

UNCLASSIFIED

DEPARTMENT OF STATE

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DATE REC'D.

TO - ACCRA ATDYO A 37

DATE SENT

2-11-70

FROM - ATD/W

SUBJECT - Faculty of Agriculture, University of Ghana, 641-11-110-041

REFERENCE - TOAID A-105

DESCRIPTION ACTION

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The Assistant Administrator for Africa approved the PROP for the subject project by Project Authorization of February 3.

The approval is qualified by the requirement to provide training for sufficient Ghanaian counterparts. Dr. Adams is concerned with the limited participant training to date. If replacements for the American staff enter training before the end of the year, we can avoid the necessity of reconsideration of the project.

Both the Administrator and the Assistant Administrator have indicated their concern with getting Africans to run their own institutions. Consequently, steps must be taken as soon as possible to insure that Ghanaians enter training so that they may be phased into the project.

The Mission is requested to provide a current report on the status of the training under this project.

RICHARDSON

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APPROVED BY	AUTHORITY	PHONE NO.	DATE	APPROVED BY	PAGE	PAGES
<i>[Signature]</i>	AFR/CHA	23722	2/11/70	<i>[Signature]</i> AFR/CHA, Stephen Christman Actg. Dep. Director, Congo/Ghana/Liberia Affairs		
AFR/CHA: [Signature]				AFR/ID: [Signature]		

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1. DATA CURRENT AS OF AUGUST 1969	2. COOPERATING COUNTRY GHANA	SECURITY CLASSIFICATION UNCLASSIFIED	641-11-110-041	FACULTY OF AGRICULTURE - UNIVERSITY OF GHANA
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NON-CAPITAL PROJECT PAPER (PROP)

Summarized Financial Requirements FY 1970 - FY 1972:

U.S. Dollars	\$381,000
Ghana Government Contribution	\$201,000

Summary Description

This project is directed toward improving high level education in agriculture in the University of Ghana's Faculty of Agriculture, one of two university agriculture faculties in the country.

Its ultimate aim is to develop in Ghana the facilities required to produce a top agricultural leadership thoroughly grounded in tropical agriculture and particularly in Ghanaian agriculture. This project will provide four U.S. professors on an OPEX salary topping basis in four disciplines for four years each. These men are to be of senior standing in their respective U.S. universities and have extensive successful teaching and research experience in their fields. The expectation is that each man will develop a dynamic program of creative research designed to contribute to Ghana's agricultural development. They are also expected to develop improved curriculums and teaching centered around field research and experimentation. These men are also expected to provide leadership in communicating developments at the University of Ghana to the wider agriculture community.

The four fields to be covered by OPEX professors are animal husbandry, agricultural engineering, agriculture extension and agricultural economics - commodity marketing. Despite painfully slow recruitment, animal husbandry and agricultural engineering have received two and one man-years of OPEX services respectively.

Setting and Justification

The important aspects of the setting of this project and the overall tenor of the USAID strategy for agriculture are set forth in Part II of the FY 1969 Program Memorandum and Annex I of the FY 1970 submission.

In December 1960 the GOG appointed a University Commission to advise it on the future development of university education in Ghana in connection with the proposal to transform the University College of Ghana and the Kumasi College of Science and Technology into an independent University of Ghana. Following the report of

the Commission in early 1961, the GOG decided to establish two independent universities at Kumasi and Legon. Both of these Universities were started with Faculties of Agriculture. Each of these Universities has a student enrollment of about 2,300 and somewhat less than ten percent of this number is enrolled in each Faculty of Agriculture. Both Universities offer a four-year degree course in agriculture and a two-year diploma course; the University of Ghana also offers a Masters degree.

The general entrance requirements for a degree course in agriculture are a General Certificate of Education with passes at the advanced level in Chemistry, Biology or Botany or Zoology, and ordinary level pass in pure mathematics or physics. For the diploma course candidates should have passed the School Certificate Examination of the West African Examinations Council and have a minimum of two years of practical experience at an approved institution in agriculture.

The Faculty of Agriculture of the University of Ghana is one of five faculties and is composed of the following departments:

1. Animal Science
2. Agricultural Economics and Farm Management
3. Crop Science
4. Home Science

The Department of Agricultural Economics and Farm Management also teaches Agricultural Extension and Agricultural Engineering. It is now planned that two new departments will be established: Agricultural Engineering in the fall of 1969 and Agricultural Extension in 1970. At Kumasi, there is no Home Science but there are departments of Horticulture, Agricultural Engineering and Farm Mechanization, and Land Economy.

Most of the students entering the Faculty of Agriculture do not have an agricultural background. To make up for this deficiency in experience, the students work on approved farms, tour Ghana observing agricultural projects and work at research stations before entering the University and during their first two summer vacations.

The Faculty of Agriculture at Legon currently numbers 29. It is composed of three professors, six senior lecturers, nineteen lecturers and one research fellow. By 1972 it is expected that only a few more will be added to the staff because of budget restrictions. The present ratio of professional staff members to students is approximately one to six. However, as projected in the table below, the ratio is expected to improve to about one to ten by 1972.

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Actual and Projected Student Enrollment for the School Years 1966/67 through 1972/1973 is shown below:

Academic Year	B.Sc. Program				M.Sc. degree	Diploma		
	1st year	2nd year	3rd year	4th year		1st year	2nd year	Total
1966/67+	35	12	8	-	4	18	-	17
1968/69+	48	50	11	15	8	35	17	164
1969/70++	60	45	28	10	10	19	33	205
1970/71++	60	58	53	25	12	35	17	260
1971/72++	60	58	56	50	16	19	33	292
1972/73++	60	58	56	54	20	35	17	300

+ Actual
++ Planned

The Faculty of Agriculture has research stations at Kpong, Kade and Nungua. Work on rice, sugarcane and pasture management is conducted at Kpong. Research on cocoa, rubber, coffee, oil palm, citrus, plantain and vegetables is carried out at the Kade station. At Nungua research activities include investigations on fodder crops, crops to be grown under supplemental irrigation, livestock production and natural grassland management.

As a group the Ghanaian faculty are well trained academically but lack the experience needed to develop integrated programs of adaptive research, curriculum development, teaching and extension in the areas of animal science, agricultural extension, agricultural engineering and commodities marketing. In addition some of the present staff require advanced academic training to prepare them for duties at the senior level. Partly due to the lack of staff experience in formulating practical research projects, research activities are limited and available funds have scarcely been sufficient to maintain on-going activities at the three research stations. Curriculums in most fields would benefit from revision to reflect latest developments and Ghanaian agricultural problems. The need in the commodities-marketing field is particularly great. While cocoa-using industrial interests spend large sums on research and analysis of trends in world cocoa supply and demand, Ghana presently has no comparable program of research on which to base policy in this area.

Above all, in each of the four fields selected for OPEX assistance leadership is needed to instill a spirit of empirical inquiry and a practical, problem solving approach to the impediments to the develop-

ment of Ghana's agriculture. If this can be developed, top students will be attracted to the Faculty of Agriculture and they will be well prepared upon leaving either to become successful practitioners or to enter upon further specialized training.

Strategy

This project was initiated in the fourth quarter of FY 1966 at the request of the University of Ghana and the Government of Ghana. From the outset the plan has been to recruit OPEX personnel of full professorial rank who have had considerable experience in developing programs of integrated teaching, curriculum development, applied research and extension in the United States. This approach, rather than a more modest one, was decided on because the University of Ghana wanted men who would provide the leadership in developing programs with these characteristics in four subject matter areas in the Faculty of Agriculture. It was important that these men have OPEX rather than advisor status partly due to the shortage of qualified senior teaching staff, but primarily in order that they could most fully exercise their leadership and expertise by entering as fully as possible into the life of the University and more particularly by serving on various committees of the Faculty of Agriculture and the University.

Planned Targets and Outputs

The success of this project will be indicated by the following developments:

1. Expanded, more active and well coordinated programs of adaptive research geared to produce solutions to the specific problems of Ghanaian agriculture.
2. Improved curriculums designed to integrate field research activities with teaching and to train agriculturists who are well prepared either to enter practical agriculture or to pursue research and further specialized training.
3. Improved and more active programs of information exchange and professional contact between the Faculty of Agriculture and the wider agriculture community consistent with the Faculty's obligation to provide intellectual leadership in identifying and solving local problems.
4. Development of high quality dynamic Departments of Agricultural Engineering, Agricultural Extension and Animal Science (already established).

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5. Development of an active program of research and teaching in the field of international and domestic commodity-marketing oriented toward the application of the latest theory and analytical techniques to the problems Ghana faces in realizing the greatest return on agricultural commodities and in providing adequate incentives to those who produce them.

Course of Action

This project grows out of the University of Ghana's request of early 1966 for USAID-financed technical assistance in the form of salary topping for four OPEX American professors in the fields of animal husbandry, agricultural engineering, agricultural economics - farm management and crop production. The first funds were obligated in late FY1966 and the funds required for the first two years of OPEX services in each field were fully obligated FY1967. The first OPEX professor recruited was a Professor of Animal Husbandry who arrived in early FY1968. The second was an OPEX Professor of Agricultural Engineering who did not arrive until early FY1969. After serving one year, he has returned to his home university. He will be replaced this fall by his head of department who will also serve for one year. In 1968 the Faculty of Agriculture requested that the professor in Agricultural Economics - Farm Management not be recruited and that one in Agriculture Extension be substituted. In 1969 the University decided to drop the Crop Production OPEX position and requested that a professor of Agricultural Economics specializing in commodities marketing be recruited instead. The commodities-marketing OPEX professor will be responsible for developing a Cocoa Research Unit to undertake research into the economics of cocoa production and marketing. A Professor of Agriculture Extension has been recruited for one year and is scheduled to arrive in the fall of 1969. Recruitment of the agriculture economics - commodities marketing OPEX professor has just been initiated.

Thus far only three man years of OPEX services have been provided under this project. Nevertheless, the results achieved in the two areas served have been encouraging. During his two years the Professor of Animal Husbandry formulated a program in his field on the basis of which the University created an Animal Science Department within the Faculty of Agriculture. This OPEX professor has been accepted as a leader in the Faculty of Agriculture and has been designated to act for the Dean of the Faculty of Agriculture when he is absent. He was successful in mounting a very respectable research program. This research is

financed on a budget of some ₵20,000 which was allocated from the University budget based on the merits of the research projects he designed. His success in this is largely an expression of the fact that he spent his early months in Ghana developing a thorough appreciation of the problems and prospects of developing a livestock industry in Ghana. In the process he developed a wide range of contacts in the working agricultural community as well as in the animal production and research fields. In May 1969 he organized a symposium on Animal Science which was sponsored by the Animal Science Department and enjoyed wide academic and non-academic attendance. During his period of only one year at the University, the OPEX Professor of Agricultural Engineering laid the groundwork which is expected to result in elevation of Agricultural Engineering to departmental status in the fall of 1969. He also has designed a research program which, however, has not as yet received budgetary support due in part to unprecedented strictures on the University's financial resources.

Despite their success in other areas, neither the Professor of Animal Science nor the Professor of Agricultural Engineering was able to make significant progress in curriculum revision. This is because they were unable, working through the appropriate University and Faculty of Agriculture Committees, to focus enough attention on curriculum problems and ancillary concerns such as improved class scheduling and more efficient use of laboratory and other facilities. This illustrates the importance of recruiting all four OPEX professors as quickly as possible. Once all four professors are active in the Faculty and able to reinforce one another's efforts, the probability of successful innovation in curriculum improvement and other areas will be greatly enhanced.

The accomplishments of the Professor of Animal Science during his first two years provide a fair illustration of what should be accomplished during the initial three years of OPEX services in the other three areas. As noted above, however, it is to be hoped that more rapid progress will be made in curriculum revision. The second two years of OPEX services in each area should be a period of consolidating the achievements of the earlier period. Research programs should be implemented, fully reported and expanded. The volume of students passing through the Faculty of Agriculture should increase at least in line with the chart shown above while the quality of scholarship improves.

The most significant developments during this period should center around the relationship between the Faculty of Agriculture and the larger agriculture community. Contacts and cross fertilization of ideas could be widened and deepened through conferences and symposiums. The Faculty would develop mutually beneficial cooperation with other agricultural institutions. It may be possible for instance for the Faculty to do more

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through its degree and diploma programs to upgrade Ministry of Agriculture sub-professional staff while obtaining in return more use of the facilities of the Agricultural Training Colleges and Farm Institutes to give its students more practical experience. The ultimate goal to be promoted by the OPEX professors would be the development of a clientele for the research work of the Faculty such that at least a significant portion of this work is, by pre-arrangement, undertaken in response to the needs of end-users including private industrial and commercial firms with interests in agriculture. USAID/Ghana hopes to initiate a trend in this direction by attributing up to \$80,000 in counterpart funds through the GOG development budget to the Faculty of Agriculture's research budget in support of specific adaptive research projects.

Funding Requirements

1. Total Requirements (FY1970 through FY1972):

Title	USAID	GOG	Other Donors
U.S. Technicians	-	-	-
Participants	\$ 76,000	\$ 36,000	\$ 20,000
Contract services	283,000	144,000	100,000
Commodities	22,000	21,000	5,000
Other costs	-	-	-
TOTAL:	\$381,000	\$201,000	\$125,000

2. U.S. Technicians:

None

3. Participants:

No.	Field	Type of Training	Duration	Funding Estimates		
				OY FY1970	BY FY1971	FY FY1972
2	Agr. Extension	Univ. Graduate (M.S.)	9/70-8/71	\$ 13,000	\$ 12,000	-
1	Animal Science	Univ. Graduate (M.S.)	9/70-8/71	7,000	6,000	-
1	Agr. Engineering	Univ. Graduate (M.S.)	9/70-8/71	7,000	6,000	-
2	Agr. Economics	Univ. Graduate (Ph.D.)	9/71-8/74	-	13,000	12,000
Total:				\$27,000	\$37,000	\$12,000

4. Contract Services:

(a) Position Title	(b) Arrival & Dep't. dates	(c) Pipeline Funds thru	(d) FY1970 thru 3/31/71	(e) FY1971 thru 3/31/72	(f) FY1972 thru 3/31/73
Animal Husbandry	7/69 HL/R 7/71 ETD	3/70	\$26,000	\$ 9,000	\$ -
Farm Mechanization	7/69 ETD 8/69 ETA	9/70	22,000	37,000	11,000
Agr. Extension	8/69 ETA	3/70	27,000	28,000	27,000
Agr. Econ.- Commodities- Marketing	8/69 ETA	3/70	32,000	32,000	32,000
TOTAL:			\$107,000	\$106,000	\$70,000

As of June 30, 1969 the contract pipeline was estimated to be \$79,000 but does not include \$19,000 provided from FY1969 funds. These and the FY1969 funds will fund the OPEX professors through the dates shown in column (c).

The amounts shown in columns (d), (e) and (f) will fund the professors through March 31, 1971, 1972 and 1973 respectively.

5. Commodities:

All commodities are to be procured from the U.S.

Category	Delivery Schedule	Funding Estimates		
		OY FY1970	BY FY1971	FY FY1972
Books	4th quarter - FY 1970	\$ 5,000	-	-
Demonstration supplies	4th quarter - FY 1970	\$10,000	-	-
Books	4th quarter - FY 1971	-	\$ 2,000	-
Demonstration supplies	4th quarter - FY 1971	-	5,000	-
TOTAL:		\$15,000	\$ 7,000	-

AUGUST 1969

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FACULTY OF AGRICULTURE - UNIVERSITY OF
GHANA6. Other Costs:

None

7. Cooperating Country Contribution - The University:

The University of Ghana will contribute an estimated \$12,000 per year for each professor, which is the equivalent of \$48,000 per year for the four professors. The University will pay international travel and maintain the salaries of participant trainees. Also, the University will supply commodities worth about \$7,000 in FY1970, FY1971 and FY1972. The Faculty of Agriculture's direct support for USAID assistance is estimated as follows:

		<u>Funding Estimates</u>		
		<u>OY</u>	<u>BY</u>	<u>PY</u>
		<u>FY1970</u>	<u>FY1971</u>	<u>FY1972</u>
OPEX Professor	...	\$48,000	\$48,000	\$48,000
Participants	...	12,000	18,000	6,000
Commodities	...	7,000	7,000	7,000
TOTAL:		\$67,000	\$73,000	\$61,000

8. Contributions from Other Donors:

Goetingen University and the West German Government have made tentative plans to provide one professor in crop science on a salary-topping basis.

Guelph University has been asked to provide one professor in crop science, one in home science and a lecturer in agriculture extension. It is planned to train two students each year for Ph.D's at Guelph. The Canadian Government will provide a very limited amount of demonstration supplies and top the salaries of the professors.

9. Related Projects:

<u>Project Number</u>	<u>Project Title</u>
641-11-110-007	Agriculture Extension & Production
641-11-620-008	Vocational Agricultural Education

