids at a reasonable price, contributing greatly to more effective teaching and learning. In due time, this unit could be self-supporting through the sale of educational materials both within Kenya and beyond. It will also provide opportunities for faculty and staff members from both

institutions to collaborate on the development of educational materials, including teaching modules, manuals, slide sets, transparencies, study guides, video tapes and possibly even textbooks which are relevant to the curriculum needs and outreach program of Egerton.

Initially, it is recommended that subject-matter specialists, representing appropriate major departments, be assigned at least 50 percent of their time to the EMC to develop educational materials, with the remaining time devoted to teaching in the home department. While current faculty may be given this responsibility, it is expected that these new responsibilities would be absorbed out of the new faculty time being added to departments as part of the current University College expansion program. By linking academic departments to the EMC in this way, departmental teaching staffs will be involved in developing materials both for their classes and for the outreach program. Materials developed by these subject-matter specialists must be reviewed by a senior member of the home department for technical accuracy and then edited before publication.

It will be necessary for the College to employ two to three graphic arts specialists, including a photographer, to prepare the "camera-ready" copy for printing or production. Also, a well organized printing center is essential to complete this operation. As the EMC begins to generate instructional materials and teaching aids, which could be used also for secondary school agriculture programs and field level extension personnel, the MOEST and MOALD may decide to include a line item in their respective budgets to cover the cost of printing these different materials. A detailed description of the EMC is given in the technical annex.

To supplement the production of the Egerton materials, teaching aids from other sources but suited to Kenya could also be purchased. If copyright releases are secured, individual copies could be purchased and then revised to fit Kenyan conditions. Illinois will offer in-service training courses to aid specialists in preparing these materials; faculty on sabbaticals may also assist.

As Egerton moves to university status, there will be a greatly expanded need for additional library resources and services. These needs have not been fully assessed in the preparation of the Project Paper. It is recommended that through the linkage program an experienced Illinois librarian come to Egerton to assess these needs and prepare a long-term plan to strengthen library resources. The long term needs must be fully assessed at an early date, with a development plan drawn up for future College budgeting and possible outside donor support.

Research and Outreach

On-campus and off-campus research and outreach are among the functions to be headquartered at the Agriculture Resources Center, also including research/outreach within the narrowly established Rural Development Laboratories, and continuing education.

In research, applied-adaptive research will be heavily emphasized, with focus on removal of constraints to agricultural production and technology transfer in Kenya. The results will be systematically linked to classroom teaching, outreach services, preparation of educational materials and agri-business firms.

Current funds and mode of allocation are inadequate. Therefore, the Director of ARC, with the status of Deputy Principal, will direct and give leadership to both programs - research and outreach. The Director will have a Research and Outreach Policy Committee, made up of representatives from public and private agricultural organizations, plus senior faculty, the Academic Registrar and the Principal. While this policy committee will meet only once a year, a Research Advisory Committee of senior faculty drawn from the Policy Committee will assist the Director in selecting proposed research projects.

Two types of research will result: on-campus, focusing on station/laboratory experiments to study/solve more applied problems and adaptive research within the two Rural Development Laboratories - one around the campus and one around the Chemeron Field Station. Each laboratory will have a Team Leader designated from the senior faculty, heading an interdisciplinary team and using senior level student assistance, with the resulting research and outreach activities annually reviewed by the Research and Outreach Policy Committee.

A local currency Research - Outreach Fund is proposed to implement the research and outreach activities planned last year by a special faculty committee, in response to President Moi's challenge to the College to serve its surrounding community.

Sabbatical and Graduate Student Research

Two-way flow of sabbatical leave holders is planned between Illinois and Egerton, with the former predominating at least in the early years. The intent is to have U.S. professors conduct research relevant to Kenya, preferably

jointly with Kenyan counterparts. With project funding, such professors could also contribute to teaching at Egerton. Logistical support would come from a local fund, administered by the Director of ARC who would also facilitate research (1) by Egerton faculty conducting their dissertation research on Kenyan problems for U.S. doctoral degrees, and (2) by U.S. graduate students working at Egerton on Kenyan problems.

The Outreach Program

Egerton will use its many resources for public service by both on-campus and off-campus activities. The former will be done chiefly by continuing education through the ARC - in-service training courses, workshops and other advisory services for individuals and groups in both the private and public agricultural sectors. To realize the great potential of ARC as a conference and continuing education center, expanded facilities are clearly needed to accommodate larger groups.

Off-campus outreach is typified by the challenge of two selected Rural Development Laboratories, one contiguous to the College and one around the Chemeron Field Station, with emphasis on on-farm adaptive research and effective strategies for technology transfer. Another excellent opportunity for outreach services lies ready at hand in the plan carefully devised last year by the Extension Service Project Committee. These activities as appropriately modified, along with the other research and outreach activities of the College, could give Egerton a good and quick approximation of the American land-grant-college model of integrating teaching, research and service for development and problem-solving in Kenyan agriculture.

It should be clearly understood, however, that while the Rural Development Laboratories will extend Egerton's knowledge and talent into the surrounding neighborhood, they are intended primarily to increase Egerton's capacity to train young professionals for agricultural service, both public and private. They are analogous to the teaching hospital a medical school conducts--not so much for health service as for training doctors, by practical experience. In both cases, double dividends are reaped: hands-on teaching for career preparation primarily, and some community service secondarily. In doing the latter, Egerton will be meticulously careful not to involve or overlap research and extension being provided by government ministries, unless by prior agreement on a mutually advantageous division of labor.

B. Administrative Feasibility

As executing agency, Egerton College gives evidence of full capacity to implement the project successfully. It has the needed organization and managerial skills, both at the policy-making and operational levels. This includes the competence of top leadership and the presence of the auxiliary and support services required for the project. Egerton's flexibility in meeting new responsibilities is implicit in its recent and prospective rapid growth and its commitment to an enlarged mission, including degree programs and an expanded research/outreach effort through a new Agriculture Resources Center. It also enjoys the confidence of the Government of Kenya.

Egerton will be aided by the partnership for collaboration with the University of Illinois at Urbana-Champaign, with access to Illinois resources and technical assistance as spelled out in the annexes. A mechanism will exist to facilitate this relationship: a liaison committee and campus coordinator on each campus, with exchange visits, subject-matter or departmental linkages, arrangement of sabbaticals, sharing of curricular materials and project evaluation by continuous "rolling assessment". Partners will have shared responsibility and performance in all four specific areas of concern in the project (details in annex E). Capacity to perform successfully will also be strengthened by the management changes herein proposed and the technical assistance available through the partnership.

C. Social Soundness Analysis

1. Beneficiaries

This project will benefit, primarily, the administration, faculty, staff and student body of Egerton College; and secondly, the agriculturalists, researchers, farmers, managers and others who participate in the programs of the Agricultural Resources Center. Thirdly, more indirectly and in the longer term, the project will benefit Kenyan small-scale farmers and private firms and parastatal and public sector organizations which are associated with agricultural production, agro-processing and marketing with whom and for whom Egerton graduates work.

2. Participation

Top level administrators and faculty of Egerton College have been actively involved in the development of this project,

from its identification through collaborative design. Numerous group and individual meetings were held with key management and academic personnel to determine the professional and teaching needs of the College. Individuals involved have worked together in the design of the project and development of the modalities for joint cooperation.

3. Socio-cultural Feasibility

This project is designed in response to the manpower needs of agriculture in Kenya and focuses on the mechanisms for continually upgrading the standards of education and management at Egerton College.

The project is based on the premise that improved access to knowledge and skills will result in attitudinal and behavioral changes. The incentive and reward system with respect to both faculty/staff and students has been taken into consideration in the design of this project.

The activities of the Agriculture Resources Center in providing outreach to Kenyan farmers and agri-business concerns, coordinating applied research activities, and producing and disseminating extension and instructional materials to the agricultural education and farming sectors, provides an avenue for contact between professional agriculturalists and the College and will provide special opportunities for Egerton faculty to be involved in research and outreach activities.

4. Impact

The project is intended to contribute to intensification of agricultural production in Kenya. Specific areas of social impact identified in the social soundness include the following: Increased professional opportunities for women, improved productivity and integration of women farmers into agricultural/extension programs, bringing academic staff face-to-face with the needs and problems of personnel in the field thereby encouraging continual revision of a relevant practical curriculum and instructional materials, wider dissemination of agricultural knowledge and innovative technologies to user-ministries/organizations, agents, teachers and farmers through the activities of the Agriculture Resources Center, and bringing together extension and applied research to meet the needs of the Kenyan farmer.

This project will continue the effort begun under the earlier Agricultural Systems Support Project to increase the enrollment of women at Egerton College and the hiring of women faculty, in order to begin to address the need for reaching out to women farmers and to assist them in increasing their production and productivity.

Ederton College has established a policy of equal opportunity for males and females. The college has taken steps to promote the participation and involvement of women in all disciplines. Towards this end, the college has developed an active recruitment drive to encourage women to apply for admission to the college which has resulted in an increase in the percentage of women students from 6% to 25%. Enrollment of new students for the current year includes 26% women, a slight increase. The most encouraging sign is that these increases are resulted from additional female participation in diploma programs in agriculture, animal husbandry, horticulture, and farm management - rather than mere numerical increases in home economics, where women traditionally have specialized. Further-more, the college has increased the number of female faculty and staff and has encouraged women to pursue further studies/training. This project will support Ederton College in achieving its long-term goal of increasing women enrollment and participation to equal that of men. In this way the project will have a positive impact on the lives and livelihood of women.

D. Economic Analysis

The economic soundness of the project rests on the cost effectiveness of the several processes to be introduced to achieve planned outputs. The cost effective aspects integral to the design of the project include (1) limited use of expatriate technical assistance; (2) reliance on U.S. faculty on sabbatic leave and advanced graduate scholars to strengthen institutional capability to organize and conduct research and assist in the dissemination of the results; (3) adaptation of cost sharing principles to guide the Ederton Work/Study Program of faculty and staff development; and (4) introduction of new technology to improve operational efficiencies.

Alternative approaches to the four principal planned outputs were studied. Some are cost effective in the normal context of technical assistance projects but the limited resources available to the project made further refinement necessary.

Separately the alternatives adopted to address each of the project outputs have cost advantages - imputed or explicit - over other available options. Collectively they respond to the constraint on foreign exchange resources available from AID and exploit to a greater than usual degree cost sharing opportunities of the academic partners, Ederton College and UIUC. The economic analysis for this project can be found in Annex E-B.

VII. Conditions and Covenants and Negotiating Status

This project has been discussed in detail with the various Government of Kenya implementing and monitoring agencies and major issues have been resolved to the satisfaction of all parties during the design phase.

A. Conditions

In addition to the Standard Conditions Precedent the following clauses will be required in the project agreement:

Conditions Precedent for Commodity and Equipment Procurement:

(a) Detailed specifications

The Project Agreement shall contain in addition to the standard Conditions Precedent (specimen signatures, designation of authorized representatives), the following clause:

Prior to disbursement of the assistance for commodities and equipment from the United States (except procurement of commodities and equipment by the contractor), or to the issuance by A.I.D. of documentation pursuant to which disbursement will be made with respect thereto, the Cooperating Country will, except as the Parties agree to in writing, furnish to A.I.D., with respect to each such commodity and equipment purchase, in form and substance satisfactory to A.I.D. detailed specifications for such commodities and equipment.

B. Covenants

1. The GOK agrees that sufficient funds will be budgeted and made available throughout the project to support project operations (Local currency funding for activities).
2. The GOK agrees to assign, as required throughout the project, all Egerton College administrative and technical staff required to adequately carry out the project.
3. The GOK agrees that it is desirable and will make every effort to assure that persons completing project-financed training programs in the United States serve a minimum period of not less than five years in service at Egerton College.

4. The Parties agree to establish an evaluation program as part of this project. Except as AID and the GOK may otherwise agree in writing, the evaluation program will include, during the implementation of the project and at one or more points thereafter:
 - (a) evaluation of the progress toward attainment of the objectives of the project;
 - (b) identification and evaluation of problem areas or constraints which may inhibit such attainment; and
 - (c) evaluation of the overall development impact of the project.

Annexes
Loq-Frame

GPOI	INDICATORS	VERIFICATION	ASSUMPTIONS
<p>GOAL: Develop and expand pool of technical and managerial human resources for agriculture in Kenya and Africa</p>	<p>Increased number of technical agricultural personnel trained and employed in both public and private sectors</p>	<p>Statistical reports of trained manpower; report on number of graduates from Eaerton; follow-up surveys of Eaerton graduates.</p>	<p>Employment opportunities in both public and private sectors.</p>
<p>PURPOSE: a) Create at Eaerton College an agricultural education institution of excellence serving the needs of Kenya and other African countries. (b) Establish a permanent institutional relationship between Eaerton College and the University of Illinois at Urbana-Champaign.</p>	<p>EOPS: (1) establishment of a permanent relationship between Eaerton College and the University of Illinois, (2) graduates better qualified technically and having a better understanding of the socio-economic context of Kenyan agriculture to meet the manpower needs of the public and private agricultural sectors, (3) high demand for student placement at Eaerton, (4) high faculty attraction to Eaerton and high faculty staff retention and satisfaction, (5) functioning research/out reach programs through the Agricultural Resources Center and its subdivisions.</p>	<p>(1) coordination mechanism in place at each institution; (2) follow-up surveys of graduates; (3) application for and rate of acceptance by students for enrollment at Eaerton; (4) applications for faculty positions, and evaluations of turn-over rate; (5) programs ongoing at ARC and Rural Development Labs. (6) Periodic and final evaluations.</p>	<p>Eaerton has sufficient trainable manpower to carry out expanded program. GOK financial support will be provided on a timely basis and recurrent costs of O&M met.</p>

GPOI	INDICATORS	VERIFICATION	ASSUMPTIONS
<u>OUTPUT:</u>	<u>MAGNITUDE OF OUTPUTS:</u>		
<p>1. Curriculum Development</p> <p>(a) Mechanism for systematic curricular review and revision to gear curricular to manpower needs, both public and private.</p> <p>(b) Revised curricula.</p>	<p>Manpower study for curricular guidance completed and analyzed plus periodic follow-up studies; provision for participation of private sector, ministries and alumni in curricular planning; new curricula in the fields of agri-business and agricultural management, and revised curricula in other fields reflecting the Kenya socio-economic context.</p>	<p>Existence of revised curricula and analysis of its content, minutes of meetings of curricular committees at all levels, program evaluations.</p>	<p>Private and public sector clients willing to participate in curriculum reviews and manpower studies.</p>
<p>2. Staff Development</p> <p>(a) Upgraded faculty skills through advanced degree and non-formal training.</p> <p>(b) Upgraded administrative/managerial staff skills through staff skills through short-term study tours in the U.S.</p> <p>(c) Trained support staff through training at Egerton by Illinois tech. assistance.</p>	<p>(a) Minimum of 10 faculty per year sent for degree training in the U.S.</p> <p>(b) Minimum of 8 senior supervisory administrative or management staff trained.</p> <p>(c) Minimum of two computer training courses held at Egerton for approximately 30 staff.</p>	<p>Existence of faculty and staff training plans and programs, training completion reports showing numbers trained at what level and approximation of goals set, and follow-up survey of staff trained.</p>	<p>College administration willing to screen applicants carefully for maximum benefit from funds available.</p>
<p>3. Administration/Management</p> <p>(a) Linkage mechanism between Egerton and Illinois for problem identification and resolution;</p>	<p>Functioning Egerton-Illinois linkage.</p> <p>Computerization completed with staffing and maintenance plans for computer</p>	<p>Liaison Committees' meeting minutes, Title XII university reports on its activities under the project, site visits to inspect computer</p>	

GPOI	INDICATORS	VERIFICATION	ASSUMPTIONS
<p>(b) Computerization of financial/accounting systems and student record-keeping for improved data management capability and information flows;</p> <p>(c) Improved institutional planning, budgeting and reporting.</p>	<p>operations. Existence of efficient management information system. Documentation of computer use. Computer-based financial management and data management system developed and in use.</p>	<p>facilities, copies of Egerton financial and administrative planning reports.</p>	
<p>4. Educational Materials Research and Outreach</p> <p>(a) Establishment of EMC;</p> <p>(b) Educational materials and library resources;</p> <p>(c) Campus-wide printing and photocopying capability;</p> <p>(d) Research program with EC faculty and UIUC faculty/students;</p> <p>(e) continuing education and outreach program at ARC.</p>	<p>(a) Education Materials Center for development/production of teaching/extension materials relevant to East Africa constructed and operational.</p> <p>(b) Strengthened library resources and services.</p> <p>(c) Printing facility established and photocopying equipment installed, and</p> <p>(d) Full utilization of Agriculture Resource Center for research, outreach and on campus continuing education.</p> <p>(e) Adaptive research/outreach programs through the Rural Development Laboratories.</p>	<p>Existence of new Educational Materials Center and instructional material for use on and off campus.</p> <p>Reports of educational materials production, distribution and sales. Statistics on use of Agriculture Resources Center.</p> <p>Adaptive research and continuing education programs, and reports on</p>	<p>Cost factors involved in educational materials production can be overcome</p> <p>Funding assistance from other donors.</p>

GPOI	INDICATORS	VERIFICATION	ASSUMPTIONS
<u>INPUTS-</u>	<u>IMPLEMENTATION TARGETS*</u>		
1. AID - \$2,000,000 T.A. Training Commodities Coordination office 2. GOK - \$4,507,700 Training Commodities Construction Staff Sabbaticals Coordination office 3. UIUC - \$2,080,700 T.A. Training Sabbaticals Coordination office	1. 36 pm of T.A 2. 30 microcomputers, and software packages procured and installed 3. 10 Exerton faculty sent for degree training each year 4. 30 staff trained in computer use at EC 5. 46 UIUC faculty and 20 UIUC students in sabbatic/research programs at EC over the life of project. 6. 56 EC and UIUC faculty and staff participate in exchange visits. 7. Educational materials, printing and photocopying equipment, and 5 vehicles purchased.	Monthly financial reports, periodic reports of Title XII university which implements project, audit reports, training completion reports, and commodity purchase/shipping documents, evaluation reports.	

* Due to the collaborative assistance method of implementation, targets for level of inputs may change during the project. Annual reviews will set implementation targets for each year.

PROJECT CHECKLIST

A. GENERAL CRITERIAL FOR PROJECT

1. FY 1986 Continuing Resolution Sec. 524; FAA Sec. 634A

(a) Describe how authorizing and appropriations committees of Senate and House have been or will be notified concerning the project

A congressional Notification regarding an FY 86 obligation was submitted to Congress on February, 27 1986.

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 further 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?

No further legislation is required.

4. FAA Sec. 611(b); FY 1986 Continuing Resolution Sec. 501. If for water or water-related land resource construction, has project

N/A

met the principles, standards and procedures established pursuant to the Water Resources Planning Act (42 U.S.C. 1962, etc. sec.)?

5. FAA Sec. 611(e). If project is capital assistance (e.g., construction), and all U.S. assistance for it will exceed \$1 million, has Mission Director certified and Regional Assistant

N/A

Administrator taken into consideration the Country's capability effectively to maintain and utilize the project?

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.

No. It is a country-specific activity. However, Egerton College is an important agriculture training institution for all of East Africa.

7. FAA Sec. 601(a). Information and conclusions whether project will encourage efforts of the country to: (a) increase the flow of international trade; (b) foster private initiative and competition, and (c) encourage development and use of cooperatives, and 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 is designed to improve the quality of agricultural services to small farmers through enhancing the education of agricultural personnel for public and private agricultural sector organizations. The technical efficiency of the agricultural sector will be improved through improving the technical and management training of future agricultural personnel.

8. FAA Sec. 601(b). Information and conclusion on how project will encourage U.S. private trade and encourage private U.S. participation in foreign assistance programs (including use of private trade channels and the services of U.S. private enterprise).

A contract will be signed with a U.S. University who will interact with Egerton College in creating a long-term mutually beneficial program of exchanges and other collaborative efforts.

9. FAA Sec. 612(b), 636(h); FY 1986 Continuing Resolution Sec. 507. 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.
- Project has been designed to include a significant contribution by the GOK of local currency funds to support this educational relationship.
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, the U.S. does not own excess Kenyan currency.
11. FAA Sec. 601(e). Will the project utilize competitive selection procedures for the awarding of contracts, except where applicable procurement rules allow otherwise?
- Yes.
12. FY 1986 Continuing Resolution Sec. 522. 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?
- This assistance is not for the production of any specific commodity for export.
13. FAA 118(c) and (d). Does the project comply with the environmental procedures set forth in AID Regulation 16? Does the project or program take into consideration the problem of the destruction of tropical forests?
- Yes. A categorical exclusion was approved by the Africa Bureau environmental officer.

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 (dollars or local currency generated therefrom)?

N/A

15. FY 1986 Continuing Resolution Sec. 533. Is disbursement of the assistance conditioned solely on the basis of the policies of any multilateral institution?

No.

16. ISDCA of 1985 Sec. 310. For development assistance projects how much 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)?

Historically black colleges and universities were encouraged to submit an expression of interest for the design phase.

B. FUNDING CRITERIA FOR PROJECT

1. Development Assistance Project Criteria

a. FAA Sec. 102(b), 111, 113, 281(a). 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, spreading investment out from cities to small towns and rural areas, and insuring wide participation

By improving the management and technical capabilities of future civil servants and other members of the agricultural community who deal directly with small farmers, it is expected that farm productivity will be increased and quality of life will be improved. The project

of the poor in the benefits of development on a sustained basis, using the 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 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?

b. FAA Sec. 103, 103A, 104, 105, 106. Does the project fit the criteria for the type of funds (functional account) being used?

c. FAA Sec. 107. Is emphasis 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)?

d. FAA Sec. 110(a). Will the recipient country provide at least 25% 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)?

targets assistance to female students, thereby improving their status and qualifications to work with the Kenyan woman to increase her productivity.

Section 103:
Eaerton College produces graduates almost exclusively for the agricultural sector.

Eaerton College is particularly well known for its practical curriculum and emphasis on teaching appropriate technology in agriculture.

Yes. The estimated host country contribution is 52 percent.

e. FAA Sec. 122(b). Does the activity give reasonable promise of contributing to the development of economic resources, or to the increase or productive capacities and self-sustaining economic growth?

The goal of this project is to improve the human resource base in agriculture, thereby leading to improvements in agricultural productivity and self-sustaining economic growth.

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 or technological research, has it been designed and will it be monitored to ensure that the ultimate beneficiaries are the poor majority?

The project has been designed to improve an important agricultural education institution and to stimulate research which will ultimately benefit the small farmer, the poor majority of Kenya, by increasing his/her productivity.

g. FAA Sec. 281(b). Describe extent to which program recognizes the particular needs, desires, and capacities of the people of the country; utilizes the country's intellectual resources to encourage institutional development; and supports civil education and training in skills required for effective participation in government processes essential to self-government.

Egerton College will work closely with the University of Illinois at Urbana Champaign to ensure that the needs of Egerton College are met. Egerton College is particularly interested in expanding the intellectual skills of its faculty and staff in both teaching and management areas. The skills provided to an Egerton graduate directly influence the agricultural civil service cadre and their ability to be effective participants in governmental processes.

5C(3) - STANDARD ITEM CHECKLIST

A. Procurement

1. FAA Sec. 602. Are there arrangements to permit U.S. small business to participate equitably in the furnishing of commodities and services financed?

A.I.D financed contracts will follow A.I.D. contracting procedures which contain provisions for small business participation.

2. FAA Sec. 604(a). Will all procurement be from the United States 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.?

Kenya does not discriminate against U.S. marine companies.

4. FAA Sec. 604(e); ISDCA of 1980 Sec. 705(a). If offshore procurement of agricultural commodity or product 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.)

No agricultural commodities or products will be financed by the project.

5. FAA Sec. 604(a). Will construction or engineering services be procured from firms of countries which receive direct economic assistance

No construction or engineering services will be financed.

under the FAA and which are otherwise eligible under Code 941, but which have attained a competitive capability in international markets in one of these areas? Do these countries 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 requirement in section 901(b) of the Merchant Marine Act of 1936, as amended, that at least 50 per centum 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 that such vessels are available at fair and reasonable rates?

No

7. FAA Sec. 621. If technical assistance is financed, will such assistance be furnished by private enterprise on a contract basis to the fullest extent practicable? If the facilities of other Federal agencies will be utilized, are they particularly suitable, not competitive with private enterprise, and made available without undue interference with domestic programs?

Technical assistance from the U.S. will be furnished by a Title XII university on a contract basis. Services by other Federal agencies are not anticipated.

8. International Air Transport. Fair Competitive Practices Act, 1974. If air transportation of persons or property is

Yes.

financed on grant basis, will U.S. carriers be used to the extent such service is available?

9. FY 1986 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?

N/A

B. CONSTRUCTION

1. FAA Sec. 601(d). If capital (e.g., construction) project, will U.S. engineering and professional services be used?

N/A

2. FAA Sec. 611(c). If contracts for construction are to be financed, will they be let on a competitive basis to maximum extent practicable?

N/A

3. FAA Sec. 620(k). 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)?

N/A

C. OTHER RESTRICTIONS

1. FAA Sec. 122(b). If development loan, is interest rate at least 2% per annum

N/A

during grace period and at least 3% per annum thereafter?

2. FAA Sec. 301(d). If fund is established solely by U.S. contributions and administered by an international organization, does Comptroller General have audit rights?

N/A

3. FAA Sec. 620(h). 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:

a. FAA Sec. 104(f); FY 1986 Continuing Resolution. Sec. 526.

(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; (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; (4) to lobby for abortion?

(1) Yes.

(2) Yes.

(3) Yes.

(4) Yes.

- b. FAA Sec. 488. To reimburse persons, in the form of cash payments, whose illicit drug crops are eradicated. Yes.
- c. FAA Sec. 620(a). To compensate owners for expropriated nationalized property? Yes.
- d. FAA Sec. 660. To provide training or advice or provide 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 purchase, 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 1986 Continuing Resolution, Sec. 503. To pay pensions, annuities, retirement pay, or adjusted service compensation for military personnel? Yes.
- h. FY 1986 Continuing Resolution, Sec. 505. To pay U.N. Assessments arrearages or dues? Yes.
- i. FY 1986 Continuing Resolution, Sec. 506. To carry out provisions of FAA Yes.

section 209(d) (Transfer of FAA funds to multilateral organizations for lending)?

j. FY 1986 Continuing Resolution, Sec. 510.

To finance the export of nuclear equipment, fuel, or technology.

Yes.

k. FY 1986 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

l. FY 1986 Continuing Resolution, Sec. 516. To be used for publicity or propaganda purposes within U.S. not authorized by Congress?

Yes.

AGF

REPUBLIC OF KENYA
MINISTRY OF FINANCE

OFFICIAL FILE

Telegraphic Address:
FINANCE-NAIROBI
Telephone: 338111

When replying please quote
Ref. No. EA/FA 188/9/01
and date



THE TREASURY
P.O. Box 30007
NAIROBI
KENYA

17th May 1982

Mr. Charles Costello,
USAID Mission to Kenya,
P.O. Box 30261,
NAIROBI.

USAID DISTR(5-20-82)JK
ACTION: ~~W~~ Watch
(DUE: 5-28)
INFO: O/DIR; PROG ~~ACR~~; RFMC; CHRON; RF.

PRJ

Extension to Egerton College Expansion
Program: Training, Technical Assistance
and Research/Extension Capability Development

I am writing to you to submit a Project Proposal for an extension of the current expansion programme of Egerton College for an additional five years starting 1984/85 to 1988/89.

The expansion programme has gone on well and we recommend it for further assistance from USAID. We therefore wish to formally request funding for extension of the programme through 1988/89.

ACTION COPY

Action taken: letter
to Mayaka

No action necessary:
FPH btj/SL
(Initials) (Date)

W. P. Mayaka

for: (W. P. MAYAKA)
PERMANENT SECRETARY/TREASURY

[Handwritten signature]

c.c.
Permanent Secretary,
Ministry of Agriculture,
P.O. Box 30028,
NAIROBI.

(Attention: Mr. J. L. Lijoodi)

Encl.

ANNEX VI

INITIAL ENVIRONMENTAL EXAMINATION

Project Country : Kenya
Project Title and Number : Institutional
Development for
Agricultural Training
(IDAT) (615-0239)
Funding : \$2 million
Life of Project : FY 1986 - FY 1991
IEE Prepared by : Vicki MacDonald

Environmental Actions Recommended:

Positive Determination _____

Negative Determination _____

or

Categorical Exclusion _____ X _____

The activities funded under this project will have no direct impact on the physical or natural environment. In accordance with section 216.2(c)(2)(i) and section 216.2(c)(2)(ii), which state that education and training programs are not subject to the procedures set forth in Section 216.3, it is recommended that a categorical exclusion be made regarding the environmental impact of this project.

Action Requested by: _____ Date: _____
Charles L. Gladson
Director, USAID/Kenya

Concurrence:

Bureau Environmental Advisor,
AFR/TD/SDP Decision

I. Examination of the Nature, Scope and Magnitude of Environmental Impacts

A. Description of the Project:

The Institutional Development for Agricultural Training Project seeks to develop a long term relationship between Egerton College and the University of Illinois at Urbana-Champaign in order to address the institutional development requirements of Egerton College and to meet the agricultural manpower needs of Kenya and Africa.

The goal of this project is to develop and expand the pool of technical and managerial human resources for Kenya and Africa. The purpose of the project is to (a) develop at Egerton College an agricultural education institution of excellence serving the needs of Kenya and Africa and (b) to establish permanent institutional relationships between Egerton College and the University of Illinois at Urbana-Champaign.

B. Identification and Evaluation of Environmental Impacts

1. Identification of Possible Impacts:

The focus of this project is the establishment of linkages between educational institutions, the training of faculty and staff personnel of Egerton College, curriculum and instructional materials development, and management of university educational programs. These activities do not have direct environmental impacts. There are no construction activities envisioned under this project and therefore there will be no direct impact on the physical or natural environment.

2. Impact Evaluation:

The scale and focus of activities are such as to preclude any impact on the physical or natural environment.

II. Recommendation for Environmental Action

In accordance with AID Regulation 16 paragraphs 216.2(c)(2)(i) and 216.2(c)(2)(ii) it is recommended that a categorical exclusion be made regarding the environmental impact of this project

Project 615-0239

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AIDAC

FOR: AFR/TR/DSF - ATTN: BUREAU ENVIRONMENTAL OFFICER,
-- - MESSIE BOYD,
-- - AFR/PD - TOM LOFCREN

E.O. 12896: N/A

SUBJECT: IEE APPROVAL FOR INSTITUTIONAL DEVELOPMENT
FOR AGRICULTURAL TRAINING PROJECT 615-0239

1. MISSION REQUESTS AFR BUREAU ENVIRONMENTAL OFFICER
ADVISE AND CONCURANCE WITH FOLLOWING IEE REQUEST FOR
CATEGORICAL EXCLUSION FOR SUBJECT PROJECT. PLEASE
NOTIFY MISSION OF ACTION SOONEST.

INITIAL ENVIRONMENTAL EXAMINATION
PROJECT COUNTRY: KENYA

PROJECT TITLE AND NUMBER: INSTITUTIONAL DEVELOPMENT
FOR AGRICULTURAL TRAINING (IDAT) (615-0239)

FUNDING: \$2 MILLION

TERM OF PROJECT: FY 1986 - FY 1991

IEE PREPARED BY: VICKI MACDONALD

ENVIRONMENTAL ACTION RECOMMENDED:

- POSITIVE DETERMINATION:

- NEGATIVE DETERMINATION:

- - - OR

CATEGORICAL EXCLUSION: - - - X - - -
THE ACTIVITIES FUNDED UNDER THIS PROJECT WILL HAVE NO
DIRECT IMPACT ON THE PHYSICAL OR NATURAL ENVIRONMENT.
IN ACCORDANCE WITH SECTION 216.2(C)(2)(1) AND SECTION
216.2(C)(2)(II), WHICH STATE THAT EDUCATION AND
TRAINING PROGRAMS ARE NOT SUBJECT TO THE PROCEDURES
SET FORTH IN SECTION 216.3, IT IS RECOMMENDED THAT A
CATEGORICAL EXCLUSION BE MADE REGARDING THE
ENVIRONMENTAL IMPACT OF THIS PROJECT.

ACTION REQUESTED BY: CHARLES L. GLADSON
-- -- -- DIRECTOR, USAID/KENYA
DATE NOVEMBER 14, 1985

Best Available Document

CONCURRENCE:

DATE: - - - - -

BUREAU ENVIRONMENTAL OFFICER,

CLEARANCE: GC/AFR - - - - -

DATE: -

I. EXAMINATION OF THE NATURE, SCOPE AND MAGNITUDE OF ENVIRONMENTAL IMPACTS

- A. DESCRIPTION OF THE PROJECT:

- - - - - THE INSTITUTIONAL DEVELOPMENT FOR AGRICULTURAL TRAINING PROJECT SEEKS TO DEVELOP A LONG TERM RELATIONSHIP BETWEEN EGERTON COLLEGE AND A U.S. AGRICULTURAL UNIVERSITY IN ORDER TO ADDRESS THE INSTITUTIONAL DEVELOPMENT REQUIREMENTS OF EGERTON COLLEGE AND TO MEET THE AGRICULTURAL MANPOWER NEEDS OF KENYA AND AFRICA.

- - - - - THE GOAL OF THIS PROJECT IS TO DEVELOP AND EXPAND THE POOL OF TECHNICAL AND MANAGERIAL HUMAN RESOURCES FOR KENYA AND AFRICA. THE PURPOSE OF THE PROJECT IS TO (A) DEVELOP AT EGERTON COLLEGE AN AGRICULTURAL EDUCATION INSTITUTION OF EXCELLENCE SERVING THE NEEDS OF KENYA AND AFRICA AND B) TO ESTABLISH PERMANENT INSTITUTIONAL RELATIONSHIPS BETWEEN EGERTON COLLEGE AND A U.S. AGRICULTURAL EDUCATION INSTITUTION.

- B. IDENTIFICATION AND EVALUATION OF ENVIRONMENTAL IMPACTS

- - - - - 1. IDENTIFICATION OF POSSIBLE IMPACTS:

- - - - - THE FOCUS OF THIS PROJECT IS THE ESTABLISHMENT OF LINKAGES BETWEEN EDUCATIONAL INSTITUTIONS, THE TRAINING OF FACULTY AND STAFF PERSONNEL OF EGERTON COLLEGE, CURRICULUM AND INSTRUCTIONAL MATERIALS DEVELOPMENT, AND MANAGEMENT OF UNIVERSITY EDUCATIONAL PROGRAMS. THESE ACTIVITIES DO NOT HAVE DIRECT ENVIRONMENTAL IMPACTS. THERE ARE NO CONSTRUCTION ACTIVITIES ENVISIONED UNDER THIS PROJECT

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NAIROBI 39278

AND THEREFORE THERE WILL BE NO DIRECT IMPACT ON THE PHYSICAL OR NATURAL ENVIRONMENT.

2. IMPACT EVALUATION:

THE SCALE AND FOCUS OF ACTIVITIES ARE SUCH AS TO PRECLUDE ANY IMPACT ON THE PHYSICAL OR NATURAL ENVIRONMENT.

II. RECOMMENDATION FOR ENVIRONMENTAL ACTION

IN ACCORDANCE WITH AID REGULATION 16 PARAGRAPHS 216.2(C)(2)(I) AND 216.2(C)(2)(II) IT IS RECOMMENDED THAT A CATEGORICAL EXCLUSION BE MADE REGARDING THE ENVIRONMENTAL IMPACT OF THIS PROJECT. THOMAS

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CN: 40619
CHRG: AID
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E.O. 12356: N/A
TAGS:
SUBJECT: INSTITUTIONAL DEVELOPMENT FOR AGRICULTURAL
TRAINING (615-0239) IEE

REF(S): NAIROBI 39272

1. GC/AFR AND AFR/TR CLEARS AND CONCURS ACTION REQUESTED
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Annex E

Analyses

A. Technical Analyses

Euerton College is entering a new era in its history. The administrative implications are great and may be seen as problems or opportunities, or both. The major components, compounded by coming at one time, are:-

1. Doubling of student enrollment, with necessarily enlarged College staff and faculty.
2. Beginning of B.Sc. degree programs and their relation to existing diploma programs and students.
3. Implications of new University College status on autonomy and in relations with other parts of Kenyan higher education and the government ministries.
4. Shift from guaranteed government employment of graduates to reliance on the job market, both public and private.
5. Beginning of special attention to research and outreach as part of the College's expanded mission, particularly through the Agriculture Resources Center.
6. Possibility of becoming a regional agricultural training, research, and service center for East Africa with collaboration from USAID, other international donors, and the International Agricultural Research Centers.
7. New partnership relation, via a USAID contract, with the University of Illinois at Urbana-Champaign for long-term mutual aid and collaboration.

These considerations comprise the context in which the Euerton-Illinois partnership must function in relation to the specific project targets for assistance:

1. Administration and Management
2. Faculty and Staff Development
3. Curricular Development and Evaluation
4. Educational Materials, Research and Outreach (through the Agriculture Resources Center).

The executive and managerial capacities for capitalizing on these new opportunities reside in the top leadership and organization of the College at the policy-making level and in the day-to-day management of the institution at the operational level. The broader consideration will be dealt with first and the operational next.

Overall academic administration is not the end for which the College exists. Instead, it is a means of organizing the entire academic community for achievement of the College's stated mission, which in the past has been teaching, and will remain so primarily, despite further parallel development in research and outreach. Hence the direct instrument for achievement of the central mission is the faculty. The indirect but also indispensable instrument is the top administration, which should facilitate the work of the faculty and keep it free of encumbrances to the generation, dissemination, and application of knowledge.

Ederton's top administration is well organized and well prepared for the new era. It has a clear sense of purpose in producing professionals for agricultural development in Kenya and East Africa and in doing so with strong commitment to hands-on, practical, applied knowledge and problem-solving.

This guiding philosophy is underpinned by good executive leadership and appropriate organization. In other words, there is no problem in conceptualization at the overall level, although problems are recognized at the operational level, as dealt with below.

Some large, general issues do lie ahead, as the administration fully realizes and is committed to resolving. Five will illustrate. First, an exciting challenge lies in deciding how to maximize Ederton's role as a major educational component in rural development in Kenya and the region, where the College's valuable intellectual resources ought to be applied. This is tantamount to formulating the appropriate Kenyan version of the American land-grant college, with its strong developmental and public service dimensions. Second and closely related to the first is the problem of entering into the expanded College mission with suitable balance among teaching, research, and service (or outreach). This is a problem in any institution but a critical one in a college without full-blown development of all three components and a college simultaneously burdened with more demand for teaching. Third, again linked to the two above, is the organization of the Agriculture Resources Center as the means of doing whatever is chosen to be done in the new areas of research and

outreach. The possibilities for both Kenya and the region are great and may well shape the future of the College. Fourth, is the maximization of opportunities with the new degree programs and Kenya's new 8-4-4 type of education, which provides a longer period of student preparation for degrees. What should be done with the longer time available? What balance should be struck between technical/professional career training on the one hand and basic or general education in principles and individual development on the other? Balance lost at the beginning will be hard to recover. Finally, some problems of faculty organization are ahead, although the academic part of the College seems to be in good hands, with good structures and good means of faculty participation in academic policy. If separate faculties are organized, as customary with University College status, new deanships inevitably follow, with two consequences: (1) a new level of administration between the faculty and the Principal and (2) some diversion of scarce resources to non-teaching duties. The question essentially is how fast to move now toward an unquestioned ultimate objective. Part-time deanships combining administration and teaching, with preponderant emphasis on the latter, might be an initial option.

These issues are illustrative of what top management faces. It appears to be well prepared for the task.

Linkage: Building the Partnership

The chief vehicle for making the Egerton-Illinois relationship work is a system of linkages, both formal and informal, involving representation from both sides of the partnership. The formal mechanism will provide a gateway through which each partner can gain systematic access to (1) the resources and programs of the other and (2) the broader set of operational resources and institutions, public and private, in the other's country. Advantage will be gained by dealing with one institution at each end of the linkage, while at the same time, having access through that institution to any cooperators needed or desired in the country of that institution. This gateway concept and mechanism will insure a shared stake in cooperation beyond this project and will build closer relationships among the designated faculty.

Therefore, the linkage mechanism must be conceptualized and organized to fit something new, both for Egerton and Illinois: (1) a twinning or partnership relationship between two institutions, not a group of institutions, and (2) concentration on the sharply targeted objectives of the IDAT project.

The partners, therefore, agree to the immediate establishment of a Liaison Committee at each cooperating institution and the designation of a Coordinator as Committee chairperson on each campus. These will function in a similar way, but may reflect the different needs and management styles of Illinois and Egerton. While each Liaison Committee will be small enough to be manageable, and able to function as a kind of executive committee, each will have a backstopping advisory committee for broader representation. At Illinois, departmental representation will be emphasized because that level is where academic matters are handled and linkage must be made. At Egerton, the existing Academic Board, or a designated part of it (i.e. the department heads), can function in this way because department heads are now represented there. Finally, in addition to the Liaison Committee and Coordinator, each with a larger advisory body, each will also be at liberty to coopt any other representation needed for any purpose. Thus at the top level (Liaison Committee and Coordinator) execution will be provided; and at the next level, advice will be obtained, with a third level for cooptation of any other talent needed on an ad hoc basis. At all levels in both institutions the linkage must reflect careful attention to the specific objectives of the IDAT project.

At Illinois, to capitalize on the decentralized nature of academic decision-making, emphasis will be put on mid-career department representatives who will be expected by colleagues and departmental heads to work with the project over the long term. Thus each key department will be represented by a productive faculty member who is knowledgeable and committed to focusing on and building this partnership within his or her field of study. Professional self-interest and personal commitment will thus be "locked in", with a gateway provided both to that department and to relevant professional organizations and colleagues in the academic world - both a formal institutional mechanism and an informal collegial network within the discipline or profession. This capturing and harnessing of departmental interest is essential for success.

One of the earliest activities will be the exchange of trips between the Egerton and the Illinois committees for joint study (first in Kenya and then in Illinois) of campus resources, problems, opportunities, needs and other commonalities for both short-term and long-term collaboration. Each committee, under guidance of the Coordinator, will host and facilitate the visits of its partner's committee.

Illustrative of the content of these intercampus or joint campus meetings, the Illinois committee at Ederton might review the overall management problems of the College under its new degree programs, doubled enrollment and opportunities with the Agricultural Resources Center and the proposed Rural Development Laboratories; discuss the areas in which Ederton can best use technical advisory assistance; and review the proposed curricular changes with discussion of options where appropriate. They might also meet with their administrative or disciplinary counterparts to learn about professional interests as a basis for determining future staff development needs and joint research opportunities.

Similarly, the Ederton representatives at Illinois might review how Illinois performs its functions like those at Ederton; discuss relevant UIUC courses, curricula and instructional materials; and observe research and extension in operation both on and off the campus. They will learn first-hand about the interrelation of teaching, research, and extension in the UIUC, as a typical land-grant institution, with discussion of the parts applicable and inapplicable in the Kenyan context.

Beyond such specific exchanges of academic experience, the visitors and visited will of course consider broader, overall issues of institution-wide concern, interest, and possible application - in fact, whatever common consent dictates as a mutual interest or pursuit.

Finally, beyond such initial visits by the entire committee each way, periodic follow-up visits will occur on an "as needed" basis to plan and carry out joint educational and research activities. For each subsequent year of the project beyond the first, at least one exchange visit per department will be made, if deemed mutually advantageous (e.g. in Year Two an Ederton departmental representative might visit Illinois with a reverse trip by an Illinois representative to Ederton in Year Three or vice versa).

This two-way exchange among like-minded professionals with similar duties is an essential first step in the project. It will give early momentum and establish both general and specific directions for the future. The face-to-face relationships will begin to generate the practical implementation of what will otherwise remain mere theory and rhetoric. Furthermore, cooperation cannot begin until each partner better understands the other, with its resources, needs and aspirations. Neither can cooperation begin effectively until initial personal as well as professional connections have been established, with sentiment as well as intellect.

The Coordinator, to be named by appropriate officers on each campus on a part-time basis, will be the manager of the relationships and activities generated by the campus - the facilitator, the initiator, the coordinator. He/she will be on the Liaison Committee and serve as its executive officer, working closely also with the advisory body. His/her duty will be to do everything possible to make the partnership productive and smooth-working; to be a conduit for the exchange of communications and information; to facilitate faculty exchanges (sabbaticals, consultancies, etc); and to cooperate with any special officer the campus may designate for specific duties, such as managing the training and staff development component. (See Illinois plan below). He/she will of course have a special liaison relationship with his/her counterpart on the partner campus.

These part-time Coordinators will also need backstopping assistance. For example, at Illinois, the Coordinator, who will report directly to the Director of the Office of International Agriculture, will serve on a quarter-time basis, with the same time allotment for a Principal Training Officer to administer the staff development training program at UIUC and a half-time teaching assistantship to be occupied by an Egerton degree candidate. Such candidate would greatly facilitate intercampus communication as desired by the Coordinators at each end of the partnership. Egerton will organize in a roughly similar way, as best suits its need, perhaps similarly using the liaison services of a visiting Illinois professor on sabbatical or research leave.

To summarize, this linkage mechanism is the chief means of making the project coherent, purposeful, and effective for both collaborating parties. It will be the channel through which people, ideas and experience will flow in two-way interchange. It will produce the face-to-face relationships that will generate not only mutual confidence but also programs and methods for the project's several areas of critical development at Egerton: management, curriculum, instructional materials, faculty development, and outreach/research through the Agriculture Resources Center. This mode of operating is the essence of the partnership and will be the measure of ultimate success.

1. Administration and Management

The Situation:

Financial management, data management and institutional planning are all areas that have been identified by both outside observers and College administrative officers as

general areas in need of improvement. Specific areas of need include the forward budgeting process and a system of financial control. Management activities related to the dining halls, dormitories, library and other administrative facilities have also been identified as areas for examination and possible improvement. In addition, the lack of word processing, photocopying and printing activities related to administrative functions currently limits the efficient flow of administrative information.

Management (the supervision, control or direction) of College resources is comprised of several facets, including:

1. A plan or system for the collection, analysis and use of management data.
2. A two-way communication system for gathering these data and disseminating the resulting information.
3. A technology for processing, analyzing and reporting the data collected.

Ederton College appears already to have in place a well thought out and adequate management plan in both fiscal affairs and student related data. The current budgeting process appears to meet all governmental requirements and also provides the framework needed to make internal College decisions on resource allocation. However, the data collection and communication process, which is essentially a "paper and pencil" system, is strained to the point of putting current operations in arrears for periods ranging from a few weeks to a few months, depending on the part of the system. Since data needed for planning activities are generally the same as for the day-to-day operations, little useful data can now be made available for planning. Therefore, planning is largely based on casual observation and intuition rather than empirical data.

Available Options:

Options available for the solution of this problem seem quite limited. A reduction in the work load, either through reduced student enrollments or through reduced record keeping and reporting is not possible in the face of the proposed doubling of enrollment. A doubling of the administrative manpower to parallel this enrollment increase might be possible, but that at best would provide only marginal improvement in the quality of management data and would entail a high recurring cost. Another option would be to change the data collection and processing technology, and somewhat alter

The data communication system, this could be done by computerizing more of the administrative activities related to the operation of the plant.

The data communication system, this could be done by computerizing more of the administrative activities related to the operation of the plant. The data communication system, this could be done by computerizing more of the administrative activities related to the operation of the plant.

Another approach is to use a shared data system. This is a system of shared data and processing capabilities. It is a system of shared data and processing capabilities. It is a system of shared data and processing capabilities.

Today, because of the tremendous improvements and miniaturization of computer hardware and a corresponding simplification of the skill level needed to operate the equipment, another alternative is a more appropriate possibility. It is to provide computer services through a series of separate stand alone micro-computers. This approach has several advantages: First, for money spent, more computing power can be bought in multiple micro-computers than in a single large computer. Second, the system can be increased incrementally as the need arises and existing components can readily be moved to meet changing conditions without having to install expensive cabling. Third, vulnerability is reduced because of the "redundancy" of multiple machines, as compared to a single machine. Fourth, existing staff can be readily trained to operate smaller, simpler machines. Fifth, certain planned administrative application systems, such as payroll,

4) A building and room inventory file should be prepared showing, at the very least, the name of the building, the identification of each room (floor, classroom, storage, etc.), the square feet of space, and the seating capacity of each classroom or laboratory. This file should be used to support the maintenance history of the building and may be used to develop a plan (and budget) for regular building and grounds maintenance; it may also be used to measure facility usage and, therefore, measure the need for additional buildings.

5) A source time table for each academic term should be prepared, showing the day of the week, the time of day, building and room number of each class meeting. This file can be linked with data from the current term registration file and the building inventory file to produce classroom utilization data, such as hours per week of usage and percentage of capacity usage figures. This file could be the source of other valuable operational data (for instance, as an advanced calendar showing students absent from campus on field study trips and thus not to be counted in food service operations for a particular day.)

6) A source time table for each academic term should be prepared, showing the day of the week, the time of day, building and room number of each class meeting. This file can be linked with data from the current term registration file and the building inventory file to produce classroom utilization data, such as hours per week of usage and percentage of capacity usage figures. This file could be the source of other valuable operational data (for instance, as an advanced calendar showing students absent from campus on field study trips and thus not to be counted in food service operations for a particular day.)

7) A building and room inventory file should be prepared showing, at the very least, the name of the building, the identification of each room (floor, classroom, storage, etc.), the square feet of space, and the seating capacity of each classroom or laboratory. This file should be used to support the maintenance history of the building and may be used to develop a plan (and budget) for regular building and grounds maintenance; it may also be used to measure facility usage and, therefore, measure the need for additional buildings.

8) A source time table for each academic term should be prepared, showing the day of the week, the time of day, building and room number of each class meeting. This file can be linked with data from the current term registration file and the building inventory file to produce classroom utilization data, such as hours per week of usage and percentage of capacity usage figures. This file could be the source of other valuable operational data (for instance, as an advanced calendar showing students absent from campus on field study trips and thus not to be counted in food service operations for a particular day.)

1) The following information is being provided to you for your information only. It is not intended to be used as a basis for any action. The information is based on the best available information at the time of preparation. It is subject to change without notice. The information is provided for your information only and is not intended to be used as a basis for any action.

The information is based on the best available information at the time of preparation. It is subject to change without notice. The information is provided for your information only and is not intended to be used as a basis for any action.

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The appropriate management system for Eastern College, or any other organization, will work best if it is made up of a coordinated whole of the several separate management activities needed to carry out day-by-day operations. Each part should be able to function independently and should be geared specifically to the particular management activity performed. For example, a "financial management system" is often perceived as being a unified, all-encompassing system where someone pushes a button at the input side, a transformation occurs, and a final result appears, "untouched by human hands." In "real life" it does not work this way. A "financial management system" will usually consist of a budgeting and resource allocation segment, a payroll/personnel segment, a general ledger segment, several subsidiary ledger segments (debtor, creditor, stores, etc.), possibly several auxiliary operations

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It should be noted, however, that some data collection and communication tasks are best done by mechanical means, with the routine computerized or not computerized, for instance, where the volume of transactions is large volume of retail sales transactions to employees and dependents, the installation of simple cash registers at "point of sale" should improve the service to the purchaser and improve the data collection for the college.

Who Needs Computers?

Since most administrative activities ultimately pass through the Administration Building, this is where the greatest need for administrative computers exists. While all computer hardware should be the same brand to assure compatibility, there is a need to have two different sizes of machines. The financial affairs office should have two large micro-computers, one dedicated to payroll and personnel records, and the other dedicated to accounting functions. Both should have a minimum of 40MB (40 million characters) fixed disk storage as well as removable disk units. The admissions office also should have one of the same size to process student records. The Planning Officer should also have one but it should be equipped with graphic capabilities. All of these machines should be interchangeable to obviate a complete work stoppage when one breaks down.

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It would also be advantageous to have, if possible, some
smaller copy machines specifically designed with
the major departments in mind. The photocopier
used is an example of a machine that has been
designed; there is a design made by the manufacturer for
a copy machine to handle small items that need to be
produced. The addition of mimeograph (stencil) machines and
specifically located copy machines would result in a more
efficient operation of the academic departments.

1. **Introduction**

1.1 **Background**

The background of the project is the need for a comprehensive training plan that addresses the various needs of the agricultural sector. This plan is designed to build on the existing human resources base and to provide the necessary skills and knowledge for the future. The project is a result of a long-term commitment to agricultural development and is intended to be a model for other similar projects.

1.2 **Objectives**

The objectives of the project are to provide a comprehensive training plan that addresses the various needs of the agricultural sector. This plan is designed to build on the existing human resources base and to provide the necessary skills and knowledge for the future. The project is a result of a long-term commitment to agricultural development and is intended to be a model for other similar projects.

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2. **Alternatives and Options**

Central to this training plan is the desire to build on the very substantial human resources base that was developed through the education expansion component of the Agricultural Systems Support Project. IDAT will concentrate on areas and types of training that were not sufficiently addressed during that project.

Departments have done a careful job of auditing the training progress made through the ASSP Project and specifying the faculty development needs that remain to be met. To the extent

1) The University of Illinois will provide the majority of the training and support for the program. The University of Illinois will also provide the majority of the support for the program.

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TRAINING IN COMPUTERS AND DATA MANIPULATION SKILLS, ON THE OTHER HAND, WILL BE PROVIDED BY THE UNIVERSITY OF ILLINOIS. THE UNIVERSITY OF ILLINOIS WILL PROVIDE THE MAJORITY OF THE SUPPORT FOR THE PROGRAM. THE UNIVERSITY OF ILLINOIS WILL PROVIDE THE MAJORITY OF THE SUPPORT FOR THE PROGRAM. THE UNIVERSITY OF ILLINOIS WILL PROVIDE THE MAJORITY OF THE SUPPORT FOR THE PROGRAM.

d. Cost-sharing Approach

Cost sharing measures will be an integral element of the academic training component. The University of Illinois and Eastern College will make in-kind contributions in the form of

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2. IMPLEMENTATION

Actual implementation of the IDAT training plan will follow an iterative process. At each annual project review, in keeping with the collaborative assistance mode, SERTON and UIUC representatives will meet to monitor progress of training activities up to that point in the project and develop a revised training plan for each upcoming year.

F. Financial Analysis

Costs presented in Table 3 are based on the assumption that \$1000 per participant per month will be required for post-graduate degree training. This amount does not include tuition and fees. Based on the fact that some participants

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Table 3

ESTIMATED ANNUAL COST OF M.S. AND PH.D. TRAINING
BASED ON USAID HANDBOOK 10 RATES AND ALLOWANCES

	\$
1. Maintenance	8000
2. Textbooks	540
3. Health Insurance (HAC)	480
4. Typing Course -related Papers	200
5. Dissertation/Thesis	200
6. Training Equipment	500
7. Book Mailing	40
8. Professional Society Membership (Approx.)	40
9. Domestic (U.S.) Travel	1000
10. Research Support	<u>1000</u>
Total Estimated costs per year not including tuition and fees	\$ 12000.00

3. Curriculum Development and Evaluation

Curricular development obviously begins with what is already in place. Egerton programs are well established and five new degree programs have been tentatively planned. Therefore, "development" necessarily calls for primary attention to how to proceed from here--for the process by which changes and plans are made in the future, with inputs to maximize the relevance of the curriculum to the needs of the public and private agricultural sectors. This is of critical importance as additional degree programs are launched and major issues are faced. Two issues will illustrate: (1) establishing the balance between education for personal development, with broad human and scientific understanding, and education for a technical or professional career and (2)

resolving the problem of teaching two groups of students side-by-side for different but still related objectives (i.e., diplomas and degrees). Therefore, what follows here is concerned with the process of curriculum development and not the curriculum itself, which must be an evolving product of the process.

The curricula at Egerton College are based on the College's commitments to the development of well trained manpower for both the private and public sectors of Kenyan agriculture.

Therefore, continuous curriculum evaluation is vital if the College is to continue to fulfil its mission. The mechanism for such activity, including means for internal and external input, are presented in the attached chart. The process is neither as novel nor complicated as it may at first appear. First, it is based on much that already exists both in structure and procedure (i.e., departmental committees, a Curriculum Monitoring and Advisory Committee and the Academic Board). Second, the flow of decision-making from bottom to top, as in the initiation of a new course, is in a clear-cut, straight line (solid on the chart). And finally, numerous if not complicated relationships are dictated by the fundamental need for full faculty participation for content and method, and some external input for curricular relevance.

External advisory committees at the departmental and College level provide valuable input from the public and private sectors.

The external departmental advisory committees will evaluate courses and help determine both employment trends and job requirements of the area which they represent, with written minutes of meetings sent to the parallel internal committee and to the appropriate Faculty Board. Internal departmental advisory committees will play an important role in the evaluation process by reviewing and monitoring courses and the course program offered by the department.

The Curriculum Monitoring and Advisory Committee (CMAC) will provide a mechanism for external input to the evaluation process, as well as representation from the College at the faculty level. It will address the broader issue of curriculum evaluation and will advise regarding the allocation of resources based on studies of manpower and employment needs.

Recommendations of the CMAC will be transmitted to the Academic Board and ultimately to the Board of Governors for their consideration.

The intent for these internal and external efforts is to assure that the Egerton graduates are receiving the proper combination of learning experiences that will best prepare them both personally and professionally for the life and jobs they will undertake after the diploma or B.Sc. degree. This includes the preservation of the commendable goals stated in the Egerton catalogue: heavy emphasis on the practical skills, leadership abilities, and communication techniques "essential for a change agent in rural areas" and a blending of the practical and theoretical with emphasis on integrating the diverse subject matter required for each diploma or degree program.

What follows is more detail about the organization and operation of the various committees.

FUNCTIONS OF CURRICULAR BODIES

BOARD OF GOVERNORS

ACADEMIC BOARD

Establishes academic policy
Determines standards
Reviews course requirements
Evaluates programs
Recommends allocation of resources

FOUR FACULTY BOARDS

Reviews curricula + course offerings
Determines policy course + curricula content
Refers matters to CMAC
Acts on evaluative survey information

INTERNAL DEPARTMENTAL COURSE COMMITTEES

Reviews + evaluate courses
Monitors rationale for course offerings
Proposes course/curriculum changes

CURRICULUM MONITORING AND ADVISORY COMMITTEE (CMAC)

Monitors Course + curricula content
Monitors diploma + degree requirements
Evaluates diploma and B.Sc degree course offerings
Recommends course additions/deletion
Plans and executes manpower and employment studies
Assesses College curricular/teaching needs
Recommends allocation of resources

EXTERNAL DEPARTMENT ADVISORY COMMITTEES

Reviews + evaluates courses + curriculum
Determines employment needs and job requirements
Provides employment information

Department Advisory Committees

Both external and internal advisory committees at the department level are essential to provide input for the development, implementation and evaluation of curricula in each diploma and B.Sc. degree program.

It is, therefore, recommended that an external advisory committee be constituted for each department and the existing internal curriculum review structure in each department be formalized as a standing committee. The internal departmental committee of three to five members should be appointed by the head of department. The external departmental advisory committee will consist of four members, two selected from the public sector and two from the private sector of Kenyan agriculture, appointed by the Principal, upon the recommendation of the department head, who will serve as an ex-officio member of the committee. Members of the committee should be chosen on the basis of their knowledge of employment needs, job requirements and related expertise in the particular sector of agriculture they represent.

The organizational meeting of each department advisory committee will be called by the head of department, with lots then drawn to determine staggered terms of service. The committee will elect its own chair, and should meet at least one time a year. The functions will be as follows: to assess employment needs relating to the sector which they represent; to determine whether the graduates possess the knowledge, skills and other abilities required to fulfill the requirements of jobs in this sector of the agriculture economy; to review the course and curricular offerings of the departments, at both the diploma and B.Sc. degree levels; and generally monitor the students' preparation for careers.

The internal departmental committee is also responsible for monitoring employer needs, assembling placement data on diploma and B.Sc. degree graduates, and the administration of an exit questionnaire to be completed by each graduating student. The questionnaire can be an economical and convenient means of obtaining initial placement and feedback for further careers planning. It could be sent by the Principal or Academic Registrar to each student who is completing the diploma or B.Sc. degree with requested completion and return to the designated office five days prior to the graduation exercises. This easily implemented approach would assure nearly 100% response from graduating students. Also, employer surveys and other evaluative strategies can be developed to fit the unique needs of each department, getting useful information for a data base constructed to foster sound management and relevant educational decisions.

Curriculum Monitoring and Advisory Committee

The Curriculum Monitoring and Advisory Committee (CMAC) is expected to be the key committee for bringing together representatives from the agricultural sector in Kenya, both public and private, and senior campus officials to participate jointly in an on-going evaluation and review of the complete curriculum. Recognizing the important role of women in Kenyan agriculture, it is strongly recommended that they be appropriately represented on this eleven-person body.

External Representation

Two alternatives are suggested for the selection of the five external representatives.

(Alternative 1) Two representatives will be chosen from the public sector, nominated by the Ministry of Agriculture and will represent the crop and livestock sectors. The Director of Agriculture Research will also nominate one from the public or private research area. Two will be nominated from the private sector by representatives of agri-business trade organizations and the Kenyan National Farmers Organization.

(Alternative 2) One representative will be chosen from the public sector and will represent the agricultural production interests, nominated by the Ministry of Agriculture, and one representing the home economics interests of the country, nominated by the Kenyan Home Economics Association. A third representative will reflect the human resource development interests, nominated by the Ministry of Education. Two private sector representatives will be nominated by representatives of agri-business trade organizations and the Kenya National Farmers Organization.

Persons who are appointed to these positions should be chosen for their comprehensive understanding of employment needs, trends and the entry level job requirements of Kenyan agriculture. Appointments will be made for two year terms, subject to possible reappointment, with staggered or overlapping terms. All appointments will be made by the Principal of Egerton College.

Internal Representation

The College representation will consist of six members: the deans of the four faculties, the Deputy Principal (or Registrar) for Academic Affairs and the Assistant Academic Registrar, who will serve as Executive Officer and Secretary of the Committee. He/she will be responsible for organizing and calling the meetings, with at least one each term. At the first meeting, a chair and vice chair will be elected.

Manpower and Tracer Studies

The data base for informed decisions by CMAC will be generated from manpower studies of the employment needs and job requirements of the public and private sectors of Kenyan agriculture and periodic follow-up tracer studies of the employment of all Egerton College graduates. These studies are of such critical importance in curricular planning that they should be organized and undertaken at the earliest opportunity. They should be given the highest priority by the CMAC because of the need to gear all programs, and particularly the new degrees, to realistic employment opportunities in both the public and private sector. Henceforth without monopoly governmental employment for its graduates, Egerton College must take into account maximum relevant information about the changing job market.

While the CMAC should launch and monitor such studies, it should rely on outside professional assistance for the design and conduct of the survey. This is proposed as an item of technical assistance to be provided by the University of Illinois, either for leadership or partnership in the undertaking. CMAC might call upon departmental committees for help and also standardize procedures and forms used.

The follow-up study of graduates should provide information on the career path followed, including initial and subsequent employment history, job titles, and the relevance of their training to the entry-level job assignment. This information will give valuable feedback for innovative planning. Such follow-up studies should be carefully planned and routinized, with resources for printing, mailing, processing, analyzing and reporting of results included in the budget. A summary of the results could be reproduced and shared with the faculty and all advisory committee members.

Optional periodic surveys (e.g., every five years) of the employers of graduates could also provide valuable information regarding the job performance of Egerton graduates

and the relevance of their training. Areas of instruction needing strengthening would be implied. This information should then be broken down and shared with the department chairs and all persons engaged in the curricular development process.

Finally, the CMAC will report its recommendations to the Academic Board, which must give its formal approval before any implementation can occur.

Faculty Boards

When faculties are formally organized, under University College status, with four presently contemplated, each will have a Faculty Board, consisting of the Dean, who will serve as Chair, and all the department heads in that faculty. They will review course and curricular offerings, structure and context. When new course proposals are presented by departments, the Faculty Board will decide whether or not the course should be offered. Another important function is the consideration of evaluative information which has been gathered by the external advisory committees and the departmental courses committees.

Each Faculty Board will report to the Academic Board, the ultimate decision-making body on curricular matters, and may also communicate with the departments on any curricular matters of mutual interest. Faculty Boards may also make recommendation directly to the Academic Board on matters that do not require review or input from the Curriculum Monitoring and Advisory Committee, although it is recommended that all information relating to curricular matters be shared with CMAC.

Academic Board

As the final internal reviewing body, the Academic Board determines academic standards, establishes policy, evaluates programs, reviews course requirements and makes recommendations regarding the allocation of resources for the educational programs of the College. It receives advice, reports and recommendations from all campus groups involved in curricular matters and makes well-informed recommendations to the Board of Governors, through the Principal, regarding both the diploma and B.Sc. degree programs.

To repeat, this apparatus, or some approximation of it, is essential for Egerton's curricular planning in a rapidly changing agricultural sector with both private and public employers.

4. Educational Materials, Research and Outreach

The Agriculture Resources Center (ARC) was officially opened by President Daniel arap Moi in July, 1985, and will serve as the focal point for instructional materials development, as well as for the research and outreach programs of the College. The ARC will be headed by a Director, who will have the same rank as a Deputy Principal and will report directly to the Principal. Although the Educational Materials Center (EMC) will serve the on-campus teaching program, it will also be a central component of the outreach program and will be under the administrative direction of the ARC Director.

The Director of the ARC will also provide programmatic direction and coordination for the continuing education program of the ARC, as well as direction and coordination for both the on-campus and off-campus research program of the College. To consider these respective research and outreach functions, the educational materials dimension will be discussed first, followed by the contribution of the IDAT project to the research and outreach programs of the College.

Objectives

Project objectives are to increase educational materials development and production capabilities with materials based on East African agriculture; to provide in-service training on materials preparation and production to insure presentation in a problem-solving format; to reduce down-time of equipment; and to develop skills necessary for proper operation and maintenance. In addition, there is a need to provide additional books, audio-visual equipment, and agricultural journals for students and faculty.

Alternative Approaches To Providing Educational Materials:

1. To purchase selected materials and/or specialist staff on campus to prepare materials, with production in the local private sector on a contract basis.
2. To have materials developed or prepared at Egerton and then produced at the University of Illinois and shipped to Egerton for distribution.
3. To establish an Educational Materials Center (including media services) at Egerton to prepare and produce educational materials to serve the teaching, research, and the outreach programs.

Discussion of Alternatives

Educational materials could be prepared and produced by the private sector, but these materials are usually expensive and often more sales-oriented. Generally they would not be developed on a problem solving approach with concomitant practical skills, demonstrations, and questions. Such developers usually lack teaching experience and methods that educational specialists and teaching faculty possess.

Most teaching materials developed at Illinois and other U.S. universities are not appropriate for Kenyan agriculture. Agronomic and livestock husbandry practices, as well as farming equipment, are different; as are the soils, climate and growing conditions. Some educational materials could be used directly from the U.S. but the number is limited. Under the Egerton-Illinois partnership, these appropriate materials for Kenya could be screened, purchased with project resources, and sent to Egerton for on-campus use. Materials on castrating, docking, surveying, welding, engine repair, etc., do not change much from one country to another. Individual copies of other teaching aids could be purchased for specialists at Egerton to revise to fit Kenyan agriculture. Since it is always easier to rewrite or revise materials than to start from the beginning, Illinois could assist Egerton to secure copyright releases for educational materials from sources other than Illinois.

On balance, given the needs of the on-campus teaching staff and the potential value to the outreach program at Egerton, the third alternative listed above is recommended as the best. An educational materials center developed on campus will result in better local control, a better quality product and better use of limited resources. With the expansion of the Agriculture Resources Center and a more active research program, research results could also be summarized into a usable form and materials prepared for both outreach and teaching.

Educational materials and media services would be a valuable tool for the teaching staff and students in the Department of Education, as well as in the outreach programs. In-service training and demonstration programs would also be strengthened. Furthermore, faculty and staff from both Illinois and Egerton could collaborate on the development of such materials as teaching modules, manuals, slide sets, transparencies, video tapes and text-books relevant to Egerton's curricular needs.

Implementing an Educational Materials Center

Given the dire need for educational materials both on-campus and an off-campus, it is recommended that an Educational Materials Center (EMC) be developed as soon as possible. Properly set up, it could produce quality teaching aids, at a reasonable price. Within time, the production unit could become self-supporting through sales and the cost kept low by having the subject-matter specialist salaries supported by the College and only the cost of production considered when pricing an item.

Where appropriate for the outreach program, materials prepared could also be given a credit line, "In cooperation with the Ministry of Agriculture and Livestock Development", thus providing wider acceptance and use of materials, which will greatly reduce unit cost and maximize input.

Initially it is recommended that the needed subject-matter specialists, representing appropriate departments, have joint appointments between their home academic department and the EMC. In the beginning, these subject-matter specialists could be assigned to 50% time teaching, with 50% devoted to the development of educational materials. At first, it may be necessary to combine some of the subject-matter areas into major fields, such as Animal and Dairy Science; Plant and Soil Science; Agricultural Economics and Management; Food Science and Home Economics; and Education and Extension. Wherever possible, these specialists should also work with their colleagues in their home department to develop materials. With the EMC available to produce materials, the teaching staff could also develop additional instructional materials and teaching aids for use in their classes and for outreach programs, or even for independent study outside the classroom.

It is strongly recommended, that when resources permit, permanent full-time materials specialists be assigned to the EMC to work full-time with their home departments on a broader range of educational materials. These specialists could also offer in-service courses for secondary agriculture teachers and extension field personnel on the materials and its use. This is also a good way of advertising the materials and getting useful feedback from teachers and extension assistants. The development of quality teaching aids and materials for the outreach program will contribute greatly to the excellent reputation Egerton already has in training agricultural personnel and could be a model program on materials development for East Africa and much of the Third World. With the possibility of EMC becoming a regional educational materials center, materials sold regionally would further reduce the unit cost of production.

Subject-matter specialists will prepare materials and other teaching aids, but these should be checked before printing or production for accuracy, using a more senior colleague in the author's department or perhaps a specialist at the Ministry of Agriculture. Accuracy and completeness are essential, as is editing by a qualified editor, so that the finished product reflects the excellent reputation of Ederton. A quality product must be produced if it is to be accepted and widely used.

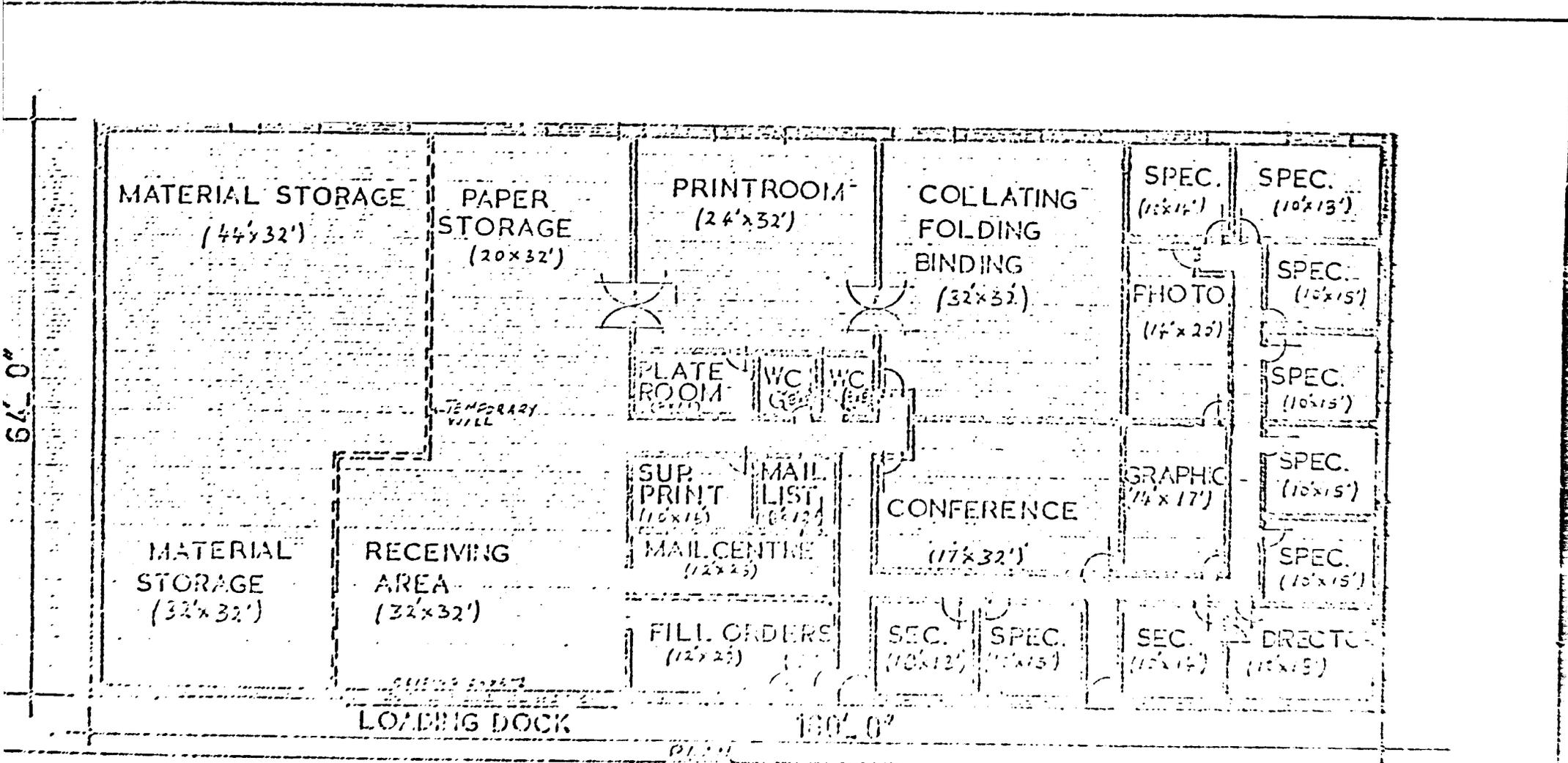
To help guide the EMC on the kinds of educational materials for the outreach program, it is suggested that an advisory committee be set up to establish priorities on the types of materials needed. This committee should contain such persons as secondary agriculture teachers or school inspectors, extension subject-matter specialists and College faculty.

The EMC, as an arm of the ARC, should be responsible for all phases in the development, production, marketing, billing, and sale of the products produced, including (1) writing the material, (2) rough typing for College staff approval, (3) editing by a technical editor, (4) final typing, (5) preparing the art work by a graphic specialist and final paste-up copy for printing, (6) printing by a pressman, (7) assembling for sale, (8) selling the material and (9) billing the client. The money received for materials sold should go into a revolving account to defray future costs of production. It will take some time before the revolving account covers all costs of production, and it is recommended that in the meantime, these differences be covered by the local currency resources of the project.

Complete cost accounting is necessary to aid in pricing the product for sale. It will also be necessary to build a mailing list of possible clients, who might also be sent a catalogue announcing new products. This information can easily be computerized for future reference.

Additional facilities will be necessary to house the EMC. Offices, including graphic design and a dark room as well as adequate space for printing, shipping, and storage, should be designed into this facility (see attached floor plan). The minimum office size needed per staff member is about 125-150 square feet. The dark room should contain a stainless steel sink, about six feet in length, with controlled water temperature. This is used for film developing and for Kodalith negatives for the printing process. Half-tones for pictures with various dot patterns are developed, using trays in the sink. The process camera is needed to handle enlargements or reductions of graphs, charts and covers. Other basics are enlargers, driers, contact printers, and developing and fixing trays for film development.

Best Available Document



PROPOSED PRINTING CENTRE FOR PORTON COLLEGE, MURU, KENYA.

DATE: 20/10/72
 SCALE: 1/8" = 1'-0"

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The off-set printing facilities should be similar to the one suggested for administrative services. The print shop storage and shipping area should be large enough to handle incoming paper to be printed on and to handle the finished product. A loading and unloading dock will help. The storage area needs to be dry and well lighted. Paper for printing may require controlled temperature and humidity, especially for off-set printing on plastic/transit for overhead transparencies. If only a limited number of transparencies is needed, a thermo-fax machine is used and this requirement for controlled temperature and humidity will not need to be considered.

As skills are developed in the printing operation, the next phase could include equipment for the reproduction of text-books as well as lecture notes and outlines. This will require equipment for book binding, which is expensive and demanding of space. It is recommended that less expensive spiral binding and Velo binding equipment be used initially. As an alternative, hard book binding could be done in the private sector on a contract basis.

For EMC, three microcomputers (2-IBM XT's and 1-IBM PC), one dot matrix, and one letter-quality printer are recommended at the start. They will be used with software packages for (1) word processing for letters and writing teaching aids; (2) D-base III plus for mailing labels, billing and inventory control; (3) Desktop Printer for page layout and original copy for printing; and (4) Fancy Fonts for titles and large type for transparencies. A typewriter Kroy lettering machine might be a better choice for lettering in the beginning stages. Software packages for graphics, charts, titles, and various art designs are also available, but could be added later.

As to personnel, graphic arts specialists are needed for artwork, page layout and photographic work. In the beginning these people in graphics could be technicians or diploma students from the Education and Extension Department. The artists and designers will need light tables, T-squares and other artist equipment. The artists will work under the direction of the subject-matter specialist and coordinate the final finished copy with the typist. Two or three graphic arts specialists should be able to handle the production and photography from the specialists. Others could be added if the need arises.

The material specialists should prepare, as a minimum output per year, the following: 100 pages of new or revised material, 2 slide sets (40-60 frames each) plus accompanying

script or study guide; 1 set of overhead transparencies (30-50 frames), and 1 video tape illustrating some practical skill to be learned. (Note: video-tape production should be delayed until the second or third year of the project.) Achievements in production will improve with experience. The first year will be a learning period, but specialists should progress rapidly after their initial training period and should have no problem in reaching the minimum goal.

As the EMC develops, it may well want to prepare printed materials in color. However, because of the high cost, it is suggested that these materials be bid out to a local skilled color printer or printed at Illinois and then shipped back to Kenya for distribution. Parenthetically, this project could also purchase educational materials from different centers in the U.S., where suited to Kenyan agriculture. There is no reason to reproduce and develop materials that are the same no matter where located. The University of Illinois works with all of the other U.S. material centers and has access to their catalogues. Such material could be reviewed by Egerton faculty for possible direct use in Kenya.

Also the Vocational Agriculture Service at Illinois is willing to grant copyright releases for most of its materials and many other states would like to do the same. This could be a very valuable benefit from the linkage between Egerton and Illinois. The latter could also help Egerton find parts and service manuals, catalogues for teaching aids, and other materials suited to Kenya.

The University of Illinois will offer in-service training courses on materials production to aid specialists and assist them in starting up the EMC. Computer-assisted instruction should also be given in training sessions at Egerton or at Illinois. Training could also be given to the teaching staff on materials production while they are pursuing a degree or on a sabbatical. Either of these two methods would greatly assist the new specialists and help avoid the many pitfalls in writing and producing educational materials.

Strengthening The Library

The current total stock of the Library system is about 35,000 items, inclusive of bound volumes and periodicals. About 780 current periodicals titles are received. As Egerton College moves to university status, there will be a greatly expanded need for additional library resources and services. These needs have not been fully assessed in the preparation of

the project paper. It is recommended that through the linkage program an experienced UIUC librarian come to Egerton to properly assess these needs and prepare a long-term plan to strengthen library resources. Some limited project resources have been allocated to improve the operation of the library, but the long term library needs must be fully assessed at an early date and a long term development plan drawn up for future College budgeting and additional donor support.

Research and Outreach

The additional functions to be headquartered at the Agriculture Resources Center (ARC) include both on-campus and off-campus research and outreach, plus extension services within the Rural Development Laboratories and continuing education. Each will be discussed separately, giving options where appropriate, as well as resource requirements.

Research

With the move to university status, the importance of research in the mission of the College will continue to grow. In developing an overall research program or thrust for the College, it seems appropriate and important that it reflect and contribute directly to the teaching programs. This suggests a very applied-adaptive research program that focuses directly on the constraints to agricultural production and technology transfer in Kenya, as well as other related rural development problems. By conducting research on these constraints that limit, either directly or indirectly, the quality of life of rural households, the College can make an important contribution to rural development in Kenya. This knowledge, in turn, can be passed on directly to students through classroom and laboratory experiences, as well as to research and extension workers. It can also reach agri-business firms through in-service workshops held on campus and through educational materials, publications and teaching aids produced by the Educational Materials Center (EMC).

Currently, the College allocates 1% of its operational budget to research, which is distributed on a competitive basis to faculty based on research proposals that are reviewed and ranked by a standing research committee. This mechanism has been satisfactory in the past, given resource availability and the status of the College as a diploma-level institution. However, given university status and new degree programs, an increasing number of faculty at the doctoral level, and the expanded mission of the College, the current level of research resources and the mechanism for allocation are inadequate.

Incentives to do research are needed (financial aid, release time, publication opportunities, etc.), as is a better-defined coordinating and leadership responsibility for research promotion. This includes encouragement by allocation of research funds on a competitive project-proposal basis, rather than by any blanket release of faculty time in the hope that research will automatically be forthcoming.

To provide a focal point for the research programs and to closely integrate them with the outreach program, the Director of the ARC will be charged with overall College leadership for both programs. The Director will have the same status as a Deputy Principal and will report directly to the Principal on all matters concerning research and outreach. To assure that the full organization of ARC does not divorce it from the expertise and talent of the academic side (or teaching faculty) as well as external views, the Director should be broadly guided by a newly created Research and Outreach Policy Committee, including representatives of public and private sector agricultural research organizations, the agricultural extension service, agri-business firms, farmer institutions, senior faculty, the Academic Registrar and the Principal. This Policy Committee will meet once a year or more frequently if policy questions arise. In resource allocation decisions and in monitoring and evaluating research progress, the Director will be assisted by a Research Advisory Committee composed of the senior faculty members on the Policy Committee. They would assist the Director in assessing research proposals and in making recommendations about which ones should be funded and at what level.

The research program is expected to have two dimensions, which should be closely related and integrated, whenever and wherever possible. The first is on-campus research, which will probably focus more heavily on subject-matter-related studies that may involve on-station/laboratory trials or experiments but should also contribute to knowledge about how to solve production problems or remove constraints to agriculture and rural development.

A second research thrust would be organized around two Rural Development Laboratories - one established in the area surrounding the campus and a second, to be organized later, that would focus on the low-potential areas around the Chemeron Field Station. The program for each laboratory would be developed by an interdisciplinary faculty team, who would assess the needs of small farmers and rural households in each area, and then focus the research program on generating

practical solutions to these problems. The research program for each laboratory would be reviewed annually by the Research Advisory Committee and appropriate recommendations made with respect to program direction and funding.

It is fully expected that senior level students in certain departments would be involved, either directly or indirectly, in these research programs. The objective would be for them to learn "first hand" research skills, to review findings and to consider the implications with respect to making recommendations to farmers and farm households.

On outreach, President Daniel arap Moi two years ago challenged the College to become involved in the surrounding community and to assist farmers in improving their production practices. Egerton responded to this challenge by organizing an extension service committee, which attempted to initiate an outreach program, to be followed by an adaptive research program. Unfortunately, inadequate funding was available for implementation; nevertheless, the faculty remains interested and committed. It is proposed that a research fund be established, from local currency project resources, to implement these research/outreach activities, or an appropriate variation of them, within the two Rural Development Laboratories. These resources would be used under the direction of two designated faculty members, one for each laboratory, to serve as team leader with on-going oversight review by the Director of the ARC and annual reviews of the research component by the Research Advisory Committee.

Sabbatical and Graduate Student Research

To expand and enhance research activities in the academic departments and through the Agriculture Resources Center, it is proposed that there be a continuing flow of Illinois faculty, and professors from other U.S. universities, conducting research in collaboration with Egerton faculty through the sabbatical exchange program. Although it is expected that this will be a two-way exchange, in the early years of the project, the major flow of sabbaticals will be to conduct research in Kenya. The expanded teaching program will limit the opportunities for senior Egerton faculty to take sabbaticals abroad. These research activities should focus on problems related to specific agricultural and rural development problems in Kenya and East Africa. Furthermore, since a central objective of this program is to develop long-term professional/colleial relationships, these sabbatical research projects should generally be done in collaboration with an Egerton faculty member and/or with other scientists in Kenya.

In most cases, U.S. professors working at Egerton would be attached to an appropriate academic department, but in some cases they might work out of the ARC. Where IDAT resources are used to cover travel and topping-up of salary, each U.S. professor would be expected to contribute to the teaching program of the College. These teaching responsibilities would be negotiated in advance, on a case-by-case basis, depending on the individual's speciality or relevance of research and on the appropriate department's need. However, in no case could the teaching load exceed 50% time under U.S. sabbatical policy.

In some cases, U.S. professors would bring their own research funding with them, particularly to cover major research expenses. In other cases, they will need local transport, consumables and other items involving local costs. To cover these, it will be necessary to establish a research fund from local currency project resources. This fund would be administered by the Director of ARC and each research project would need to estimate resource requirements for project success. These should be planned and budgeted in advance of sabbatical initiation.

Another dimension of strengthening the research capacity of the College is through post-graduate student research. It is expected that most Egerton faculty, undertaking doctoral level study in the U.S. as part of the IDAT project, will return to Kenya to conduct their dissertation research on specific problems important to Kenya. During their research and data collection activities in Kenya, they will need access to research resources for such items as transport and consumables. It is expected that they would submit their proposals to the Director of ARC and reasonable requests would be supported from this same research fund.

Likewise in reverse flow, U.S. graduate students would also be expected to come to Egerton to work on research problems of importance to Kenya. It is expected that these activities, where deemed mutually important, could also receive support through the Director of the ARC, after being reviewed and approved for support by the Research Committee. In most cases, these researchers would also be attached to the appropriate academic department. Where mutual interest exists for these doctoral candidates to teach part-time in an academic department, they could also receive a stipend and other support to cover their living expenses while at Egerton. This stipend would be paid from the local currency resources set aside to cover the topping-up salaries for U.S. faculty on sabbaticals at Egerton.

The Outreach Program

Another new dimension of Egerton College is its intention to use its many resources in the service of the public. This means both on-campus and off-campus services. The former will chiefly involve services offered through the continuing education/conference facilities of the ARC. It is expected that the faculty and staff will be involved in a variety of ways in offering in-service training courses, workshops and other advisory services for groups and organizations in both the public and private agricultural sectors.

Off-campus service or outreach is typified by what can be done in the two selected areas called Rural Development Laboratories - the contiguous area around the College and the area around the Chemeron Field Station. That would mean providing outreach-type services in the selected laboratory areas in collaboration and agreement with the governmental ministries operating there. In doing so, there would be an excellent opportunity to carry out on-farm adaptive research, and derive technology transfer strategies. Thus, the purpose of outreach activities in the Rural Development Laboratories is primarily to learn how to provide outreach services more effectively and then to use this knowledge and the laboratory setting for training student and ministry personnel through in-service training.

An excellent basis for launching a progressive and coherent outreach program exists in the plans devised last year by a special committee appointed by the Principal. It prepared a plan in response to President Moi's challenge that the College should serve the surrounding community. That plan, or some variation of it, could become Egerton's best Kenyan approximation of the American land-grant college model of integrated teaching, research and service, provided through the resources of a single institution, committed to development, by making knowledge useful.

The challenging opportunity of these Rural Development Laboratories as the means of learning to teach and to serve clearly ought to be funded out of local currency funds. The faculty are interested and ready to act, if resources are available. For the first year of the project, work should be concentrated in the area surrounding the College. However, in the meantime, a second committee should be established for the second laboratory around Chemeron and, after an action plan has been drawn up, approved work should be started there during the second year of the project. As mentioned earlier, the two interdisciplinary research teams, who would develop and help carry out the research and outreach programs in these two laboratories, would operate under the general guidance and direction of the Director of the ARC.

Another important dimension of the outreach program will be the use of the ARC hotel and conference facilities to help carry out the continuing education function of the College. It is expected that the ARC facility will become an increasingly important resource for the College to use in sponsoring or hosting workshops, conferences and in-service training courses for different agricultural groups. For example, it is expected that in-service training courses will be organized for research and extension workers. The Agricultural Management Project, which will operate out of the ARC, will use the Center to put on management workshops for agri-business managers. Furthermore, it is expected that this facility will be extensively used in the future for regional seminars and conferences.

The current hotel, office and conference facilities are adequate for a start-up phase of operation; however, the limited number of hotel rooms greatly restricts the size of groups that can be accommodated at the Center. Although project resources have not been requested for the expanded facilities, this is clearly an important need which must be addressed in the near future, possibly by another donor. Expanded facilities will clearly increase the potential use for larger groups or multiple smaller groups simultaneously.

The realization of these different on-campus and off-campus outreach activities would dramatically and quickly advance Egerton toward its goal of increased public service in Kenya and the region. Putting it another way, Kenya cannot gain the full benefit of Egerton's many resources unless some such opportunities for linking research and outreach (and teaching) are provided.

B. Financial/Economic Analysis

1. Financial Analysis

Cost estimates for this project have been generated from program statements developed for the four primary project outputs described in the technical analysis and summarized in the body of the Project Paper.

Table 1, Summary Cost Estimate and Financial Plan and Table 2, Summary Cost Estimate by Project component, are presented in section V-B of the main body of the Project Paper. Tables 3-6 provide Projections of Expenditure by Fiscal year and Contributor. Tables 6, 7, and 8 provide detailed budget estimates by fiscal year for each of the principal contributors, AID, Egerton College/GOK and UIUC. Contributions of Egerton College/GOK and UIUC are primarily in-kind, reflecting faculty time released to support the project. Some, notably the UIUC tuition and fee waivers and the Egerton/GOK equipment procurement for the Education Materials Center, are "hard" costs and are not included in the recurrent budget of either institution. Support Document 1 provides, in narrative shorthand, underlying assumptions for each detailed budget. Support Document 2 provides the basis for estimating average monthly costs for short term TA and project management costs for each fiscal year. Costs, inflation and contingency factors in support of Table 4, Costing of Project Inputs/Outputs. Support Documents 4 and 5 provide information on micro-computer procurement and equipment for the Educational Materials Center respectively.

Separately they are useful in analyzing discrete project components. In the aggregate they provide a plan for the implementation of project activities and a basic guide for evaluation.

TABLE 3 PROJECTION OF EXPENDITURE BY FISCAL YEAR
AID CONTRIBUTION (\$000 OR EQUIVALENT)

	FY 87	FY 88	FY 89	FY 90	FY 91	TOTAL
	FX	FX	FX	FX	FX	FX
I CURRIC DEV	29.0	30.2	8.7	9.0	9.4	86.3
II ADMIN IMPROV	179.6	8.3	8.7	-	-	196.6
III STAFF DEV/TRNG	208.5	310.4	335.3	243.8	189.0	1287.0
IV EDUC MATS, RES & OUTREACH	98.5	61.2	31.2	31.5	22.5	244.9
V EVALUATION	-	40.0	-		50.0	90.0
SUBTOTAL	515.6	450.1	383.9	284.3	270.91	1904.3
VI INFLATION	25.8	22.5	19.2	14.2	13.5	95.2
TOTAL	541.4	472.6	403.1	298.5	284.4	2000.0

TABLE 4 PROJECTION OF EXPENDITURE BY FISCAL YEAR
EGERTON/GOK CONTRIBUTION (\$000 OR EQUIVALENT)

	FY 87 LC	FY 88 LC	FY 89 LC	FY 90 LC	FY 91 LC	TOTAL LC
I CURRIC DEV	15.0	15.0	12.5	12.5	12.5	67.5
II ADMIN IMPRO	28.3	20.3	20.3	14.3	14.3	97.5
III STAFF DEV	207.3	275.3	347.1	347.1	297.1	1473.9
IV EDUC MATS	474.6	488.5	521.4	488.5	486.0	2459.0
V EVALUATION	-	-	-	-	-	-
VI INFLATION	72.5	79.9	90.1	86.2	81.0	409.8
TOTAL	797.1	879.0	991.4	948.6	890.9	4507.7

TABLE 5 PROJECTION OF EXPENDITURE BY FISCAL YEAR
UIUC CONTRIBUTION (000 OR EQUIVALENT)

	FY 87	FY 88	FY 89	FY 90	FY 91	TOTAL
	FX	FX	FX	FX	FX	FX
I CURRIC DEV	3.7	3.9	4.1	4.3	4.5	20.5
II ADMIN IMPROV	45.0	47.9	16.6	17.4	18.2	144.6
III STAFF DEV	118.5	118.5	112.5	112.5	112.5	574.5
IV EDUC MATS	162.0	270.0	270.0	270.0	270.0	1242.0
V EVALUATION	-	-	-	-	-	-
SUBTOTAL	329.2	439.8	403.2	404.2	405.5	1981.9
VI INFLATION	16.5	22.0	20.2	20.2	20.2	99.1
TOTAL	345.7	461.8	423.4	424.4	425.7	2081.0

**TABLE 6 DETAILED BUDGET BY FISCAL YEAR
AID CONTRIBUTION (\$000 or equivalent)**

OUTPUT FX	FY 87	FY 88 FX	FY 89 FX	FY 90 FX	FY 91 FX	TOTAL FX
I CURRIC DEV						
TECH ASST/ UIUC STAFF	26.0	27.2	7.2	7.5	7.9	75.8
INT TRAVEL	3.0	3.0	1.5	1.5	1.5	10.5
TOTAL CURRIC DEV	29.0	30.2	8.7	9.0	9.4	86.3
II ADMIN IMPROV						
A TECH ASST	26.0	6.8	7.2	-	-	40.0
INT TRAVEL	3.0	1.5	1.5	-	-	6.0
SUBTOTAL	29.0	8.3	8.7	-	-	46.0
B EQUIPMENT/SUPPLIES						
MICROCOMPUTERS	120.0	-	-	-	-	120.0
SOFTWARE	30.5	-	-	-	-	30.5
SERVICE	-	-	-	-	-	-
SUBTOTAL	150.5	-	-	-	-	150.5
TOTAL ADM IMP	179.6	8.3	8.7	-	-	196.6
III STAFF DEV/TRNG						
A DEGREE TRNG						
EXTRA TUITION	-	32.0	36.0	36.0	24.0	128.0
STIPEND/SBSTNC	60.0	128.0	162.8	78.0	36.0	464.8
OTHER TRNG CST	10.0	29.0	32.0	22.0	18.0	111.0
SUBTOTAL	70.0	189.0	280.8	136.0	78.0	703.8
B NON-DEGREE TRNG						
STIPEND/ABSTNC	15.0	15.0	3.0	3.0	3.0	39.0
OTHER TRNG CST	5.0	5.0	1.0	1.0	1.0	13.0
US TRAVEL	5.0	5.0	1.0	1.0	1.0	13.0
SUBTOTAL	25.0	25.0	5.0	5.0	5.0	65.0

TABLE 6 DETAILED BUDGET BY FISCAL YEAR
AID CONTRIBUTION (\$000 or equivalent)

OUTPUT	FY 87 FX	FY 88 FX	FY 89 FX	FY 90 FX	FY 91 FX	TOTAL FX
C MANAGEMENT						
UIUC COGRD OFC						
PROJ COORD	22.5	23.7	24.9	26.1	27.3	124.5
TRNG COORD	22.5	23.7	24.9	26.1	27.3	124.5
SEC SUPPORT	15.0	15.7	16.4	17.3	18.1	82.5
US TRAVEL	10.0	10.0	10.0	10.0	10.0	50.0
INT TRAVEL	24.0	7.5	7.5	7.5	7.5	84.0
SUPPLIES	6.0	6.0	6.0	6.0	6.0	30.0
SUBTOTAL UIUC	100.0	86.6	89.7	93.0	96.2	465.5
EGERTON COORD OFC PER DIEM	13.5	9.8	9.8	9.8	9.8	52.7
SUBTOTAL MANAGEMENT	113.5	96.4	99.5	102.8	106.0	518.
TOTAL STAFF DEV/TRNG	208.5	310.4	335.3	243.8	189.0	1280.
IV EDUC MATS RES & OUTREACH						
A TECH ASST						
UIUC STAFF	19.5	27.2	7.2	7.5	-	61.4
INT TRAVEL	-	1.5	1.5	1.5	-	4.5
TEACHING AIDS	20.0	10.0	-	-	-	30.0
SUBTOTAL	39.5	38.7	8.7	9.0	-	95.9
B SABBATIC/SCHOLAR PROG						
INT TRAVEL	9.0	22.5	22.5	22.5	22.5	99.0
C JOINT RESEARCH VEHICLES	50.0	-	-	-	-	50.0
TOTAL EDUC MATS, RES & OUTREACH	98.5	61.2	31.2	31.5	22.5	244.9
V EVALUATION	-	40.0	-	-	50.0	90.0
OUTPUT SUBTOTALS	515.6	450.1	383.9	284.3	270.9	1904.8
VI INFLATION 5%FX/ 10%LC	25.8	22.5	19.2	14.2	13.5	95.2
TOTAL	509.1	472.9	441.1	301.0	261.4	2000.0

TABLE 7 DETAILED BUDGET BY FISCAL YEAR
EGERTON/GOK CONTRIBUTION (\$000 or equivalent)

OUTPUT	FY 87 LC	FY 88 LC	FY 89 LC	FY 90 LC	FY 91 LC	TOTAL LC
I CURRIC DEV						
TECH ASST/EC						
STAFF	10.0	10.0	10.0	10.0	10.0	50.0
INT TRAVEL	3.0	3.0	1.5	1.5	1.5	10.5
SUBSISTENCE	2.0	2.0	1.0	1.0	1.0	7.0
TOTAL CURRIC DEV	15.0	15.0	12.5	12.5	12.5	67.5
II ADMIN IMPROV						
A TECH ASST/EC						
STAFF	7.0	3.5	3.5	-	-	14.0
INT TRAVEL	3.0	1.5	1.5	-	-	6.0
SUBSISTENCE	4.0	1.0	1.0	-	-	6.0
SUBTOTAL	14.0	6.0	6.0	-	-	26.0
B EQUIPMENT/SUPPLIES						
MICROCOMPUTERS/ SERVICE	14.3	14.3	14.3	14.3	14.3	71.5
SUBTOTAL	14.3	14.3	14.3	14.3	14.3	71.5
TOTAL ADMIN IMP	28.3	20.3	20.3	14.3	14.3	97.5
III STAFF DEV/TRNG						
A DEGREE TRNG						
SALARIES	50.0	100.0	150.0	150.0	100.0	550.0
INT TRAVEL	30.0	90.0	90.0	90.0	90.0	390.0
RES COSTS	-	-	50.0	50.0	50.0	150.0
SUBTOTAL	80.0	190.0	290.0	290.0	240.0	1090.0
B NON-DEGREE TRNG						
SALARIES	5.2	5.2	1.0	1.0	1.0	13.4
INT TRAVEL	30.0	30.0	6.0	6.0	6.0	78.0
SUBTOTAL	35.2	35.2	7.0	7.0	7.0	91.4
C MANAGEMENT						
UIUC COORD OFC						
INT TRAVEL	24.0	7.5	7.5	7.5	7.5	54.0
PER DIEM	11.0	3.5	3.5	3.5	3.5	25.0
SUBTOTAL	35.0	11.0	11.0	11.0	11.0	79.0
D EGERTON COORD OFC						
COORD	4.7	4.7	4.7	4.7	4.7	23.5
SEC SUPPORT	1.3	1.3	1.3	1.3	1.3	6.5

TABLE 7 DETAILED BUDGET BY FISCAL YEAR
EGERTON/GOK CONTRIBUTION (\$000 or equivalent)

OUTPUT	FY 87	FY 88 LC	FY 89 LC	FY 90 LC	FY 91 LC	TOTAL LC
FAC LIAISON	3.1	3.1	3.1	3.1	3.1	15.5
INT TRAVEL	48.0	30.0	30.0	30.0	30.0	168.0
SUBTOTAL	57.1	39.1	39.1	39.1	39.1	213.5
SUBTOTAL MANAGEMENT	92.1	50.1	50.1	50.1	50.1	292.5
TOTAL STAFF DEV/TRNG	207.3	275.3	347.1	347.1	297.1	1473.9
IV EDUC MATS RES & OUTREACH						
A TECH ASST						
INT TRAVEL	-	1.5	1.5	1.5	-	4.5
SUBSISTENCE	-	1.0	1.0	1.0	-	3.0
SUBTOTAL	-	2.5	2.5	2.5	-	7.5
B EQUIP/FACILITY						
BUILDING	156.2	-	-	-	-	156.2
EQUIPMENT:	-	-	-	-	-	-
PRINT SHOP/ PHOTO/AV.	75.3	-	32.9	-	-	108.2
COPY CENTER	39.5	-	-	-	-	39.5
SUBTOTAL	271.0	-	32.9	-	-	303.9
C OPER/MAINT						
PROF STAFF	6.2	31.0	31.0	31.0	31.0	130.2
EXP SUPPLIES	11.4	95.0	95.0	95.0	95.0	391.4
SUBTOTAL	17.6	126.0	126.0	126.0	126.0	521.6
TOTAL EDUC MATS, RES & OUTREACH	474.6	488.5	521.4	488.5	486.0	2459.0
D SABBATIC/SCHOLAR PROG						
LC STIPEND	162.0	300.0	300.0	300.0	300.0	1362.0
INT TRAVEL	9.0	22.5	22.5	22.5	22.5	99.0
RES SUPPORT	15.0	37.5	37.5	37.5	37.5	165.0
SUBTOTAL	186.0	360.0	360.0	360.0	360.0	1626.0
V EVALUATION	-	-	-	-	-	-
OUTPUT SUBTOTALS	725.2	799.1	901.3	862.4	809.9	4097.9
VI INFLATION	72.5	79.9	90.1	86.2	81.0	409.8
TOTAL	797.7	879.0	991.4	948.6	890.9	4507.7

TABLE 8 DETAILED BUDGET BY FISCAL YEAR
UIUC CONTRIBUTION (\$000 or equivalent)

OUTPUT	FY 87 FX	FY 88 FX	FY 89 FX	FY 90 FX	FY 91 FX	Total FX
I CURRIC DEV						
A TECH ASST/ UIUC STAFF	3.7	3.9	4.1	4.3	4.5	20.5
TOTAL CURRIC DEV	3.7	3.9	4.1	4.5	4.5	20.5
II ADMIN IMPROV						
A TECH ASST UIUC STAFF	45.0	47.4	16.6	17.4	18.2	144.6
TOTAL ADMIN IMP	45.0	47.4	16.6	17.4	18.2	144.6
III STAFF DEV/TRNG						
A DEGREE TRNG TUITION WAIVER	80.0	80.0	80.0	80.0	80.0	400.0
SUBTOTAL	80.0	80.0	80.0	80.0	80.0	400.0
B NON-DEGREE TRNG						
OTHER TRNG CST	7.5	7.5	1.5	1.5	1.5	19.5
SUBTOTAL	7.5	7.5	1.5	1.5	1.5	19.5
C MANAGEMENT						
UIUC COORD OFC						
US TRAVEL	2.0	2.0	2.0	2.0	2.0	10.0
SUPPLIES	1.0	1.0	1.0	1.0	1.0	5.0
PER DIEM	1.0	1.0	1.0	1.0	1.0	5.0
FAC LIAISON	27.0	27.0	27.0	27.0	27.0	135.0
SUBTOTAL	31.0	31.0	31.0	31.0	31.0	155.0
TOTAL STAFF DEV	118.5	118.5	112.5	112.5	112.5	574.5

TABLE 8 DETAILED BUDGET BY FISCAL YEAR
UIUC CONTRIBUTION (\$000 or equivalent)

	FY 87 FX	FY 88 FX	FY 89 FX	FY 90 FX	FY 91 FX	Total FX
IV EDUC MATS, RES & OUTREACH						
SABBATIC/SCHOLAR PROGRAM						
UIUC SALARY	162.0	270.0	270.0	270.0	270.0	1242.0
TOTAL EDUC MATS, RES & OUTREACH	162.0	270.0	270.0	270.0	270.0	1242.0
V EVALUATION	-	-	-	-	-	-
OUTPUT SUBTOTALS	329.2	439.8	403.2	404.2	405.2	1981.6
VI INFLATION 5%FX/ 10%LC	16.5	22.0	20.2	20.2	20.2	99.1
TOTAL	345.7	461.8	423.4	424.4	425.7	2080.7

Support Document 1

Cost Assumptions - Detailed Budgets.

Table 6 - Aid contribution

I Curriculum Development

A. TA

1. FY 87:- 4 months (3 on manpower study; 1 instruction spec.)
FY 88:- 4 months (3 on manpower study; 1 on instruction spec.)
FY 89:- 1 month on instruction/curricular spec
FY 90:- 1 month on instruction/curricular spec
FY 91:- 1 month on instruction/curricular spec
2. Int Travel - assume average ticket cost of \$3000 for all Int travel, assume A.I.D. pays one-half of airfare for T.A.
3. Subsistence - assume average need of \$1000/month for all in - Kenya per diem needs.

II Administrative Improvement

A. TA

- FY 87:- 4 months (2 persons @ 2 months each to train EC computer users)
- FY 88:- 1 mo - 1 person/mo to follow-up training, troubleshoot etc.
- FY 89:- same
- 90-91:- No TA planned at this time.
Same assumptions as 2 and 3 above.

B. Equipment

FY 87 Purchase 30 microcomputers for highest priority areas plus associated software and service contracts. (Balance of recommended list can be packaged for other donor support).

IV Staff Development and Training

A. Degree Training

1. FY 87: a) 10 new starts under UIUC tuition fee waiver

b) Assume need to provide topping up of up to \$6000/trainee

c) international travel costs at same rate as for TA.

FY 88: a) 10 FY 87 group continues; 25-30 new starts, most on assistantship or waivers but with provision for four at non-linkage institutions

b) Other assumptions hold

FY 89: 10 FY 87 group continues/complete; FY 88 group continues; new starts as in FY 88 to limit of topping up funds.

FY 90: Departure of FY 87 group opens 10 new UIUC tuition fee waivers; FY 88 group continues/complete

FY 91: FY 89 group continues/complete.

2. In 89-91 trainees will be doing thesis research in Kenya. Additional RT travel will be needed for trainees and major professor.

3. Assume average of \$2,500 for in-country thesis research costs, including \$1000/advisor for subsistence costs while supervising the trainee.

B Non Degree Training

1. FY 88/89: a) 10 trainees at average of 1 month each

b) average subsistence 1500/month.

c) average \$500/trainee for special program fees at other university, attendance at special short courses, etc.

d) average \$500/trainee to travel to other locations.

89/91:

- a) 2 trainees average 1 month each
- b) other assumptions hold

C. Management

1. UIUC FY 87-91

- a. assume .25-fte linkage coordination, .25 fte training coordination and 1.0 fte support to manage US side.
- b. international travel for coordinators and faculty liaison travel to Kenya as follows: FY 87-16 trips; FY 88/91, 5 trips per year. Assume A.I.D. pays one-half of air fare.
- c. US travel primarily supports in country travel of Egerton College faculty liaison team.
- d. assume average need of \$500/mo. for office supplies, telecommunications, etc.
- e. per diem in LC to support coord. and fac-liaison Kenya travel

2. Egerton-FY 87-91

- a. international travel for Egerton Coordinator and faculty liaison to US as follows: FY 87-16 trips; FY 88/91 - 5 trips/year.
- b. Kenya travel primarily to support in country transport of UIUC faculty liaison
- c. assume average need of \$2000/year for office supplies, telecommunications, etc.
- d. per diem is FX to support Egerton Coordinator and Faculty Liaison travel in U.S.

IV Educational Materials, Research and Outreach

A. TA

1. FY 87

3 months (combination of manpower study and materials prep) other assumptions for TA costs apply.

- FY 88 4 months (3 months manpower study/material prep; 1 month EMC organization/operations spec.)
- FY 89-90 1 mo. EMC organization/operations spec.
- FY 91 - no TA planned at this time. Assume A.I.D. pays one-half of air fare for T.A.
2. Teaching Aids - allocation in FX to purchase off the shelf items of universal applicability from UIUC/VAS or other U.S. university. Program total of \$30,000 with split of 20/10 in FYs 87/88.

B. Equipment/Facility

1. Building construction of a 1000m² Education Materials Center at Kshs.2.5K/m² - equivalent to \$156,200.
2. Equipment a. using estimates provided by Roger Courson, include equipment for EMC print shop, photo center and audio visual center. (no provision for separate administrative printing facility included; this could be purchased from other donor support if deemed essential);
- b. include production Xerox or similar quality smaller copiers for "quick copy" needs campus-wide.

C. Sabbatic/Scholar Program.

1. Assume sabbatic schedule as follows: FY 87-6; FY 88/91-10 per year.
2. Assume scholar schedule as follows: FY 87-0; FY 88/91-5 per year.
3. Top up/stipend: assume 1/2 time equivalent top-up for sabbatic salary (average \$27,000/sabbatic) and scholar stipend (average \$6000/scholar).
4. International travel: Assume A.I.D. pays one-half of air fare.
5. Numbers of trips anticipated in FY 87 - 6 sabbatic; FY 88/91 - 10 sabbatic and 5 scholar per year.

Assume establishment of a research fund from local, i.e. Kenya, funds to support joint faculty research of sabbatic and scholars - available for US and Egerton

faculty/scholar research projects approved by EC Research Committee. Purchase from FX up to 5 RHD vehicles in FY-87 to support linkage and research activities. Assignments of vehicles made to need.

V Evaluation

Provide FX for mid term and EOP evaluations in FY 88 and FY 91. Assume majority of persons on evaluation teams will be drawn from REDSO/EA or AID/W to minimize FX cost. Although no audit is currently planned for this project, funds would be made available from the evaluation budget should an audit prove necessary.

VI Inflation Factor at 5% FX and 10% LC.

VII Contingency distribute residue of FX (\$49,200).

Table 7 - Egerton/GOK Contribution

I Curriculum Development

1. TA-Assume release time value for faculty equivalent to 1.0 fte senior level to devote to curricular matters.
2. Assume EC contributes one-half of T.A. air fare and local subsistence allowance.

II Administrative Improvements.

- A.1. TA - Assume release time value for faculty involved in complete training in FY 87/89.
 2. Assume EC contributes one-half of T.A. air fare and local subsistence allowance.
- B. Equipment/Supplies - Assume EC will provide computer paper, etc from recurrent budget.

III Staff Development/Training

A. Degree Training

1. EC to continue 80% of salary of faculty while in overseas training. Assume average salary equivalent to US \$6,200 or Kshs 100,000. Number of trainees detailed in notes on Table 3.A
2. EC to cover international travel and research costs of participants

B. Non Degree Training

1. Same assumption as A.

C. Management

1. Assume linkage coordinator at .5 fte at senior professor level of Kshs.150,000/yr (equivalent to \$4,700) plus secretarial support.
2. EC to contribute one-half of our fare for UIUC liaison committee travel and local per diem; also international travel of EC liaison committee.

IV Educational Materials, Research and Outreach

A Building 1000m² at Kshs.2500/m².

B Operations/Maintenance

1. Prof. staff: assume assign 1.0 fte in FY 87 and increase to 5.0 fte in FY 88/91 at average salary equivalent to \$6200/year.
2. Support staff: assume assign 3.0 fte in FY 87 and increase to 25.0 fte in FY 88/91 at average salary equivalent to \$3,800/year.

B. Sabbatic/Scholar Program

1. Housing support estimated at value of \$500/month or \$6000/year. Numbers of sabbatic/scholars determine housing contribution. Assumptions based on Table 3-A levels.
2. EC to contribute one half of international travel, as well as local stipends and research support.

VI Evaluation - All FX costs; no C contribution.

VII Inflation - Factored at 10% LC.

VIII Contingency - not factored

Table 8 UIUC Contribution

I Curriculum Development

TA - Assume .5 mo each year by Asst Dean on curriculum development update.

II Administrative Improvements

TA FY 87/88 Approx 7.0 mo. faculty release to work as counterparts to senior Ederton College administrative staff programmed for short term training in various administrative areas.

FY 89-91 Approx 2.0 mos. effort as above.

III Staff Development and Training

A. Degree training

Ten tuition and fee waivers by UIUC average \$8000/student in each of the five years of the project.

B. Non-degree training

Waiver of normal special programming fees, averaging \$750/mo, normally assessed to short-term trainees.

C. Management - UIUC.

1 Travel, supplies and per diem to support Faculty Liaison.

2 Assume total salary release for Faculty Liaison Group equivalent to .5fte/yr.

IV Sabbatic/Scholar Program

A. UIUC provide .5fte salary for six sabbatic leaves in FY 87 and 10 sabbatic leaves in each FY 88/91.

Support Document 2

Average monthly cost for salary and related costs of TA

A. In Kenya

1. Salary	\$4500
2. Fringe benefits 15%	700
3. Indirect Costs 25%	1300

B. In U.S.

1. Salary	\$4500
2. Fringe benefits 15%	700
3. Indirect Costs 45%	<u>2300</u>

\$7500

Average monthly cost for TA over LOP at 5% inflation per year (\$000)

	FY 87	FY 88	FY 89	FY 90	FY 91	
In Kenya		6.5	6.8	7.2	7.5	7.9
In U.S.		7.5	7.9	8.3	8.7	9.1

Support Document 3

PRIORITY ADMINISTRATIVE IMPROVEMENT COMPUTER EQUIPMENT LIST
 *** COST FIGURES ARE SHOWN IN U.S. DOLLARS ***
 (All computers to be equipped with a printer.)

OFFICE LOCATION	-----	USE PRIMARY/ SECONDARY	NOTE	S F W R	Q N T Y	UNIT	COST MACHINE COST	TOTAL COST
** FUNCTION		ADMINISTRATION						
PRINCIPAL	PC	TEXT	L.Q. PRINTER	1	2	\$3000	\$6000	\$6000
REGSTR-ACAD	PC	TEXT	L.Q. PRINTER	1	2	3000	3000	3000
REGSTR-ADMN	PC	TEXT	L.Q. PRINTER	1	2	3000	3000	3000
PLANNING	AT	DATA TEXT	CLR,GRPH,WIDE	2	1	8000	8000	3000
PLANNING	PC	TEXT/DATA	L.Q. PRINTER	1	1	3000	3000	3000
ADMISSIONS	AT	DATA/TEXT	WIDE PRINTER	2	1	7000	7000	7000
ADMISSIONS	PC	TEXT/DATA	L.Q. PRINTER	2	1	3000	3000	3000
ADMISSIONS	BACKUP	ARCHIVE	TAPE BACKUP		0	2500	0	2500
STUDIES	AT	DATA/TEXT	CLR, WIDE PR	3	1	7000	7000	7000
STUDIES	BACKUP	ARCHIVE	TAPE PRINTER	2	2	7000	14000	14000
FINANCE	BACKUP	ARCHIVE	TAPE BACKUP		0	2500	0	2500
FINANCE	AT	DATA/TEXT	WIDE PRINTER	2	2	7000	14000	14000
FINANCE	PC	DATA/TEXT	DOT PRNTR	1	2	2800	5600	5600
FINANCE	PC	TEXT/DATA	L.Q. PRINTER	1	2	3000	6000	6000
CMPTR SRVCS	PRT	RESERVES	PORTABLES	0	4	1500	6000	6000
STORES	PC	DATA/TEXT	DOT PRNTR	1	1	2800	2800	2800
TAYTON FARM	AT	DATA/TEXT	WIDE PRINTER	3	1	7000	7000	7000
TAYTON FARM	BACKUP	ARCHIVE	TAPE BACKUP		0	2500	0	2500
TAYTON FARM	PC	TEXT/DATA	DOT PRNTR	1	1	2800	2800	2800
ARC HOTEL	PC	DATA/TEXT	DOT PRNTR	1	2	2800	5600	5600
ARC-PRGMS	AT	RESEARCH		3	2	7000	14000	14000
ARC-PRGMS	PC	OPERTNS	SPCL PRNT	5	2	3000	6000	6000
CAMPUS WIDE	SETUP		MCHN SET UP		0	1500	0	1500
EMC-PRNT	AT	ACCOUNTS	COLR WIDE	2	1	7500	7500	7500
EMC-PRNT	PC	TXT EDIT	SPCL PRGMS	5	1	3500	3500	3500
EMC-PRNT	SOFTWARE	DESK TOP	PUBLISHING	5	0	0	0	2500

Subtotal* \$120,800 \$134,800

SOFTWARE 13 SETS PACKAGE #1	1	0	500	0	6500
SOFTWARE 6 SETS PACKAGE #2	2	0	700	0	4200
SOFTWARE 4 SETS PACKAGE #3	3	0	2000	0	8000

Subtotal 18700

Machine maintenance - 10% of machine cost
 Total \$165,500 12000

Software Package #1 Data Base + Word Processing
 #2 Data Base + Word Processing + Spreadsheet
 #3 Data Base + Word Processing + Spreadsheet + Statistics
 #5 Special software packages-price included in machine cost

Note: PC equivalent to IBM-PC compatible MS/DOS micro-computer; AT equivalent to an IBM-PC AT compatible MS/DOS microcomputer

Support Document 4
Equipment for Educational Materials Center and
2 week Copy Center

I. Educational Material Center:

Note: Building facilities to be located near the Agricultural Resources Center. This will require a new building approximately 64' x 160'. See drawing for layout. Office furniture and storage shelving to be purchased when completed.

1. Purchase of teaching materials.

A. Suggested Vendor: University of Illinois and other US Universities having materials suited to Kenya agriculture.

Price (\$000)

30.0

2. Equipment Specification

A. Printing equipment

<u>Quantity</u>	<u>Description</u>	<u>Price</u>	(\$000 or equivalent)
2	Off-set Printer, GPC with Chain delivery. @ 15.5		31.0
1	Collator - (for 8 1/2 x 11" Material)		1.6
1	Collator - for 11" x 17"		2.3
1	Paper Cutter (Gillotine)- (W/three extra cutting knives)		5.0

1	Stitcher/stapler	5.5
1	Multifolder	1.3
1	Process Camera W/210 MM W/A lens	5.8
1	Film Processor	5.0
1	Electostatic platemaker	8.9
1	Platemaker	1.0
2	Light tables @.45	.9
1	Spiral Binder - Electric	3.2
1	Mechanical spiral binder punch	1.8
1	PMT processor	.3
1	Typewriter Kroy lettering machine (fonts Helvetica 8pT., 14pT., 18pT. 24pT., 36pT.)	2.5
1	Binding machine	.5
	Spare parts for above equipment	3.0
	Printing and darkroom supplies for 18 months	7.0
	Duplicator start-up supplies for 18 months	15.0
	CIF to Mombasa	10.0

B. Photo Equipment

<u>Quantity</u>	<u>Description</u>	<u>Price (Ksh.'000)</u>
2	35 mm SLR Camera @7.0	14.0
2	Lenses: Wide angle 28 mm @2.4	4.8
2	Telephoto lens 150 mm 3:1 300 m @3.5	7.0
2	Mcaro lens @3.6	7.2
2	Flash units @2.0	4.0

1	35 mm SLR camera W/250 filmback	12.0
1	Photo Drier	4.4
1	Negative Drier	6.0
1	Photo enlarger & Stand	32.0
1	Secretary Thermofax Transparency Maker	6.0
1	6' stainless steel sink w/ controlled water temperature controls	40.0
4	11" x 14" Developing trays @ .48	1.9

C. Audio-Visual Equipment

<u>Quantity</u>	<u>Description</u>	<u>Price</u> (Ksh 000)
2	35 mm slide projectors (carousel) (Lens 70 - 120 mm 300m) @ 20.0	40.0
2	Overhead projector - 3 m-2130 @18.0	36.0
2	Filmstrip projector @10.0	20.0
1	Cassette duplicator - cetec or equal	130.0
2	Cassette recorder players @8.0	16.0
1	Reel to reel recorder	15.0
	<u>TV equipment (not needed until 3rd or 4th year)</u>	
1	Video cassette recorder Format: 'U' Matic TV system: CCIR 1/2" Color: PAL Record/playback time: 60 min Power Source: 240 Volt 50 Hz Horizontal Resolution: 250	50.0

lines color
Horizontal resolution:
350 line monochrome
Audio: 2 tracks
Audio crosstalk: Better than 40 db
Audio frequency response: 50-15,000Hz
Signal to Noise Ration-color 46 db

Portable Video Cassette Recorder 60.0
Record/Playback time: 20 min. 1/2"
Power Source: 12V DC from internal
rechargeable battery
- external battery cable
- 240 v. AC Adaptor/Battery
Recharger
- Wireless microphone
* All other specifications
as for (1) above

E.N.G. Video Camera 1/2" 200.0
Color system: PAL/CCIR
Horizontal Resolution: 550
lines (center)
Signal to noise Ration:
53 db
Sensitivity: 2000 LUX, f4
(at 3200K)
Optical filter: 3200 deq. K,
5600 deq K, 5600 deq
K + 1-/8ND
Lens mount: Navonet
Lens: zoom

- Triped with Dolly & Adaptor 100.0
- Studio Configuration
attachment
- i.e. Lens cabl kit 4.5
inch Viewfinder
Remote operation panel
AC Adaptor - 240 V AC. 50 Hz
Remote Control Adaptor
Camera Cable 15m-50m

E.N.G. Configuration 20.0
attachments:
- Battery Belt
- Battery Pack
- VTR Cables
- Microphone
- Battery charger Adaptor
- Carrying case
- Headphones
- Power source: 240V.AC 50Hz

20 inch Color Monitor 18.0
PVM series or KX20pSI
TV system: CCIR
Color System: PAL
Color resolution: 600 lines
Power source: 240V.AC 50Hz

D. Drawing Equipment

1 Light box table 7.2
2 Drawing Tables @12.0 24.0
1 20 11/2-2" drawer map file 24.0
2 T- Squares and drawing accessories @4.0 8.0
2 Rapidograph pen sets @ .8 1.6

E. Mail Room

1 Digital scale 44.8
1 Postal meter (Rented): -

F. Storage & Order Filling Area

100 4' x 6' adjustable metal upright shelving @ 5.2 520.0
1 Hydraulic cart to lift skids .9

G. Office Furniture

14 Desks @5.2 72.8
28 Chairs @2.0 56.0
28 Tables @1.2 33.6
28 File cabinets @3.2 89.6

II Quick Copy Centers

<u>Quantity</u>	<u>Description</u>	<u>Price (Ksh 000)</u>
16	Memographs - Roneo acatel or similar quality equipment @.9	14.4
5	Copy machine - Ricoh - Model 3050 or similar quality equipment @80.0	400.0
1	Zerox - Model 3600 or similar quality & Model	217.0

2. Economic Analysis

The economic soundness of the IDAT project rests on the cost effectiveness of the several processes to be introduced to achieve planned outputs. The cost effective aspects integral to the design of the project include 1) limited use of expatriate technical assistance - no resident long term TA and limited short term TA; 2) reliance on U.S. faculty on sabbatic leave and advanced graduate scholars to strengthen institutional capability to organize and conduct research and assist in the dissemination of the results; 3) adoption of cost sharing principles to guide the Egerton Work/Study Program of faculty and staff development; and 4) introduction of new technology to improve operational efficiency. These aspects are examined below in the context of the four planned major outputs of the project.

Output - Curriculum Development and Evaluation

Historically, Egerton College graduates have been guaranteed employment in the public sector. Recent actions by government have removed the certainty of employment and have encouraged students to look for careers in the private sector. The curricular response to this shift in government policy could take either of two forms. The first would be to continue with the same curricular structure, assuming that preparation for public and private sector employment requires the same mix of theoretical and practical subjects. The second would be to adopt a pro-active approach to determine the changes needed in the educational infrastructure to produce graduates who can make productive contributions to employing organizations immediately.

The adoption of the "stand pat" alternative would invariably lead to a stagnant curriculum producing graduates with less than marketable skills for a dynamic private sector. Employers would have to retrain new employees, in many instances, with the costs of training eventually passed on the consuming public in the form of higher prices. The spread effect of such a "stand pat" approach would be reduced productivity and increased costs.

By adopting the alternative of a process of continuous evaluation and adaptation, Egerton College can assure that expectations of potential employers - whether public or private - can be considered in the curricular structure for a given diploma or degree program. Graduates having the requisite skills for productive work will increase the competitive position of the employer, making possible reduction in consumer prices through efficiency in the production of goods and services.

Output - Administrative Improvements

Ederton College has a pressing need to modernize its administrative information management system. Over the next three years this need will become increasingly critical in the face of the proposed doubling of enrollment. While the current management plan follows generally accepted principles of business management and appears to meet all government requirements, the plan is operated by a "paper and pencil" technology. Options to improve this situation are few. Student enrollment, which is a major determining factor in administrative work load, is scheduled to double within three years, possibly requiring a doubling of administrative manpower and concomitant recurrent costs. It appears that the only feasible course of action to increase efficiency and thereby hold down recurring costs is to computerize as many functions as possible.

Computerization can be accomplished in one of two patterns: a single centralized, large computer or multiple, decentralized smaller computers. The latter pattern is recommended because of cost advantages, increased College control, a more reliable system and simplicity of operation. This choice is now possible because of recent advances in the miniaturization and simplification of micro-computers.

A selection of highest priority targets for computerization has been recommended that will provide for the immediate needs of Ederton College. Increased efficiencies in administrative operations and instructional programs can be realized in subsequent years, perhaps through additional resources from AID or other donors, by procuring the phase two list recommended by the design team. (See Procurement List following project annexes)

Output - Staff Development and Training.

Participant training is costly, but cost effective in terms of the alternative of ignoring the importance of investment in human capital. The IDAT project is designed to depart from the traditional AID financed participant program - the costs of which were in no way considered excessive by the design team - to develop a model unique to the expressed desire of Ederton College leadership. Cost sharing elements in the form of guaranteed tuition and fee waivers and access to competitive assistantships by UIUC, partial salary contribution and international transportation for trainee faculty by Ederton College, time commitments to support major professors by Ederton faculty trainees, and supplemental maintenance and health insurance contributions by AID form the basis of the Ederton Work/Study Traineeship.

This experimental program reduces the AID direct cost input to the training component to partial maintenance support, up to a fixed level equivalent to that prevailing for half-time graduate assistantships at the training institution. (Some reserve has been provided to cover full tuition and fees for a limited number of traineeship that cannot be accommodated under the Egerton Work/Study model.) To illustrate the cost saving potential to AID under this approach, a participant studying for a graduate degree at UIUC under full AID sponsorship, in accordance with Handbook 10 schedules, should be budgeted in the range of \$18,000 to \$19,000 dollars per year. Under the Egerton Work/Study model the cost to AID would be less than \$8000-\$9000 in the majority of cases.

Output - Educational Materials, Research and Outreach

Classes at Egerton College follow the lecture method with limited or no use of textbooks, lecture notes or other supplementary materials. The lecturer is often the sole impartor of information for a given course. His/her ability to transmit unpublished information to students is limited.

In another part of the information generation and flow continuum, secondary schools, in which the teaching of agriculture is mandated, constantly approach Egerton College, and other institutions it is assumed, for material that can be used by their instructors. In the form of handouts, these materials may be used within the student's family to improve the productivity of the family unit or enhance the quality of family living.

Units of MOALD that have direct contact with producers require current published information that can be left with farmers/herdsmen. They also need materials that enable them to illustrate newly recommended practices to groups.

These needs can be met by searching out and purchasing educational or extension literature, slide or slide-tape presentations, films or videotape programs, or any of a wide array of excellent materials produced in the U.S., Europe or other agriculturally advanced countries. Some of these may have universal applicability. Most will not. And they will be expensive in terms of unit costs and as a drain on foreign exchange reserves.

The alternative of investing in the construction and equipping of an Educational Materials Center at Egerton College is the best response for long term benefits to Kenya agriculture. The investment, which is projected from GOK

resources, will provide Egerton College with the capability to

- 1) institutionalize information management in such a way as to add to the productivity of the teaching faculty through production of classroom materials;
- 2) enhance the quality of agricultural education imparted to Egerton students and to secondary school students, many of whom will be engaged in farming or agricultural related activities after leaving school, through the production of teaching modules, illustrative materials and take-home information, and
- 3) improve the capability of MOALD extension personnel to serve their clientele by providing an array of print, sound and visual materials oriented toward small farmer concerns.

The continued development of the EMC and the increasing dissemination of the product - agricultural information - will increase the awareness and productivity of Kenyan agricultural workers and lead to improved incomes of the rural population.

Contributing to the flow of information described above is the increase in the generation of knowledge to be shared through faculty research. The Egerton College faculty will increasingly be expected to conduct research as the institution expands its mission to include preparation of degree candidates. Good research is an indispensable component of good teaching. Not all Egerton faculty will have the opportunity for graduate studies abroad - certainly not within the resources available to this project. Most will develop individual research skills in Kenya, primarily at Egerton itself and the nearby farms.

Research methodology training can be provided through various forms of technical assistance activity. The limited resources of this project will not permit the assignment of a cadre of research specialists who would devote their full time activities to interacting with Egerton faculty on a program of in-service training. While the type of activity is both productive and cost efficient in terms of the numbers of researchers assisted, it cannot be an alternative for IDAT.

A less intensive, but more collegial, approach is recommended using selected U.S. faculty on sabbatic leaves from UIUC and other institutions, supplemented by advanced graduate students undertaking field research for dissertations. This program will be supported by U.S. university and Egerton College contributions for the salary, housing, transportation and research costs. AID contribution is limited to the purchase of a limited number of vehicles to provide a modest degree of mobility to U.S. sabbatic and scholars and their Egerton colleagues.

Approximately ten sabbatic professors and five graduate scholars can be absorbed within Egerton resources each year. With the average annual cost of a full time expatriate TA approaching \$200,000 this alternative clearly appears to be cost-effective for IDAT.

Separately the alternatives adopted to address each of the project outputs have cost advantages - imputed or explicit - over other options. Collectively they respond to the foreign exchange resources available from AID and exploit to a greater than usual degree cost-sharing opportunities of the academic partners, Egerton College and UIUC.

At the time of the mid-term and final evaluation, economic and financial returns for project interventions in each of the four goal areas may be calculated. Recommendations for continuation or modification of activities can be generated from these analyses.

C. Social Soundness Analysis

(1) Socio-cultural Context

The poor natural resource base of most of Kenya, the growing population, the skewed distribution of good agricultural land and the lack of viable production alternatives outside of agriculture contribute to the need to intensify agricultural production. The structure of agricultural production is built primarily around large, medium and small-scale farmers and pastoralists within the private sector. Small-scale farms contain approximately 70 percent of the Kenyan population and account for about three-fourths of the total agricultural output. Only about seven percent of the population are either settled or nomadic pastoralists. Medium and large-scale farms, plantations and ranches account for a small proportion of the population, but are significant in terms of the amount of land covered.

All farmers and pastoralists, in varying degrees, are affected by weaknesses in institutions responsible for the availability of agricultural inputs and services and provision of market outlets. Many of the institutional weaknesses stem from human weaknesses attributable to the educational system. The formal educational system is geared toward learning specific information and skills. Little attention is given to educating students for problem-solving and decision-making, an appreciation for the contributions of related disciplines, an attitude of collaboration and teamwork, a sense of organization and leadership, and a good understanding of the dynamics of small-scale farming and of pastoralism.

(2) Beneficiaries

The primary beneficiaries of this project will be Egerton College faculty, staff and students, and adults involved in activities of the Agriculture Resources Center. The faculty will benefit directly from opportunities for upgrading their knowledge and skills, through training and research opportunities, and indirectly or more broadly from working in a better managed environment, by having available relevant instructional materials, and by having opportunities to participate and gain knowledge from the outreach programs of Egerton.

The magnitude of the impact of training is shown by both need and probable opportunity. A total of 79 individuals have been suggested for overseas degree training (49 doctorate and 28 masters), of whom less than half will eventually be accommodated. In addition, 41 individuals, more than half in the administrative category, have been identified for non-degree training ranging from a few weeks to several months.

Those who aspire to the Ph.D. level will be expected to conduct their dissertation research in Kenya on problems in Kenyan agriculture, thereby linking their research to relevant rural needs. These dissertation topics will be selected in conjunction with UIUC advisors, who are participating in the linkage program and understand the Kenyan agricultural system through their participation in this project, and with the concurrence of Egerton College.

As of July 1985, the diploma course staff, comprised of lecturers and demonstrators, totalled 134, with 12 percent women, of whom almost half are in the Home Economics Department.

It is anticipated that students will benefit from the project in many ways. Curriculum modifications and changes will be made to incorporate new information and skills oriented to job opportunities in both the public and private sectors. In fact, manpower studies are planned to gear courses and programs to the realities of the employment market. Mechanisms will be established to promote better linkages between the College and potential private sector and parastatal employers. Also, improvements in the quality of the education received are expected to increase the students' effectiveness in the jobs

which they eventually undertake. These well trained managers will better be able to administer extension programs, supervise personnel and direct useful research. The improvement will be aimed at better realization of the objectives of the Egerton College courses in the spirit of the land-grant college with its emphasis on the application and use of knowledge.

The student body of the College currently consists of 1452 students enrolled in a total of 16 three-year diploma courses. The total student capacity is 1650, although over the next five years enrollment is expected to more than double as Egerton adds degree programs in five fields in 1986-87 and additional degree programs in subsequent years. Approximately 10-15 percent of the current student body are from other African countries. Twenty-four percent are women and about one third of these women are enrolled in the Agriculture and Home Economics Diploma Course, which consists solely of women.

An enhancement of skills and knowledge will also be derived by those who participate in courses, seminars and workshops at the Agriculture Resources Center or receive its newly generated materials for practical applications. The participants will be primarily those engaged professionally in the agricultural sector and will include farmers, men and women, both directly and indirectly.

One group of indirect beneficiaries will be private, parastatal and public sector firms and organizations which are related to agriculture supply and services, agricultural production, agro-processing and marketing who employ Egerton graduates. They will benefit from staff with enhanced knowledge, skills and attitudes which will permit them to more effectively provide agricultural inputs and market outlets to Kenyan farmers, male and female. These firms will also be one important source of participants in the activities of the Agriculture Resources Center.

Another important group of indirect beneficiaries is the Kenyan small farmer who will benefit from the knowledge, skills, and innovations brought by the extension agent trained at Egerton College and armed with greatly expanded extension materials from the Agriculture Resources Center. Women and the rural family will be critical beneficiaries also.

Egerton College, at the present time, places top priority on an equitable geographic distribution in the selection of diploma students. This is expected to continue during the project and with degree candidates.

This project will attempt to provide an equitable mix of benefits to both Ederton College and to the University of Illinois, so that a long term relationship can be maintained. The mechanisms for documenting and measuring the actual benefits of this project were presented in Section VI, Project Monitoring and Evaluation.

(3) Participation

Top level administrators of Ederton College have been actively involved in the development of this project from its identification through collaborative design. The direction of the project and its implementation strategy are guided by previous experiences and the College's current needs. The PID and this Project Paper have been reviewed not only by the GOK but also the Board of Governors of Ederton College.

Numerous group and individual meetings have been held with the management and faculty of Ederton College to take into account the views and professional needs of faculty members and managerial personnel. A survey of Ederton College graduates since 1980 is planned, to provide additional information and incorporate feedback on priority areas for project focus.

The project is intended to follow a collaborative, collegial style between Ederton College and the University of Illinois. The individuals involved have already begun to work together as colleagues in the design of the project and development of the modalities for joint implementation of this project. Procedures and arrangements for on-going joint planning and participation are discussed elsewhere.

Women need to be involved in decision-making processes on all aspects of the project in order to ensure that women benefit equitably from it. Male decision-makers need also to be reminded to be affirmative in the distribution of fiscal resources, equipment and selection of staff for training. It is recommended that the College set goals for (1) training existing women faculty members and (2) hiring not only more women faculty members but also hiring women to fill positions in a broader range of academic areas similar to the goals they have set for admitting female students. Attention should also be given to the representation of women on the Academic Board, curricula and other College-wide committees. Likewise, there should be systematic fostering of research on the role of women and the farm family in rural development, both for professional

publication and for materials to enhance classroom teaching; and conscious planning for Egerton's outreach capacity to be directed to women, both in training of extension workers and reaching them as recipients of extension service on the farm and through the Agriculture Resources Center.

Where appropriate, curriculum and course content should reflect the roles and contribution of women in agricultural development. Certain courses in sociology, economics and psychology, which are required in all or most curricula, should include content to help male and female students better understand and appreciate the social, economic and physical contributions of women to agricultural development and the institution of the family. In the production of educational materials, women as well as men should be represented when pictures of humans are included in any printed materials, slides or film strips.

A survey of recent graduates is planned to obtain baseline information and feedback concerning the relevance of coursework to the employment market and to on-the-job needs. This will be followed in the final year of the project with a survey of the same graduates as well as the 1000 new diploma graduates who have been through the newly developed programs.

(4) Socio-cultural Feasibility

The project is conceived within a wide context as a response to the manpower needs of agriculture in Kenya, and East Africa in general, the division of responsibility between existing Kenyan agricultural education institutions, the needs of Kenyan farmers, and the trained professionals who deal with them. It focuses on mechanisms for continual upgrading of the standards of education and management at Egerton College, plus added emphasis on research and outreach in the new mission of the College as a degree-offering University College. It also includes assistance in the establishment of the Agriculture Resources Center as an active Egerton outreach unit for the agricultural community. The processes developed ought to permit periodic reassessment in regard to employment opportunities, responsibilities vis-a-vis other institutions, and the needs of Kenyan farmers. The Agriculture Resources Center will fulfil a need for the continuing education of professional agriculturalists, ranging from farmers, to agri-business managers, to ministry personnel. It has tremendous potential for socio-cultural impact both directly and as an institution consciously devoted to public service.

The project is based on the premise that improved access to knowledge and skills will result in attitudinal and behavioral changes. Incentives and rewards (including opportunities for career development) must be taken into account as important determinants of achieving the desired outcome. With respect to Egerton College personnel, incentives and rewards are important factors in motivation for self-improvement, in commitment to and participation in continual betterment of the College, and in retention as a core of well-qualified and committed staff. This commitment is reflected in the pride of students and staff in the programs of the College and in the value attached by the public to the diplomas awarded.

The stability of the Egerton staff is unusual and indicative of high morale and readiness for further rapid progress. An unusually large number of the staff have tenure dating from the early 1970's. The project design team has already considered a potential problem and challenge: the effect of recruiting a large number of new staff at one time. Unless special care is taken and suitable criteria applied, the sudden influx of degree-holders from a variety of university graduate programs, many abroad, plus expatriates, may subtly alter the nature and philosophy of the College. The College is determined to be on guard against a dilution of its public service mission and philosophy of applied knowledge. In fact, the added emphasis on adaptive research and outreach is intended to strengthen this "grassroots" approach, as typified in the potential of the Agriculture Resources Center and the Rural Development Laboratories (discussed elsewhere).

The student drop-out rate at Egerton College is extremely low, reflecting commitment to the receipt and inherent value of an Egerton diploma. In the past, graduates have been hindered in career advancement because their diploma status had not qualified them for entry to the university for an advanced degree. These barriers to higher levels of formal education have been a disincentive to good job performance since level of formal education is a prerequisite for significant job advancement and salary increases. The development of Egerton College toward university status will provide the avenue for those Egerton diploma-holders seeking educational and career advancement to return to Egerton to obtain those degrees in a shorter period of time. The constraint at this point will be available space, not intent, in the expectation of remedy at an early date.

The design team has addressed ways to improve the sharing of information within Kenya, particularly through the activities of the Agriculture Resources Center and through new

data management systems. Currently there is little contact between professional agriculturalists at research stations and the educational institutions. Activities of the Agriculture Resources Center will provide special opportunities for Egerton faculty to be involved in outreach programs. These will provide direct access to Kenyan farmers, agri-business activities of the private sector, and applied research efforts which have a direct bearing upon the small farmer. Also, reading materials based on information from East Africa will be made more accessible to students. Numerous high quality research studies and project evaluations have been carried out which could, if fully used, facilitate a better understanding of the technical aspects of African agriculture, extension methods and small-holder dynamics. The feasibility of establishing a sustainable method to provide low cost reading materials has been investigated (See Annex VI.E). The need for these materials has been highlighted in an evaluation of Egerton College which pointed out that too much classroom teaching was devoted to lecturing and even reading to students in the absence of appropriate materials. Access to improved reading materials will result in improved classroom teaching also. In addition, the instructional materials developed by the University of Illinois are written in a problem-solving format, an essential teaching tool for the Kenyan educational system. Many existing Illinois materials can be adapted to Kenyan use without copyright complications.

Books and journals published outside of Kenya were ordered for the College library under a previous USAID project. Additional technical journals will be provided under this project in recognition of the need for greater emphasis on the library's collection and management.

The project is based in part on extensive use of short-term U.S. consultants for specific tasks. Visiting Illinois professors on sabbatical and advanced graduate students are anticipated also to be engaged in work beneficial to the College. Actual implementation arrangements have been developed in the course of project design and are discussed elsewhere.

(5) Impact

The project is intended to contribute to intensification of agricultural production in Kenya. The design addresses ways in which the project can help to make a close linkage between achievement of project purpose and project goal.

A number of areas can be identified in which the impact of this project may have long-term beneficial outputs from a social soundness perspective. Some of these areas are outlined below:

This project has several potential areas of impact for women. The first of these relates to expanding career opportunities for women: additional faculty and staff positions for which women should be eligible at Egerton and opportunities for women faculty to receive skills upgrading/training. The graduation of additional women students as extension agents can directly impact upon the women farmers in an area of immense need. Female students will have expanded skills to work with the Kenyan woman farmer to improve her productivity and the quality of life for both her and her family. Women extension agents will be better able to integrate women farmers into the agricultural/extension programs at the community level, with greater access to those inputs that otherwise put women at a disadvantage.

The project expects to develop an evaluation and feedback system for the continual review of the curriculum and, following from that, the quality of instructional materials. From a socio-cultural perspective, the development and field testing of prototype teaching/learning materials which have been developed and prepared by Kenyans for use by Kenyans and other East Africans will be a step ahead in terms of testing cultural feasibility.

The outreach and adaptive research programs envisioned for the Agriculture Resources Center will also have significant spread effects. These include bringing the academic staff face-to-face with the needs and problems of personnel in the field, thereby encouraging the continuation of practical training and development of a curriculum to meet the needs of farmers and private sector employers; spreading agricultural knowledge and innovations throughout Kenya and possibly the region; encouraging the participation of women in all activities of the Center, including courses directed specifically toward women; bringing extension and applied research together to focus on the problems of small food producers; providing seminars and short courses to orient user-ministries/organizations and agents on farming systems, on the problems of women farmers and on the availability of improved agricultural technologies; and improving the relevance of outreach activities to the needs of the farming sector.

Distinct socio-cultural impact will flow from the applied research and outreach envisaged for what are called the Rural Development Laboratories, spheres of influence and service in the community adjacent to and surrounding the campus and the Chemeron Field Station. In agreed-upon collaboration with government agencies, through a division of labor, adaptive research will be performed by College faculty members and

certain extension services which will harness faculty knowledge to community problems. Also the Laboratories will be the site for research conducted by Illinois sabbatical holders and other visiting researchers.

Many functions of Egerton College use a participatory approach. One important area to date, with opportunity for expansion, is the participation of Egerton graduates, user ministries and the private sector on curriculum committees. In the future this may include the participation of research clients, including small farmers, on Egerton's research and development committees to assist in setting research and development priorities and in validating research findings, with reverse benefits from the feedback from recipients of outreach services.

D. Administrative Analysis

To implement the project, Egerton College, as the executing agency, has the requisite organizational and managerial skills. This capacity includes the operational competence of the top leadership as well as the necessary auxiliary administrative services for budgeting, financial and personnel management, procurement, and monitoring, with adequate accountability as the project progresses. The adaptability of Egerton is attested by its recent growth in enrollment and its commitment to an enlarged mission, including degree programs and an expanded research and outreach program through a new Agriculture Resources Center. The demonstrated administrative capacity of Egerton is further attested by the confidence it obviously enjoys with the Government of Kenya and the relevant ministries.

For carrying out the partnership and collaboration with the University of Illinois at Urbana-Champaign, Egerton College will have systematic access to Illinois resources, services, and assistance, as spelled out in the technical annexes. The chief mechanism of access will be the linkage system, elaborated upon above, with a Liaison Committee on each campus, chaired by a Coordinator. Two-way communication and exchange between these campus groups will both facilitate and give content to all sectors of the collaboration, starting with an exchange of visits between liaison committees and in subsequent visits in both directions by the designated departmental and administrative representatives. Through this on-going exchange, they will plan and set priorities, arrange joint research and sabbatical assignments, share curriculum materials and teaching aids, and contribute to continuous monitoring and adjustments.

The carrying out of this project is a shared responsibility of both partners, and they will divide the labor between them whenever feasible. Some illustrative specifics are given below for each target area, with others to be determined by mutual agreement as the project unfolds.

(1) Administration and Management

Each side will organize to execute its end of the linkage that ties all parts together. Egerton will undertake the management changes proposed, while Illinois will provide the needed technical assistance on computers and printing technologies. Egerton will, to the fullest extent possible, do all procurement required in the implementation of the project.

Furthermore, the present administrative capacity of Egerton will be enhanced progressively as the project evolves and computerized operations are begun in all the management and support services of the College.

(2) Faculty and Staff Development

Illinois will administer the U.S. based training component of the faculty staff development program, both for advanced degrees and non-degree short-term programs. It will assist in placing nominated Egerton faculty in graduate degree programs at Illinois or other appropriate universities in the U.S. and monitoring their academic and personal progress toward degrees. It will give logistical support and facilitate the organization of all needed non-formal training, including the learning-by-observation tours of Egerton representatives and the selection of Illinois counterparts where such person-to-person matching is required or desired.

Egerton will select participants for degree programs and provide such administrative and logistical support as needed in Kenya as the candidates leave from and return to duty at Egerton.

(3) Curriculum Development

Illinois will assist in the planning and execution of an initial manpower study to give maximum relevance to the Egerton curriculum and to provide an empirical basis for allocating new faculty resources to departments. It is critical that new teaching resources and the corresponding student intake into different departments reflect the future manpower needs of the overall agricultural sector, both public and private. Illinois will also provide advisory services on all curriculum matters, present and prospective, as desired by Egerton, particularly through the exchange visits of the departmental

representatives. This input will include consideration of curriculum organization and subject-matter, as well as procedures to keep these curricula up to date.

Egerton will continue its degree and course planning and its implementation through existing methods and structures, with recommended modifications, such as implementing the external advisory committees and follow-up studies, as mutually agreed.

(4) Educational Materials, Research and Outreach

Illinois will assist with the substantive input for educational and outreach materials as appropriate, and will provide the training needed for writing such materials. It will give technical assistance as desired in designing and setting up the physical facilities, equipment, and organization of the production capacity as recommended in this project paper. Also, Illinois will provide technical assistance as desired on related computerized record-keeping, such as inventories, billing procedures, mailing lists, and costs of production. Egerton will provide the departmental assistance needed in supplying the subject-matter for the materials produced. This will be done, at least in part, by part-time assignment of subject-matter specialists, as well as full-time specialists in graphic arts, printing, etc., for the needed production proficiency.

With on-going technical and advisory assistance from Illinois, Egerton will organize and operate the Agriculture Resources Center as the College's chief vehicle for linking research and outreach services, utilizing the conference and continuing education capacities of the Center and the research/outreach capacities of the Rural Development Laboratories, one in the area around the campus and a second to be begun around the Chemeron Field station.

Illinois will promote and coordinate faculty sabbatical leaves of absence for research, teaching and advisory services at Egerton wherever possible in a joint mode of research between Illinois and Egerton colleagues. Advanced Illinois graduate students will also assist in research projects of mutual benefit to them and to Egerton. Egerton will provide local housing, offices, and logistical support for the Illinois and other U.S. personnel thus involved, including the purchase of airplane tickets and topping-up of salaries where local currency can be used.