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 PD-AAI-212:BI.D.1

PPC/RS  
 A.I.D.

PROJECT AUTHORIZATION

Reference Center  
 Room 1656 NS

1. PROJECT NUMBER 690-11-110-026	3. COUNTRY Malawi	4. AUTHORIZATION NUMBER 0134 12P
2. PROJECT TITLE Banda Agricultural College		5. AUTHORIZATION DATE July 30, 1971
		6. PROP DATED July 15, 1971

7. LIFE OF PROJECT

a. Number of Years of Funding: 3  
 Starting FY 19 72, Terminal FY 1974

b. Estimated Duration of Physical Work 12 (staff)  
 After Last Year of Funding (in Months): 24 (Participants)

8. FUNDING BY FISCAL YEAR (in U.S. \$ or \$ equivalent)	DOLLARS		P.L. 480 CCC + FREIGHT	LOCAL CURRENCY			
	GRANT	LOAN		Exchange Rate, \$1 =		HOST COUNTRY	
				U.S. OWNED		JOINTLY PROGRAMMED	OTHER
Prior through Actual FY						Recurrent Costs	
Operational FY 72	\$191,000					73,000	
Budget FY 73	67,000					77,000	
B 11 FY 74	115,000					80,000	
B 12 FY 75	67,000					85,000	
B 13 FY							
All Subsequent FY's							
TOTAL	\$350,000					315,000	

9. DESCRIBE SPECIAL FUNDING CONDITIONS OR RECOMMENDATIONS FOR IMPLEMENTATION, AND LIST KINDS AND QUANTITIES OF MATERIALS TO BE PURCHASED

2 staff personnel to be hired either under PASA arrangement and/or topped-up OPM recruitment contract.

10. CONDITIONS OF APPROVAL OF PROJECT

(Use continuation sheet if necessary)

Approved in substance for the life of the project as described in the PROP, subject to the conditions cited in Block 10 above, and the availability of funds. Detailed planning with cooperating country and drafting of implementation documents is authorized.

This authorization is contingent upon timely completion of the self-help and other conditions listed in the PROP or attached thereto.

This authorization will be reviewed at such time as the objectives, scope and nature of the project and/or the magnitudes and scheduling of any inputs or outputs deviate so significantly from the project as originally authorized as to warrant submission of a new or revised PROP.

A.I.D. APPROVAL	CLEARANCES	DATE
Samuel C. Adams, Jr. SIGNATURE	Phinbaum:AA/AFR	
Asst. Admin. for Africa	EMogan:AFR/DP	7/26/71
	ANellis:AFR/SAF	7-26-71
	A CONT	

A.I.D.  
Reference Center  
Room 1656 NS

NON-CAPITAL PROJECT (PROP)

COUNTRY: Malawi

PROJECT NUMBER: 690-11-110-026

PROJECT TITLE: Bunda Agricultural College

U.S. OBLIGATION SPAN: FY 1971 through FY 1974

U.S. DOLLARS: \$350,000

GRANT: \$350,000

COOPERATING COUNTRY CONTRIBUTION: \$315,000

OTHER DONORS:

U.K. \$24,000

Israel \$20,000

## I. SUMMARY DESCRIPTION

AID has already made an important contribution to the development of agricultural education in Malawi through the establishment of Bunda, but the task of establishing agricultural education on a sound foundation remains to be completed. The development and maturation of this college will depend, however, on the interim provision of experienced, qualified personnel to establish and develop the Agricultural Engineering Department and to give the College a more meaningful role in the agricultural development programs of the country. The absence of an Agricultural Engineering Department has been the critical deficiency in the Bunda curriculum, as it is essential to the provision of requisite courses for a General Degree in Agriculture. Bunda's capacity to actively participate in the various on-going and planned rural development schemes has been handicapped by its limited research capability. It is recommended that AID provide an Agricultural Engineer and a Rural Sociologist to help address these deficiencies.

These positions are the top priority needs of the College, according to the Vice Chancellor of the University of Malawi and the Principal of Bunda who is an American. The College is also seeking lecturers in Crop Production Land Development and Livestock Production, but it is particularly requesting U.S. assistance for the Senior Agricultural Engineer and the Rural Sociologists, fields in which the U.S. excels.

There is a great need for Bunda graduates. There are now 63 professional level positions vacant in the Ministry of Agriculture. It is also estimated that 200 expatriates technicians in agriculture could be replaced by first degree graduates. The comprehensive areal development projects assisted by the IBRD and the U.K. can use increasing numbers of trained agriculturalists. In order to meet these manpower and other agricultural needs of Malawi, Bunda is offering degree, diploma, and certificate level courses.

Table 1  
Page 1 of 2  
COUNTRY: MALAWI

NONCAPITAL PROJECT FUNDING (OBLIGATIONS IN \$000)

Project Title: Bunda Agricultural College

PROP DATE  
Original  
Rev. No.  
Project No.

Mo/Day/Yr  
X  
690-11-110-026

Fiscal Years	Ap	L/G	Total	Cont <sup>1/</sup>	Personnel Serv.			Participants		Commodities		Other Costs	
					AID	PASA	CONT.	U. S. Agencies	CONT	Dir U. S. Ag	CONT	Dir & U. S. Ag	CONT
Prior through Act. FY _____													
Oper. FY <u>72</u>	D/G	D/G	101	-	-	35	52	14	-	1	-	-	-
Budg. FY . . .		D/G	67	-	-	37	-	28	-	2	-	-	-
B + 1 FY _____		D/G	182	-	-	78	58	43	-	2	-	-	-
B + 2 FY _____		-,-	-----										
B + 3 FY _____													
All Subs.													
Total Life			350			150	110	85		5			

Table 1  
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Exchg rate \$1= 2/

Project No. \_\_\_\_\_

Fiscal Years	AID-controlled Local Currency		Other Cash Contribution Cooperating Country	Other Donor Funds (\$ Equiv.)	Food for Freedom Commodities		
	U. S.-owned	Country-owned			Metric Tons (000)	CCC Value & Freight (\$000)	World Market Price (\$000)
Prior through Act. FY <u>70</u>	-	-	-	-	-	-	-
Oper. FY <u>72</u>	-	-	73.0	34.0	-	-	-
Budg. FY <u>73</u>			76.7	10.0			
B + 1 FY _____			80.6				
B + 2 FY _____			84.6				
B + 3 FY _____							
All Subs.							
Total Life							

## II. SETTING

Bunda College of Agriculture, Malawi, is a recently established and rapidly growing institution which has lacked the agricultural engineering and other staff necessary for support of its research and educational programs. The growth of the agricultural sector in Malawi required a large number of middle-level personnel with the background that only the engineering approach can give. AID initially provided approximately \$1.5 million during the construction of the college which started in 1966. The ODM also made a capital input--£38,000 Sterling for farm buildings and £50,000 for the library, staff houses, hostels, etc. The physical plant is now complete, except for a number of staff houses still to be constructed from ODA funds, and some livestock buildings and greenhouses. The U.K. provides major support through its direct budgetary assistance to the Malawi Government which is very dependent upon external assistance. The budgetary aid provided by the U.K. assists Bunda through the Ministry of Education budget. The University of Malawi, of which Bunda is now a constituent college, required £1 million Malawi per year (£1 M equals \$2.40) from the total Ministry of Education budget of £4 million Malawi. The U.K. is providing an additional million pounds to move the University of Malawi to its new campus at Zomba.

The ODA has recently committed £10,000 Sterling for equipment required for the new Bunda Department of Agricultural Engineering. Israel has agreed to furnish a lecturer in the Department for the next two years.

Originally, the institution was planned as a National Resources Training Center to provide certificate level instruction. At that time, AID contracted with the University of Massachusetts for staff, and under this program a number of counterparts were sent to the U.S. for training. President Banda, however,

later decided that Bunda and the Polytechnic were to become constituent colleges of the University of Malawi. Unfortunately, the counterparts who returned were qualified for teaching up to the certificate level, but were unqualified as degree level instructors. There was also a lack of control in regard to the choices of subjects they studied, and as a result only 25% could be used on the Bunda staff due to the duplication of specialties.

The IBRD considers Bunda College to be an important supporting element to the various agricultural schemes in which IBRD and others are involved. Bunda's course of upgrading the G.O.M.'s field staff has been critical to the Lilongwe project. Bunda's plan to develop a Department of Agricultural Engineering is strongly supported by the Bank.

STAFF: The core group of instructors at the College, a maximum of four, have been AID-financed under the University of Massachusetts contract which has just phased out. UNDP provided three FAO staff, the Peace Corps - four volunteers, other agencies a scattering of personnel, and there were also some university contracts. The Principal and Professor of Agriculture, and primary contact between the University and the College, has 25 senior staff positions, 23 of which are teaching and 2 administrative. There are 6 or 7 vacancies this year which need to be filled if Bunda is to establish a full-fledged faculty of Agricultural Engineering, and carry on its other research and educational programs.

Bunda has the highest proportion of Malawian staff in comparison to any other branch of the University of Malawi. There are three Malawians in training (one at the University College of Aberystwyth, Wales studying Bio-Chemistry and Agricultural Economics). A Malawian Livestock Nutritionist, now in the Animal Research Laboratory at Bunda, will be going to the U.S. and U.K. for

studies this year, and an assistant lecturer in Soils Science is scheduled for Ph.D. crop production studies at Cornell in 1972. In addition to these five staff, there are three Malawian teachers totaling eight out of the 25 senior posts. The Bunda staff also includes two Nigerians. Ratio of staff to students is about 1 to 10.

The problem of finding qualified counterparts was discussed with the Principal. He believes some high performance first year students at Bunda could start their studies immediately with the 3-year diploma course in Agricultural Engineering at Egerton / <sup>(Kenya)</sup>, followed by degree studies at Alameya / <sup>(Ethiopia)</sup>. Some students could finish their degree at Bunda and then take a second degree at another institution. Programs already available from the U.K. and U.S. could be used to provide the post-graduate degree necessary for their professional advancement in university employment. As mentioned previously, Bunda has been successful in the past in preparing Malawian candidates for lecturer positions. There are four Malawian staff in crop associated subjects in Bunda -- one assistant lecturer, two lecturers, and one senior lecturer. It requires 8 years before an individual is qualified for a lecturer position and such personnel usually have a first degree with a few years experience.

The availability of qualified counterparts to replace the U.S. staff after the four-year program is developed by AID personnel was examined. It was suggested to the Principal that he be prepared to check the University of Southern California graduates under the AID Malawi Polytechnic program. Some

of them have their B.S. in mathematics and physics. They could work under the AID staff at least a year on trial basis and then be sent for three years of Agricultural Engineering studies and an extended M.A. This approach would have the advantage of providing an evaluation period of one year's work experience before recommending further study at the Master' level designed to replace U.S. staff. If University of Southern California graduates could be selected for the fall term, they could conceivably be ready to take up the U.S. staff position in approximately four years. The Principal said he would explore such possibilities.

### III. STRATEGY

The Bunda agriculture/<sup>college</sup>administration will look to the next few years as a period of consolidation to develop the new Agricultural Engineering Department and the degree program which has been delayed due to lack of staff. They see the phase of major physical development almost complete and the present task as one of curriculum development. There is a question whether the G.O.M. with its pressing needs will allow a period of foundation building and consolidation. The College administration has already been asked to establish a diploma course in Agricultural Engineering, provide special courses in forestry, and expand the Bunda farm. Bunda is also heavily engaged in applied research and development. In any event, Bunda Agricultural College is committed to graduating within the next few years about 50 degree, 200 diploma, and 60 certificate level students, as well as creating a viable Department of Agricultural Engineering and introducing a program of localization for that Department.

The Principal wishes to establish the fifth department of the school,

Agricultural Engineering, with an American approach as he prefers our broad, general approach as contrasted to the more mechanistic training received by agricultural engineers in the U.K. He hopes to have a senior staff of four to staff the department, and is consulting with Edgerton College, Kenya, for additional personnel. Agricultural engineering graduates can make a substantial contribution to Malawi's economy. Increased agricultural production and mechanization must be linked to solve food problems of the future. This is particularly important if Malawi is to increase its exports of agricultural products. Students under this course will become familiar with power and machinery, processing and structures, and the engineering aspects of soil and water conservation.

#### IV. PLANNED TARGETS (OUTPUTS)

The development of middle-level agricultural manpower as provided by this project is essential to an extremely poor country so dependent upon agriculture Malawi's economy will, for the foreseeable future, be primarily agricultural, as this is the most productive sector of the economy and the principal foreign exchange earner. The G.O.M. is aware that more intensive agricultural education is a key factor in developing modern and efficient farming techniques. By far, the greatest priority in terms of U.S. assistance as voiced by President Banda, the External Aid Section of the Ministry of Finance, and the University of Malawi is the development of Bunda College. Provision by AID of the two salary supplemented positions will enable Bunda to establish Agricultural Engineering, an essential departmental unit for a fully comprehensive agricultural college, and to assure a vital research role in the several comprehensive rural development schemes being financed by the IBRD and the British.

## V. COURSE OF ACTION

ORGANIZATION: The staff is striving to develop an African model of a land grant college aiming at an annual student body of about 205. The school operates under a collegiate system, each department has its own budget, and there is a standing committee consisting of the heads of departments. There are presently four departments: (1) Basic Subjects for the teaching of first year students; (2) Crop Production chaired by a Malawian, Mr. L.K. Mughogho, a senior lecturer; (3) Rural Development chaired by a British expatriate (this department includes Extension, Home Economics, Rural Sociology, and Agricultural Engineering until a new department is established); and (4) Livestock Production also headed by a British expatriate. The fifth department will be Agricultural Engineering. The Principal's budget is approximately 30,000 Malawian Kwacha (1 Malawian Kwacha equals \$1.20). He also receives approximately 30,000 Malawi Kwacha from proceeds of the farm run by the college staff and students. All profits and farm income from this self-help endeavor are utilized for the development of the University. There are approximately 150 junior staff at all levels as each department has field assistants, clerical, and technical support staff.

CURRICULUM: Originally the degree course consisted of three years at Chancellor College and two years at Bunda. Now it requires two years at each college and under a new system, students will take one year at Chancellor and three years at Bunda or vice versa if the students desire a non-agricultural degree. The development of the curriculum for the degree program is at an early stage. The teaching format will be a mixture of practical and theoretical, similar to the U.S. land grant college system. There will be heavy dependence

on student participation in seminars.

The three-year diploma program is well established. During the first year, the student, who is an "O" level entry, is involved in English, Math, Biology, and Physical Sciences as majors, and technical drawing, map reading, and workshop as minors. The second year, he moves into applied agricultural sciences such as crops, livestock, extension, rural development, and farm management accounting. The third year, the student applies what he has been learning. In the nearby Mkwinda Village, adjacent to the college, he works in individual farm planning, area conservation, extension, community development, under five clinics and home planning. There is also formal classwork in management of livestock and crops, and he attends development seminars. Fifty-one diplomas in General Agriculture were awarded in 1969 and 1970. Approximately 170 students, including one Sudanese, and 18 women are currently enrolled. Professor Pinney does not foresee any changes in the diploma program for the next few years.

Bunda offers a certificate level "upgrading" course every other year designed to provide the technical knowledge for field assistants who have demonstrated their ability during employment by the Government, to permit their promotion to the Technical Officer grade. One year of extensive theory is taught. Certificate level training, however, is phasing out and probably 1975 will be the last year it is presented at Bunda.

This year, of 163 first choice secondary school graduate candidates, Bunda selected 50, and on the basis of the Cambridge results, the Bunda selectees

have the best record. The University of Malawi also has agreed to accept Part II students in agriculture from UBLS. A total of 2% of the student body can be foreign students if they are totally supported outside of G.O.M. finances (M£350 per year per student). UBLS has nominated a few students who have been accepted by Bunda for the new school year.

AID INPUTS: The role of AID personnel will be chiefly in curriculum development, teaching, research, and the development of counterparts. Management responsibility will be in the hands of the Principal as well as the overall institutional building role. It is expected that the AID engineer be capable of developing in four years the basic components of an Agricultural Engineering Department. The rural sociologist is expected to teach as well as work closely, as a Bunda consultant, with the administration of the various areal agricultural development programs. Two-year tours with options for two-year renewals will be the basis for filling these positions at Bunda. Project funding is based on one PASA and one topped-off contract person.

AID will provide sufficient funds for participant training as follows:

First Year - two participants for four years each.

Second Year - two participants for two years each.