

PD-BAI-249

PROJECT PAPER

AGRICULTURAL MANPOWER DEVELOPMENT

TANZANIA

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TABLE OF CONTENTS

	PAGE
Project Face Sheet .....	1
Glossary of Terms .....	11
Table of Contents .....	iii
<b>I <u>Project Summary and Recommendations</u></b> .....	<b>1</b>
A - Recommendations .....	1
B - Description of The Project .....	1
1. Scope and Inputs .....	1
2. Implementation .....	3
3. End of Project Status .....	5
C - Summary Findings .....	5
D - Issues .....	6
1. Consistency with DAP Strategy for Agricultural Sector Assistance .....	6
2. TanGov/USAID Manpower Training Strategy .....	7
<b>II <u>Project Background and Detailed Description</u></b> .....	<b>8</b>
A - Background .....	8
1. Overall .....	8
2. Original .....	8
3. New .....	11
a. Additional Participant Training .....	11
b. Agricultural Education and Extension - University of Dar es Salaam .....	12
B - Detailed Description .....	14
1. Goal .....	14
2. Purpose .....	14
3. End of Project Status .....	14
4. Outputs .....	15
5. Inputs and Phasing .....	15
6. Linkages and Assumptions .....	20
a. Purpose to Goal .....	20
b. Outputs to Purpose .....	21
c. Inputs to Outputs .....	21
d. Linkages Between Involved Institutions .....	22

III	<u>Project Analyses</u> .....	23
	A - Technical Analysis Including Environmental Assessment .....	23
	1. Overall Rationale and Analysis .....	23
	2. Appropriateness of Assistance in Agricultural Education .....	27
	3. Appropriateness of Technology .....	29
	4. Environmental Aspects .....	30
	5. Technical Soundness and Reasonableness of Cost .....	30
	6. Conclusion .....	31
	B - Financial Analysis .....	32
	1. Recurrent Budget Analysis of Implementing Agencies .....	32
	a. Ministry of Agriculture .....	32
	b. University of Dar es Salaam .....	32
	2. Financial Plan/Budget Tables .....	33
	C - Economic Analysis .....	37
	D - Social Soundness Analysis .....	38
	1. Socio-Cultural Feasibility .....	38
	2. Spread Effects .....	40
	3. Benefit Incidence .....	40
	4. Effect on Women .....	41
	a. Background .....	41
	b. Discussion .....	41
	c. Conclusion .....	42
	5. Summary .....	42
IV	<u>Implementation Arrangements</u> .....	43
	A - Analysis of the Recipient's and AID's Administrative Arrangements .....	43
	1. Recipient .....	43
	a. Ministry of Agriculture .....	43
	b. University of Dar es Salaam .....	44
	c. Links .....	44
	2. A.I.D. .....	44
	3. The Contractor .....	45

B - Implementation Plan .....	45
C - Evaluation Arrangements .....	47
1. Regular .....	47
2. In Depth .....	48
3. Within the TanGov .....	49
D - Conditions, Covenants and Negotiating Status .....	49
E - Annexes (list of Annexes A to Q).....	50

## PROJECT PAPER

### Agricultural Manpower Development

#### I. Project Summary and Recommendations

##### A. Recommendations

Authorization of a grant of \$7,915,000 for the project complete with the following waivers and approvals: 1/

1. A procurement source and origin waiver from AID Geographic Code 000 (U.S. only) to Code 935 for procurement of construction materials;
2. Waiver of the provisions of FAA Section 636(1) to allow the financing of procurement of one project vehicle of AID Geographic Code 935 manufacture; and
3. Approval to deviate from the policy expressed in AIDTO Circular A-466 of June 27, 1976, to permit project completion over a period in excess of five years.

##### B. Description of the Project

###### 1. Scope and Inputs

This manpower development and training project has three major components aimed at assisting the TanGov in developing its professional and sub-professional training activities and capabilities and in expanding the supply of highly trained agricultural manpower. The project seeks to accomplish these purposes through the provision of: a) an advisor to the Director of the Manpower Development Division (MDD), Ministry of Agriculture; b) eight staff members in various fields to the Ukiriguru (5) and Mpwapwa (3) Ministry of Agriculture Training Institutes (MATIs); c) consultants; d) four staff for the Department of Agricultural Education and Extension (DAEE) and the Center for Continuing Education in Agriculture (CCEA) - Faculty of Agriculture and Forestry (FAF), University of Dar es Salaam; e) vehicles for the MATIs and the FAF; f) funds for the construction of certain facilities at the FAF; g) participant training for the involved institutions plus training for other agricultural personnel; h) miscellaneous commodities; and i) funding for selected local and other costs.

1/ Justifications provided in Annex M.

Specifically the project will provide:

a) MinAg and MATIs (including the Participant Training for the Sector)

1. Technical Assistance \$ 3,371,000

- (a) MinAg - Advisor to Director MDD (7-2/3 staff years)
- (b) Assistant to Principal, Mpwapwa MATI (4+ staff years)
- (c) Assistant to Principal, Ukiriguru, MATI (4+ staff years)
- (d) Four Instructors/Trainers Ukiriguru MATI (16-2/3 staff years)
- (e) Two Instructors/Trainers, Mpwapwa MATI (8-1/3 staff years)
- (f) Administrative Assistant MDD (5-1/2 staff years)
- (g) Consultants and Study Team (12 staff months)

2. Participant Training \$ 1,190,000

- (a) MATI staff - 80 years of degree training  
(40 long term participants)
- (b) Degree training for 20 individuals filling  
or expected to fill key positions in the  
food crop and livestock subsectors

3. Commodities \$ 107,000

- (a) Vehicles (9 Jeeps)
- (b) Teaching Materials
- (c) Miscellaneous

4. Other Costs \$ 177,000

- (a) Supplemental Furnishings
- (b) Travel
- (c) Evaluation
- (d) Other

b) Faculty of Agriculture and Forestry

1. Technical Assistance \$ 1,409,000

- (a) Agricultural Education Specialist, FAF,  
UDSM (4+ staff years)
- (b) Agricultural Extension/Rural Sociology Specialist,  
FAF, UDSM (4+ staff years)
- (c) Agricultural Teaching Materials/Audio-Visuals Specialist  
FAF, UDSM (5+ staff years)
- (d) Director for Center for Continuing Education,  
FAF, UDSM (4-1/2 staff years)
- (e) Consultants (10 staff months)

2. Participant Training \$428,000

- (a) For the Department of Agricultural Education and Extension - 12 years of degree training
- (b) For the FAF in areas relevant to agricultural education and extension - 28 years of degree training

3. Comodities \$105,000

- (a) Vehicles (4 Jeeps and one 30-40 seat bus)
- (b) Audio-Visual Equipment
- (c) Miscellaneous

4. Other Costs \$987,000

- (a) Four Houses
- (b) One Hostel
- (c) One 800 sq. meter bilding, including an audio-visual facility, for the Center for Continuing Education in Agriculture and the Department of Agricultural Education and Extension
- (d) Evaluation
- (e) Miscellaneous

2. Implementation

The Manpower Development Division of the Ministry of Agriculture will have full responsibility for organizing and carrying out the project activities at MinAg Headquarters and at the two MATIs being assisted and for the selection of the MATI and agricultural sector participants. The Director of the MDD and the principals of the involved MATIs will be the officials responsible. At the Faculty of Agriculture and Forestry the Head of the Department of Agricultural Education and Extension (to be funded under the project) will have primary responsibility, under the direction of the Dean of the Faculty, for developing the Department. Similarly the Director of the Center for Continuing Education in Agriculture (also project-funded), under the Dean, will be responsible for the development of the Center.

There will be close links between all project components. Contract staff will be expected to help ensure these links are developed and strengthened. Within the Faculty, the Department of Agricultural Education and Extension (DAEE)

will share facilities with the Center while all Faculty Departments will provide staff for training activities. It will also be important for the Director of the Center to establish good working relationships with agricultural parastatals and other organizations for which training might be provided. Both the Center and the DAEE will need to coordinate with the MinAg who will be a major market for graduates, a supplier of middle/high level manpower for training and the source of information on appropriate training. The MATIs as users of Faculty trained manpower will need to express judgments on the quality of trained staff and perhaps look to the Faculty as a source of expertise in the development of teaching materials and in the conduct of specialized training.

The AID funded technical staff will be provided through a contract with a consortium of West Virginia University and North Carolina Agricultural and Technical State University. The personnel will provide needed teaching skills, assist in the development of curricula, train staff and generally assist in developing viable training institutions. The technical assistance contract will also be responsible for carrying out the participant training.

Construction of the houses and the facilities at the FAF will be contracted locally and will employ Fixed Amount Reimbursement Procedures. Most of the commodity procurement will be handled directly by AID. Procedural details will be included in the Project Agreement.

The AID-funded inputs of staff and training over the indicated time frame are expected to lead to the outputs of trained students, better trained teaching staff at the MATIs and the FAF, new or revised curricula and additional in-service training courses. The TA staff, vehicles, commodities and additional facilities will result in a strengthened and better equipped training structure.

The outputs of trained MATI and FAF students, additional training for teaching staff and trained TanGov and parastatal staff leads directly to the "expansion of the supply of highly trained agricultural manpower" (Purpose #1). Outputs of teaching staff, additional facilities, classroom instruction, revised curricula, in-service training at several levels and additional facilities will clearly contribute to "developing TanGov professional and sub-professional training activities and capabilities" (Purpose #2). In both instances the range of outputs provides a high degree of certainty that the expected outputs will lead to achievement of project purpose.

### 3. End of Project Status

At the end of the project it is expected that at MinAg Headquarters: (a) a professional career system for the administrative and technical staffs of the MATI system will have been established; (b) regular in-service training programs will be underway; (c) a system of evaluating agricultural manpower effectiveness will be in use; and (d) future, trained agricultural manpower needs will have been identified with training underway or planned to meet the needs. At the Ukiriguru and Mwapwa MATIs the conditions expected at the end of the project are: (a) new and improved curricula in use; (b) approximately two-thirds of the teaching positions filled with B.S. or higher degree holding personnel; (c) adequate laboratory and field space will be available; (d) in-service training courses will be provided; and (e) additional facilities and equipment will be in use. For the FAF the end of project status will be: (a) a functioning Department of Agricultural Education and Extension; (b) revised agricultural education and extension syllabus in use; (c) additional staff with U.S. graduate training in social science fields; (d) a functioning Center for Continuing Education in Agriculture; (e) refresher and short courses being provided; and (f) adequate facilities in place. Finally, the the TanGov in general at the end of the project, key agricultural agencies will have better qualified staff with additional trained Tanzanians occupying senior positions leading to better planning, management and operation of agricultural projects.

### C. Summary Findings

As detailed in this paper the project is reasonable, will contribute significantly to meeting a critical Tanzanian development need and is already being or is ready for implementation. As the DAP emphasized, additional trained agricultural manpower and the capability to train manpower are very real constraints to further agricultural development. This project, with components aimed at the certificate, diploma, degree, in-service and short-course levels, combined with a MinAg manpower planning input, provides a comprehensive package with high potential for substantial impact on the problems. The assistance to the FAF is particularly critical. With the addition of the new faculty and the Continuing Education Center the FAF will have the capability to implement its new development-oriented strategy. This strategy stresses the need for the FAF to work directly with villages and other agricultural enterprises and to continuously interact with people engaged in development activities. The linkages between the several components reinforce the activities.

The institutions proposed for assistance are ones with key roles in meeting the manpower needs but are currently less than adequately staffed and/or equipped. The concepts involved in this manpower

development and training project are well proven elsewhere. The specialities of the academic staff members to be provided are based on the assessment of needs at the MATIs and the FAF. The number of staff and the length of time they are scheduled to be provided are judged to be the minimum necessary to achieve the outputs and purpose in the indicated time frame. The evaluations scheduled during the project will make recommendations in this regard.

Socially the project appears to be sound. There are no cultural constraints to the activities proposed although the ultimate social impact of the project cannot be determined. Women should benefit from project activities as direct participants in training activities and as more people become aware of the need to take social factors into account in carrying out development activities.

The project activities do not impose a severe financial burden on the TanGov. In all cases, upon project termination, it appears the TanGov will be able to pick up the total costs. No economic rate of return analysis is possible although only a miniscule improvement in the functioning of the agricultural sector will be needed to cover costs. The project is cost effective.

Implementation of the MATI and the participant training activities is well underway. At the FAF no particular implementation problems are foreseen if the inputs in the project are provided as scheduled. The U.S. contractor (West Virginia University and North Carolina Agricultural and Technical State University consortium) appears capable of successfully implementing the technical assistance, the participant training and part of the commodity procurement. The limited construction will be handled by a local contractor under Fixed Amount Reimbursement procedures. The planned monitoring and evaluation activities will help identify and resolve implementation difficulties.

#### D. Issues

There are no issues on the assistance to the MinAg and the MATIs and the participant training for the agricultural sector. On the proposed assistance to the Faculty of Agriculture and Forestry two major issues have been raised. In the following each of these issues will be briefly covered along with an indication where additional discussion elsewhere in the paper is provided.

1. Consistency with DAP Strategy for Agricultural Sector Assistance  
The DAP emphasized that Tanzania suffers from a shortage of skilled manpower at all levels - from farmers through PHD researchers. At

the same time the DAP proposed a transitional strategy which bridges the gap between infrastructure and production while not prematurely abandoning present infrastructure building efforts. In other words, the infrastructure, while improving, is still weak and requires further nurturing, even increased inputs. Furthermore, the new emphasis in the FAF is on working with the small farmer directly. Much if not all of the activity of the new DAEE will be concentrated on small farmer development -- with heavy emphasis on practical village-level work. Thus the assistance to the FAF appears fully consistent with the DAP strategy (further discussion appears in the Project Background and the Project Analyses Sections).

## 2. TanGov/USAID Manpower Training Strategy

While it is agreed that no formal document exists which up-dates the 1972 Manpower Study there is ample evidence proved by the DAP, IBRD materials including the 1974 Agriculture and Rural Development Sector Analysis, the National Maize Program documents and the support of both the MinAg and the University to conclude that assistance to the Faculty should be a part of any manpower strategy. Given the linkages (see Sections II and III) it is also apparent that unless the Faculty is strengthened a sizable gap will exist which will undermine the impact of any manpower development efforts. Finally, it should be noted that some of the manpower information required to prepare a comprehensive, written strategy will be generated by the project.

## II. Project Background and Detailed Description

### A. Background

#### 1. Overall

In April, 1973 the original Project Paper (PROP) for this project was submitted. After the incorporation of a few AID/W comments the PROP was resubmitted in August, 1973 and finally approved in December, 1973. The approved project called for an AID grant input of \$3.3 million, primarily for technical assistance and participant training, over a FY 1974 - 1980 funding period. The first participants departed in January, 1974. A technical assistance contract was signed in November, 1974 and the first contract technician arrived in February, 1975. In August 1975 a Project Paper (PP) revision was submitted which explained and justified a request that the number of participants to be trained under the project be increased from 45 to 60. This revision (PPR No. 1) was approved. A new activity entitled Farmer Training and Production was submitted under the project in March, 1976 and is awaiting AID/W approval. While certain linkage discussions of this PP amendment include the Farmer Training and Production component the rationale and detailed analysis for that activity will not be repeated. The reader is referred to the PP dated March, 1976 for the complete discussion.

With the exception noted above this revision takes the 1973 PROP and restructures it into PP form while also detailing the approved change in the participant training component (PPR No. 1) and adding an Agricultural Education and Extension element to project activities. In the following "original" refers to project components submitted in 1973 and "new" refers to additions or proposed changes since then. The background of the "new" components is quite detailed. However for the original components it is not believed that a comprehensive repeat of the background presented in the original PROP is necessary. Instead a rather brief background and history of project activities to date is given.

#### 2. Original

Several constraints to the transformation of Tanzanian agriculture into a modern, highly productive segment of the economy have been identified in numerous studies. <sup>2/</sup> The universal theme of these

2/ Yeaman, Schwencke and Wamumza, Agricultural Manpower Development, August 1972; Food Crop Sub-Sector Study, University of Missouri, July, 1973; Appraisal of the 3rd Education Project in Tanzania, Report No. FE-18A, January 1972. IERD/IDA; Development Assistance Program 1974. USAID/Tanzania; Tanzania Agricultural and Rural Development Sector Study, Report No. 541a-TA, December, 1974. IERD/IDA.

papers is the critical shortage of properly trained and skilled agricultural manpower at all levels. Yeaman, et al, estimated agricultural manpower training needs at two levels. The first was an optimum ratio level of 1:2:20:10000 for agricultural staff and of 1:2:10:50000 for veterinary staff. The agricultural optimum ratio was based on the calculation that for every 10,000 farm families one Agricultural Officer (graduate), two Field Officers (diplomates), and 20 Assistant Field Officers (certificate holders) would be necessary. The veterinary optimum ratio meant that for every 50,000 units of livestock one Veterinary Officer, two Field Officers (Veterinary), and 10 Assistant Field Officers (Veterinary) will be needed. The second level of estimate took into account a TanGov financial constraint which limited increases in personal emolument expenditures of MinAg to 9 percent per year (1973). Note: In 1975/76 the MinAg alone had 291 vacant degree positions (279 filled); 265 vacant diploma positions (785 filled); and 670 vacant certificate positions (3,300 filled). Obviously the need for trained personnel is at least as acute today as it was in 1972/73.

Manpower Needs (Based on One Assistant Field Officer  
for Each 500 Farm Families)  
(Includes Agriculture and Veterinary (Livestock Staff) 3/

<u>Category</u> <sup>5/</sup>	<u>Total</u>	<u>On Board</u> <u>(1972)</u>	<u>Needed</u> <u>(1980)</u>	<u>Lost During</u> <u>Period</u> <u>(Expatriates</u> <u>&amp; Attrition)</u>	<u>Numbers to be</u> <sup>4/</sup> <u>Trained</u>
		<u>Expatriate</u>			
Graduate	320	87	1,080	152	911
Diplomate	753	14	2,008	127	1,382
Certificate	3,126	-	11,216	157	8,247

Manpower Needs (Based on 9% Financial Constraint)

<u>Category</u> <sup>5/</sup>	<u>Total</u>	<u>On Board</u> <u>(1972)</u>	<u>Needed</u> <u>(1980)</u>	<u>Lost During</u> <u>Period</u> <u>(Expatriates</u> <u>&amp; Attrition)</u>	<u>Numbers to be</u> <sup>4/</sup> <u>Trained</u>
		<u>Expatriate</u>			
Graduate	320	87	546	152	378
Diplomate	753	14	1,299	127	673
Certificate	3,126		5,402	157	2,433

3/ Includes parastatals and Ministry of Education.

4/ Includes attrition at 5% for certificate level; 15% for diplomate level; 20% for graduate level.

5/ The following education requirements for officer rank are Tanzanian Government personnel regulations:

1. Agricultural Officer or Veterinary Officer - Graduate (B.S. Degree).
2. Field Officer (Agriculture or Veterinary) - Diplomate.
3. Assistant Field Officer (Agriculture or Veterinary) certificate holder.

Source: Yeaman, et al, Agricultural Manpower Development in Tanzania, pages 40 and 41.

As part of its attempts to alleviate this situation the TanGov increased the number of Ministry of Agriculture Training Institutes (MATI's) from two to twelve in the 1967 - 74 period. While this rapid expansion of the training institute system was required if the TanGov was to meet its goal of self-sufficiency in agricultural manpower by 1980, assistance was also required to overcome problems of staffing, equipment and a general inability of the MATI's to provide well trained graduates (2 year certificate holders and 3 years diploma's).

The assistance obtained to improve the Ministry of Agriculture Training Institute system included an IDA credit covering the construction and partial equipping of several MATI's as well as some specific technical assistance at the national level. Also aid from the NORDIC countries for the institute at Mbeya and West German aid for the Ifakara Institute was negotiated. AID attempted to fill part of the remaining gap between hopes and realities by providing technical assistance at the national level (one special assistant to the Chief of the Manpower Development Division - MinAg) and at the Ukiriguru and Mpwapwa MATI's. Combined with extensive participant training and limited commodities it was believed that two functioning institutes and overall improvement in the training system would result. An additional component of the original PROP was a short study of the Faculty of Agriculture and Forestry, University of Dar es Salaam, aimed at determining how best to establish a Department of Agricultural Education and Extension. This Department would help fill the gap identified in degree level trained manpower.

A brief summary of the current status of the original AID project (updating the March, 1976 PAR) is as follows: a) The Chief of Party for the contract team has been on-the-job since February, 1975; b) of the eight experts to be assigned to the Ukiriguru and Mpwapwa MATI's six have arrived (but these are more than one year behind schedule as a result of delays in the construction of necessary housing), with the remaining two expected shortly; c) the study of the Faculty of Agriculture and Forestry University of Dar es Salaam has been completed and the recommendations are covered in this revised Project Paper; d) vehicles and commodities have been ordered and are either on-site or expected shortly - additional items will be ordered in the near future; and e) the participant training is ahead of schedule with six participants having returned, 18 currently in training and 15 expected to begin their training programs in August/September, 1976. Further details are included in the Consortium Annual Progress Report.

### 3. New

#### a. Additional Participant Training

The conclusion reflected in the August, 1975 revision to the Project Paper, mentioned above, that an additional 15 participant training slots can be very productively used, is actually not new. In the earliest version of the Project Paper a total of 60 long-term trainees was proposed. However, as it was felt by AID that the Ministry of

Agriculture would have difficulties in providing 60 qualified training candidates (because of under-staffing problems), it was decided to initially approve only 45 positions. The decision whether or not to include additional participants later on in the project was left to be determined by the findings and recommendations of the major external evaluation scheduled for FY 1976. But since the contract for the implementation of the project was signed a year later than called for in the original implementation schedule it is now anticipated that the evaluation will not take place until CY 1977. Waiting for this evaluation to decide on additional participants would not meet current needs and would also reduce the effect of the training. Further it should be noted that the one project component on schedule is the participant training. A total of 39 people have been approved for training with six returned, 29 presently in training and an additional 4 scheduled to leave in the next few months. These numbers exceed by 20 percent the original estimate of participants at this point in the project and reflect the ability of the Manpower Development Division to come forward with greater numbers of highly qualified participant training candidates than was earlier anticipated. The TanGov has requested that USAID train at least an additional 15 people under the project, both from within and outside the MATI system - giving a total of 40 within the MATI system and 20 outside this system but in the general area of food and livestock production.

b. Agricultural Education and Extension - University of Dar es Salaam

The previously referenced Agricultural Manpower Development Study recommended that a capability be established at the University of Dar es Salaam in the area of agricultural teacher training. 6/ The study further recommended that a Department of Agricultural Education and Extension be established. In recognition of these recommendations the original PROP included funding for a study team to examine the real needs and to recommend a course of action.

In June and July, 1975, a four-man study team from WVU and NCATSU conducted a review of the training capabilities of the Faculty of Agriculture and Forestry for the purpose of making recommendations for the organization and development of the new Department of Agricultural Education and Extension at the Faculty. The activities proposed in th's paper are based on the recommendations of their report of October, 1975 which included: "The introduction and implementation of the Department of Agricultural Education as requested by the University of Dar es Salaam should proceed as rapidly as resources can be provided and "A Center for Continuing Education should be established in the Faculty of Agriculture

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6/ See Annex A for a summary of the Study.

and Forestry to improve the instruction methodology and agricultural technology for some 26,000 agricultural workers in Tanzania." 7/

The purpose of the Department of Agricultural Education and Extension (DAEE) would be to train qualified and capable agricultural instructors to fill teaching positions at all levels of formal and informal education throughout Tanzania, including teachers for MATI's, Rural Training Centers, Farmer Training Centers and secondary schools. It would also train persons to fill supervisory roles in primary schools and villages and to conduct special training demonstrations and extension sessions.

The primary purpose of the Center for Continuing Education in Agriculture (CCEA) would be to provide in-service training for Tanzanian civil servants - including agricultural teachers, extension workers and parastatal staff. This in-service training would provide them the opportunity to up-date themselves and the agricultural extension service in general with respect to newly researched and developed teaching, training and extension methodologies (including preparation and use of demonstration materials, visual-aids, and innovative output increasing but low cost agricultural technologies) found by the Center and researchers to be applicable to Tanzania's resource and input availabilities. To meet the growing requirement for in-service training for civil servants and parastatal workers in the agricultural sector, because of increased need for an emphasis on introducing output increasing but low cost technological inputs, (necessitated by more specialized needs of a developing agriculture), the FAF and the Ministry of Agriculture are also proposing to develop the Center for Continuing Education in Agriculture at the Faculty.

The decision has already been made by the University Senate to proceed with the development of the new DAEE. The decision was based not only on the increasing demand for well trained agricultural specialists in Tanzania, but also because of the growing need for agricultural extension workers and agricultural instructors at the various educational levels.

However, the development of a DAEE and a CCEA requires resources the Government does not have. Manpower with the necessary expertise and experience is not available. On-going financial problems for the TanGov in general prevent the needed investments from being made. Thus, even though the alleviation of the identified constraint would have very important benefits, without outside assistance the development of these institutions will not take place at the desired pace, if at all in the very near term. As detailed later, from AID's point of view this provides an opportunity, in an area where the U.S. is eminently qualified, to provide much needed assistance. Such assistance would be consistent with the DAP which points

7/ Program Proposal for a Department of Agricultural Education and Extension and Center for Continuing Education in Agriculture at the Faculty of Agriculture and Forestry at Morogoro Tanzania, West Virginia University and North Carolina Agricultural and Technical State University, USAID/Afr-C-1067, Oct. 1975. Summary and recommendations contained in Annex B.

out that the high level agricultural manpower needs will double from 1971 to 1981 and which stresses the overall manpower problem. It would also fill out an AID manpower strategy which is directed at several links in the manpower chain (See Section III for additional discussion).

It is within the above environment of an important constraint and limited resources that the following project was revised/developed by USAID/Tanzania in close collaboration with the Ministry of Agriculture, the Faculty of Agriculture and Forestry and the USAID-funded technical assistance contract team leader. As such it reflects current thinking and analysis and the complete agreement of the involved parties.

## B. Detailed Description

### 1. Goal

The goal of the project is "To assist the Government of Tanzania (TanGov) achieve its objectives of increased self-sufficiency in the food crops and livestock subsectors."

### 2. Purpose

The project has two purposes: a) To assist the TanGov in developing its professional and sub-professional agricultural training activities and capabilities; and b) to expand the supply of highly trained agricultural manpower.

### 3. End of Project Status

By the end of the project it is expected that at MinAg Headquarters: a) a professional career system for the administrative and technical staffs of the MATI's will have been developed (already accomplished); b) regular in-service training programs will be underway for TanGov agricultural staff, c) a system of evaluating agricultural manpower effectiveness will be in use with the results feeding into the further improvement of training programs; and d) future trained agricultural manpower needs have been identified with training underway or planned to meet the needs.

At the Ukiriguru and Mwapwa MATI's, by June of 1980 when the technical assistance is scheduled to end, it is expected that: a) new and improved curricula will be in use along with additional facilities and equipment; b) approximately 2/3's of the teaching positions will be filled with B.S. degree holding (or higher personnel); c) adequate laboratory and field space will be provided for student needs; d) in-service technical and administrative training courses will be provided; and e) annual budgets will be adequate to support/maintain the facilities.

Within the Faculty of Agriculture and Forestry at the University of Dar es Salaam it is expected by project end that: a) a functioning Department of Agricultural Education and Extension will exist; b) a revised agricultural education and extension syllabus will be in use; c) a significant number of FAF staff members will have U.S. degree training in agricultural education, agricultural extension, rural sociology or related fields; d) a Center for Continuing Education in Agriculture will be functioning; e) refresher courses for professional agriculturalists will be regularly scheduled; and f) adequate facilities and equipment will be available.

Finally by project end it is expected that: a) key MinAg and agricultural parastatal organizations will have better qualified administrative, management and technical staff; b) better trained Tanzanians will be occupying more senior positions; and c) planning, management and operation of crop production and livestock development projects will be improved.

#### 4. Outputs

From the project funded inputs the following outputs are expected:<sup>8/</sup>  
a) better trained students; b) improved teaching staff; c) trained TanGov and parastatal staff; d) revised curricula, lesson plans and training materials; e) in-service training courses; f) additional facilities at the FAF including a student hostel and a building containing classroom space, office space and a visual aids laboratory; g) non-degree training courses for agriculturalists and individuals with a need for agricultural information; h) permanent career service system for MATI teaching and administrative staff (already accomplished); i) manpower development and training programs for MinAg staff; j) classroom instruction; k) a requirements analysis of establishing an agricultural education program at the FAF, University of Dar es Salaam (accomplished); and l) agricultural manpower survey for use in planning training programs.

#### 5. Inputs and Phasing<sup>9/</sup>

The total inputs for the project are shown in Table 1. As can be seen the major AID components are technical assistance (\$4,780,000) and participant training (\$1,618,000), with smaller amounts for commodities (\$212,000) and other costs including construction (\$1,164,000). From Tanzania the primary inputs are recurrent operating budgets for the MATI's and the Faculty of Agriculture and Forestry (\$4,358,000), participant support (\$212,000), training fees (\$195,000) and trust fund contribution (\$150,000).

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<sup>8/</sup> For the magnitude of outputs see Annex D, Logical Framework.

<sup>9/</sup> For additional input details see Annex J.

Additional AID inputs supporting this project which have been provided under other projects are commodities and staff housing for the MATI's funded under Agricultural Support Loan II (\$445,000) and development budget support to Ukiriguru and Mpwapwa MATI's under Agricultural Sector Loan I (\$221,500).

Other donor inputs which relate directly to the project but which are not part of the project are: a) an IDA loan of U.S. \$3,300,000 including \$1,839,000 for the MATI system (\$339,000 for construction of facilities at Ukiriguru and Mpwapwa); b) about \$2,586,000 in Nordic AID to build, staff and train the Mbeya MATI; c) West German assistance to Ifakara; and d) various donor assistance to the Faculty of Agriculture and Forestry (see Annex K for additional detail).

TABLE 1. Project Inputs - Agricultural Manpower Development

<u>AID</u>	(U.S. \$'000)
<u>Technical Assistance</u>	
MinAg Headquarters and MATI's	\$ 3,299
Faculty of Agriculture and Forestry	1,349
Consultants	132
Sub Total	<u>\$ 4,780</u>
<u>Participant Training</u>	
MATI's and Key Agricultural Positions	1,190
Faculty of Agriculture and Forestry	428
Sub Total	<u>\$ 1,618</u>
<u>Commodities</u>	
MinAg Headquarters and MATI's	107
Faculty of Agriculture and Forestry	105
Sub Total	<u>\$ 212</u>
<u>Other Costs</u>	
MinAg Headquarters and MATI's	177
Faculty of Agriculture and Forestry	987
Sub Total	<u>\$ 1,164</u>
Contingency and Inflation	141
TOTAL	<u>\$ 7,915</u>

TANZANIA

I. Ministry of Agriculture

a) MATI Support (operating budgets)	\$ 3,570
b) Participant Support	132

II. Faculty of Agriculture and Forestry

a) Operating Budgets	788
b) Participant Support	80
c) Facilities	40

III. Other

a) Training Fees	195
b) Trust Fund Contribution	150

Total Tanzania \$ 4,955

Total Project \$12,870

The proposed phasing of the technical staff is shown in Table 2. The arrival times are particularly important because they coincide with the academic year. Later arrivals than those shown, for the staff members not on-board, will delay the project a year in each case. For the MATI staff members an assistance period of four years is now judged adequate (rather than  $4\frac{1}{2}$ -5 years per the original PROP) given the progress already made in participant training. At the FAF it is expert judgement that four years will be sufficient to develop an on-going Department of Agricultural Education and Extension (assuming the participant training proceeds on schedule) but  $4\frac{1}{2}$ -5 years will be needed to establish a viable Center for Continuing Education in Agriculture.

TABLE 2. Phasing of Long-Term Technical Assistance Staff

Position	FY75	FY76	IQ	FY77	FY78	FY79	FY80	FY81	FY82	FY83
1. Chief of Party (MinAg)	Feb								Sept	
2. Administrative Asst. (MinAg)				May					Sept	
3. Agronomy (Ukir)		May					June			
4. Ag. Eng. (Ukir)		May					June			
5. Rural Economy and Extension (Ukir)		May					June			
6. Land Use Specialist (Ukir)		May					June			
7. Prod. Economist (Ukir)		July					June			
8. Animal Prod. (Mpw)		Nov					June			
9. Range Mgt (Mpw)		May					June			
10. Animal Health (Mpw)		July					June			
11. Ag. Ed. Sp. (FAF)				July				Aug		
12. Ag Ext. Sp. (FAF)				July				Aug		
13. Director - Center Cont. Ed. (FAF)						Jan				July
14. Ag. Teaching Materials (FAF)						Apr				May
<b>Total Long-Term Staff Months</b>	<b>5</b>	<b>30</b>	<b>27</b>	<b>119</b>	<b>150</b>	<b>165</b>	<b>144</b>	<b>70</b>	<b>48</b>	<b>18</b>

Total Long-Term Staff Months = 776

MinAg = Ministry of Agriculture

Ukir = Ministry of Agriculture Training Institute - Ukiriguru

Mpw = Ministry of Agriculture Training Institute - Mpwapwa

FAF = Faculty of Agriculture and Forestry

The participant training schedule is shown in Table 3. Generally the schedule is front-loaded to ensure the participants return in sufficient time to benefit from on-the-job training from the AID-funded staff.

TABLE 3. Participant Training Schedule

FY	<u>Participant Starts With FY Funding</u>			Total Starts	Accumulative Total
	<u>M/II</u>	<u>OTHER AGR</u>	<u>FAF</u>		
FY 74	6	1	-	7	7
75	11	6	-	17	24
76	10	5	-	15	39
77	9	6	8	23	62
78	4	2	6	12	74
79	-	-	6	6	80
80					

In Table 4 the phasing of U.S. commodities and other costs on an obligation basis and the Tanzanian inputs on an estimated expenditure basis is shown.

TABLE 4. Time Phasing of Commodities, Other Costs and Tanzania Inputs <sup>19</sup>

<u>A. AID</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>TOTAL</u>
I. Commodities	27	1	4	33	108	14	6	15	4	-	212
II. Other Costs	27	35	18	55	944	22	51	8	4	-	1,164
<u>B. TANZANIA</u>											
I. MinAg	11	31	629	628	614	599	595	595	-	-	3,702
II. FAF	-	-	-	-	159	151	234	225	68	71	908
<u>III. Other</u>											
(a) Fees	-	-	-	-	-	-	42	46	51	56	195
(b) Trust Fund	-	3	10	23	29	32	28	12	8	5	150

Unit: U.S. \$'000

<sup>10/</sup> For breakdown see Table 7, Section IV and Annex J, Additional Project Details.

### 3. Linkages and Assumptions

#### (a) Purpose to Goal

As detailed elsewhere in this Project Paper, one of the serious constraints to agricultural development is the shortage at all levels, in quantity and quality terms, of trained agricultural manpower. In a country where information sources and channels to small farmers are limited, greater emphasis is being placed on agriculture and decentralized decision making is being implemented, this manpower is particularly critical in extending ideas, technology and information on which decisions can be made. Achieving the changes in current production practices necessary to have "increased self-sufficiency in the food crop and livestock agricultural sub-sector" (Goal) requires that the farmers recognize the opportunities and have the means to implement the new practices. Without trained manpower such as will be developed through the institutions to be strengthened under this project it is not likely that farmers, including the rural youth who will need to seek a livelihood in agriculture will become aware of the possibilities; at least not at the rate necessary for achieving the development objectives, preventing food shortages and making agriculture a more attractive occupation.

Regarding staff quality, there is ample evidence that additional or better training will improve quality as measured by performance and effectiveness. In turn there is an obvious link between staff performance and effectiveness and the results which will occur from agricultural programs being designed and implemented. Thus this project, which seeks to expand the supply of trained agricultural manpower as well as to assist in the development of the TanGov's professional agricultural training activities and capabilities (purposes), clearly has a link to increased agricultural production. In fact trained manpower is probably the most critical requirement to increased production as the manpower performs the functions of planning, extending, advisory, assisting etc.

The only question would be whether the scope of the project is large enough to make a significant difference in the supply of quality manpower. In the judgement of USAID/Tanzania and the TanGov, the addition of 80 U.S. degree trained staff to the manpower pool and the annual outturn of 20 degree trained Tanzanians, over 225 certificate holders, and about 75 diploma level staff plus the training to be provided for large numbers of existing staff, is significant. In a few years the presence of these staff should make a substantial difference.

Critical assumptions at the goal level are that the TanGov will continue to support the food crop and livestock sub-sectors and that TanGov policy will provide a suitable environment for increased production. In this regard, TanGov is currently discussing means by which M.S. level staff can be made available for planning and implementation at the Regional level, B.S. level staff at the District level, and at least diplomates (MATI graduates) at the Ward level. These discussions indicate that TanGov recognizes the importance of trained manpower at levels close to village development efforts.

(b) Outputs to Purpose

The project design is based on clear links between the expected outputs and the project purposes. The outputs of trained MATI and UDSM students, teaching staff and trained TanGov and parastatal staff lead directly to expanding the supply of highly trained agricultural manpower (purpose No. 2). The outputs of teaching staff, additional facilities, classroom instruction, revised curricula and inservice and non-degree training at the MATI's, the UDSM and for MinAg staff are components of "professional and sub-professional training activities and capabilities" (purpose No. 1). Finally the outputs of a career service system for MATI staff, a requirements analysis at the UDSM and agricultural manpower information, are supportive of achieving the other outputs.

The range of outputs involving training of two basic types - academic training at the degree, certificate and diploma levels and in-service training for low, medium and senior level staff-provides a high degree of confidence that additional numbers of trained agricultural staff will be produced. Similarly, the outputs of teaching staff, additional facilities and equipment, revised curricula and in-service and non-degree training courses are designed to strengthen and develop institutional capabilities and the actual training for large numbers of Tanzanians. The combination of staff, facilities and training materials should enable training to be conducted and a capability to be developed. The magnitude of the expected outputs and the given time frame are judged adequate to reasonably conclude that the outputs will lead to the achievement of project purposes.

Critical assumptions at the purpose level are that adequate financial support will be provided and that the TanGov will effectively utilize the trained manpower. At the output level financial support is also critical as is the supply of suitable staff for training.

(c) Inputs to Outputs

For each input there is a corresponding output or outputs. The most critical inputs are technical staff and participant training. Assuming that properly qualified technical staff are provided it is not unreasonable to believe that the staff can: a) develop and improve curricula; b) provide on-the-job training for Tanzanian staff which will make them more proficient and effective teachers; c) lecture and train Tanzanian students; d) develop in-service and non-degree training course in relevant fields meeting identified needs and e) generally up-grade the quality of instruction at the involved training institutions. At the national level the Chief of Party will be involved in the overall planning and development of training strategies to meet national needs. These technical assistance inputs plus a relatively large number of participants leads to the conclusion, even with some participant losses to non-project activities, that additional trained teachers and other TanGov and parastatal staff will be in place upon project completion.

Adding trained teachers and equipment to the additional facilities provides good evidence that a strengthened training structure will exist. The length of time and the range of technical assistance, training and other inputs indicate that some of the less tangible elements of a viable, productive system such as experience, decision-making and planning ability will also be in place. To conclude, it seems reasonably clear that the inputs will lead to the outputs.

Again, in addition to the assumptions mentioned above, there are assumptions of financial resources and manpower available for training and that AID management is adequate.

(d) Linkages Between Involved Institutions

As shown in Annex J the various institutions involved in the project are closely and complexly linked through information and personnel flows while simultaneously affecting and being affected by the larger Tanzanian environment. A particularly important link exists, in development terms, between the MinAg (and the MATI's) and the Regional and District Governments who plan and implement agricultural programs with the guidance of the MinAg and utilizing the student output from the MATI's. It is vital that information flows both ways through this link so the MinAg will profit from the experience of the local levels in implementing programs and so the local officials are aware of the most recent adapted recommendations and practices. The activities of the MATI's and the FAF in the surrounding villages where the students gain practical experience are a critical component of the exchange and provides an opportunity to instill proper student attitudes while also transmitting information.

A second critical link is between the MinAg and the Faculty of Agriculture and Forestry. The MinAg will be a major employer of FAF graduates. To turn out the kind of people needed the FAF must have information on MinAg and agricultural sector plans and requirements. At the same time the FAF staff represents a large pool of highly trained manpower which can provide expertise, judgements and recommendations on agricultural development activities and opportunities to the MinAg and other agricultural or planning bodies. This interchange is facilitated by the fact that the working relationships between the MinAg and the FAF are excellent. This is reflected by the fact that at one point the Director of the Manpower Development Division, MinAg, agreed to temporarily shift two positions from the MATI's to the FAF because the need there was, in his judgement, more critical. To quote from the relevant letter of 2/2/76 "All of the agricultural education programmes underway/or proposed are inter-related and mutually supporting. The spirit of cooperation between this Ministry and the Faculty of Agriculture is excellent. Our view is that the Faculty basically trains people for the market, and we are that market. Anything that we can do to support the Faculty programme is obviously in our short and long-term interest".

An additional link between the two organizations will be provided by the Center for Continuing Education in Agriculture. This Center will provide in-service training for senior level agricultural officers of the MinAg, Parastatals and other organizations. The direct contract between the "academics" of the FAF and the "realists" designing and implementing activities will be mutually beneficial.

Finally, the center itself will have direct links through its training activities with all TanGov and parastal organizations involved in agriculture as well as with villages and schools. It is expected that the Center will be a looked-to source of information on agricultural subjects and an effective disseminator of such information. As a service organization the Center will need to be responsive to the needs of its clientele and will be required in planning training activities to maintain close liason and coordination with the Ministry of Education, agricultural bodies and parastatals.

### III. Project Analyses

#### A. Technical Analysis Including Environmental Assessment

##### 1. Overall Rationale and Analysis

The rationale behind this project is an attempt to integrate the various facets of agricultural education efforts within the agricultural sector in a more efficient manner.

Historically there has been little effort to approach the MinAg training efforts from an educational point of view. Recently the Ministry of Agriculture has been able to implement a new Scheme of Service, or career ladder, for those who have chosen teaching agriculture as a profession. This permanent scheme of service will have a long term impact upon the quality of persons attracted to the work of teaching agriculture at the various training institutes within the MinAg. There has also been considerable confusion within the MATI network regarding the development of syllabi that were appropriate in terms of technology and practicality for Tanzanian agriculture. At the moment intensive efforts are being made to standardize the syllabus at all certificate level institutions in order to produce a generalist of uniform quality that will be assigned to work at village level.

Coordinators of studies have been appointed at all MATIs and they are beginning to make a much more systematic attempt to improve the syllabus, improve teaching methodology, teaching loads for individual tutors, and supervision of the overall program.

A new approach to curriculum development and revision utilizing both teaching staff and the clientele that the MinAg serves through the MATI training program will also facilitate the development of more applicable syllabi with practical skills orientation that is now being demanded by the villages. It also implements the decentralization concept by involving many others in this process outside and beyond the Pamba House headquarters of the MinAg Manpower Development Division.

The MinAg is also making a real effort to provide training in teaching methods and educational administration for the senior tutors who are being released for further training. The Manpower Development Division is developing a staffing pattern approach to apply at all MATIs which will greatly assist in the selection and posting of teaching staff to the institutes. With an "establishment" or staffing pattern developed for each institute, the uniformity and improvement in quality of graduates will be greatly facilitated. Staff utilization will also be improved. Specialization will continue to be the order of the day at the diploma level. Through this project, it is intended to support the initiation of a specialized program of agricultural education at the degree level. Concurrently, through the Farmer Training sub-project, this effort to further integrate agricultural education will be carried to the most important group within the agricultural sector, the farmers themselves.

The farmer training activities relate directly to the MATI network. First, all of the planned activities in the general field of farmer training will be under the aegis and direction of the MATI. The presence of farmers on the MATI compounds and the new emphasis on farmer acceptability will have a very positive effect on the teaching atmosphere at the MATIs. The demands that this new emphasis will place upon the existing teaching staff as well as newly recruited teachers will have a healthy influence on the rural development emphasis that is being nurtured in all government programs throughout the country. It should highlight the basic purposes of the MATI certificate and diploma programs: that is, that graduates are being produced to give practical assistance to the 95 percent of the population that lives and works at the rural village level. Whether the teaching staff is working with certificate/diploma level students or with the farmers, they will be continually reminded of their basic mandate - to provide assistance to the farming community. This continual reinforcement of basic purpose has been missing in the somewhat academic and elitist atmosphere of the MATIs in the past. The daily problems of communication with farmers and the demands for practical solutions to everyday agricultural development problems will have a tremendous impact on the syllabus that develops for use at the certificate and diploma level. Gone will be the days when

blackboard lectures and the academic approach reigned supreme. There is no doubt that the farmer influence in the training atmosphere will effect useful change in the MATI syllabi. On the other hand, teaching staff will be firmly encouraged to develop their teaching skills in useful interaction with the farmers themselves. The extension activities of KILIMO personnel have been heavily criticized in recent years. There are plausible reasons for this criticism, not the least being the confusion during the move to decentralize the extension administration. But many MATI-trained extension workers have taken a very shallow and academic approach to their work with practicing farmers. With the TANGOV's egalitarian approach to national development giving individuals a voice in their own development destiny, the daily contact between students and teaching staff and the farmer, and the rising eminence of the village as a legal entity demanding suitable qualified development assistance personnel, the atmosphere at the MATIs will be more directed at the salient objectives of TANGOV agricultural development policy. This will be a healthy situation for the resolution of many MATI curriculum problems. Much of what is developed will involve student activities within the Farmer Training Wing activities as well as the MATI sponsored technical assistance activities with the selected villages. The MATI students' involvement in this whole process will focus on their role in the development strategy and should go a long way in developing a more useful frame of reference for their future activities.

At the degree level there is a rapidly growing demand for a new breed of university graduate with a technical agricultural background coupled with the ability to effectively transmit his knowledge. With the experience of a project-oriented development policy, many of the top agricultural professionals are realizing that project implementation has been severely hampered by lack of trained manpower. Training officers are now being urgently recruited by MinAg parastatals and the MATI network. Because of the increased emphasis being placed on agricultural instruction in the educational system, these same individuals are in great demand within the secondary school system, the teacher training colleges, and even within the supervisory structure of the primary school system. At the moment, no institution in Tanzania (or East Africa, for that matter) is producing a B.Sc. degree holder with a specialty in agricultural education or extension. Tanzania will be pioneering this effort within this geographical area of the world. Initiating the degree level specialty at Morogoro in Agricultural Education and Extension in harness with an operating Center for Continuing Education in Agriculture will be particularly innovative.

The Faculty of Agriculture and Forestry at Morogoro has clearly taken on a national commitment to the development of the agricultural sector in Tanzania. There is much evidence of this commitment showing up in teaching and research programs underway at the Faculty which are focusing on real priority development problems. An ivory tower approach is no longer acceptable. To this point in time, however, there has been no useful vehicle for the Faculty to express its commitment in the area of extension and continuing education efforts. Existing physical facilities of the Faculty simply do not allow any sustained, refresher-course type of training. During the few weeks of the year that the student hostels are not filled to capacity, the Faculty has been providing seminars, in-service training and conference facilities to the agricultural community in Tanzania.

The cooperative effort to establish the Center for Continuing Education will provide the vehicle for useful in-service training of the senior officers within the MinAg cadres, 11/ as well as officers of the MinAg parastatals, and senior officials of the regional administration and TANU itself. Tanzania's whole development strategy is focused on the rural sector, and the facility can play a very positive role in a more effective and efficient use of the limited resources available for the agricultural development effort. By utilizing the concept of extension specialists within each of the major departments at the Faculty, a new bridge will be constructed between the Faculty, as the major repository of agricultural expertise in the country, and the practical problems being faced by farmers, MinAg field workers and those in the administrative hierarchies of the parastatals, development projects, the regions and TANU. These extension specialists will have the responsibility to work and teach in the Center on a part-time basis, conduct field work in the regions and districts, but will be based within the departments of the Faculty where their agricultural expertise is located. The three-way communication thus established should have far-reaching effects upon the curriculum being presented to the degree students, and the nature and quality of the in-service course being presented to senior agricultural representatives, or base clientele, utilizing the service offered by the Center. The linkages that this sort of innovative approach to staffing the Center can provide should have far-reaching and dramatic ramifications. The improved flow of communication between the training/retraining efforts at the various levels and the possibilities this provides is the most intriguing and attractive part of the proposed new program. The lessons learned at the higher levels will have a good deal of applicability at the intermediate (certificate/diploma) level as well as at the farmer training level.

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11/ There is a strong desire on the part of the MinAg to up-grade its field staff through in-service training. Only the more junior officers can really benefit from the present mode of in-service training, that is through the MATI network, due to the present quality and quantity of the MATI teaching staff.

Besides providing the sort of trained manpower now being demanded, the Department of Agricultural Education and Extension also has a role to play in the Center. For instance, the Audio-Visual Specialist will be sharing his time between the Department and Center. This offers him a wide scope for utilization of student practicals in the preparation of practical audio-visual teaching aids for instantaneous trial and use within the Center. The Agricultural Education Specialist and the Agricultural Extension Specialist will also be utilized in the preparation and implementation of the various in-service programs, and the feed-back from participants can have a positive effect upon the training syllabus used for degree level students.

The possibilities for practical training of students at the various levels provide many alternative teaching activities. The area of practical training in education and extension courses has been one of the weak links in both degree and intermediate level training programs of the past. The linkages and improved communications flows at various levels of training are greatly enhanced and will encourage adjustment and fine tuning of syllabi throughout the system.

The Faculty commitment to support such an effort is clearly shown in their planning and proposed funding for the new department and the Center. The assistance requested ties in completely with the overall planning and long term goals of the Faculty.

## 2. Appropriateness of Assistance in Agricultural Education 12/

At several places in this project paper it is argued that assistance in agricultural education is appropriate because of the growing demand for teachers of agriculture and for agriculture training officers which Tanzania produces in only small numbers. 13/ This assumes that the teaching of agriculture at the secondary and other school levels should be supported. In the following the validity of this assumption is examined.

Is education in agriculture something which should be and can be successfully introduced in Tanzania? There is a relatively long history of attempts to install a system of agricultural education in Tanzania schools. Early colonial efforts, backed by official policies which

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12/ This section draws heavily on Agriculture in African Secondary Schools - Case Studies of Botswana, Kenya and Tanzania, Sheffield, Moris and Hermans, 1976, The African - American Institute.

13/ A one-year course at the Butimba College of National Education has been offered to certificate and diploma training agricultural staff in an effort to produce some agricultural teachers.

emphasized the importance of agriculture, were thwarted by problems including lack of qualified teachers, imprecise definitions of what should be taught, unsuitable teaching methods and the use of student labor for non-educational purposes. Students and parents also were skeptical that agricultural teaching would help the students gain access to salaried employment - the aim of education.

Since independence there has been renewed interest in agricultural education but it wasn't until 1971 that programs in agriculture were actually implemented by the Ministry of Education - well after Nyerere's announcement of an official policy of practical education in 1967. According to a 1975 proposal the objectives of agricultural instruction in general secondary schools are: 1) to emphasize to the pupils the important fact that the Tanzanian economy is dependent, and will continue to depend, on agriculture; 2) to teach pupils that industrial development is dependent on agricultural development; 3) to stimulate interest by showing that agriculture as an applied science is a dignified and remunerative occupation; 4) to teach pupils principles and techniques underlying work in livestock production and crop production; 5) to teach the relationships among rural economy, socialist production, agricultural engineering, soils productivity and agriculture; 6) to teach pupils, by example, the dignity of manual dexterity; 7) to ensure that schools become cooperative productive units so that they become more and more self-reliant; 8) to have schools set an example of sound agricultural production for people in the surrounding locality; 9) to encourage pupils to continue with higher training in agriculture and to take up agriculture as a career; 10) to help pupils appreciate and adopt better agricultural practices, including the keeping of farm records and the running of school shops; and 11) to help pupils understand and appreciate the importance of extension services provided by the Ministry of Agriculture and to take part in the dispersal of information to those who need it.

In spite of the laudable objectives is it feasible to implement a program of agricultural education given past experience? There seems to have been many changes in the Tanzanian rural economy which would hold out promise for a successful program. First, parental opposition to practical work has decreased. Second, at least at the primary level, students have lowered their job expectations. Third, political leaders are now willing to support such programs. Fourth, cash crops which make farming profitable are available for local adoption. Fifth, extension services to support school graduates are available in most areas. There still remain problems of teachers, teaching materials, land, financing, etc., but these are perhaps more easily dealt with than the attitudes which appear to have changed.

There also appear to be several reasons why agricultural education through the schools is appropriate: a) the school system is in place and is already heavily staffed - there are many more teachers than any other class of civil servants such as extension agents, thus it would be cost effective to use this group; b) non-formal or extension education cannot replace more complicated or extended learning available through the schools. In the schools some valuable agricultural skills can be taught which cannot be taught on a short-term or extension basis; and c) agriculture training can encourage interest in agriculture or farming as a career. Since a majority of the students will be required to seek a livelihood in Agriculture this attitudinal change is important.

While the limited discussion above does not "prove" either that agricultural education can or should be introduced and supported, it does argue that there is evidence it will be accepted, there are good reasons for such a program and that there would probably be substantial benefits particularly to an agriculturally based country. Since implementing the program requires resources beyond Tanzania's current capabilities it appears that assistance in agricultural education would be appropriate.

### 3. Appropriateness of Technology

The technology required in this project is less easily defined than for many other types of assistance activities. Viable institutions normally possess manpower and physical facilities but these elements alone do not guarantee viability. The less tangible elements of experience, procedures, problem solving ability, planning and management are equally critical components.

At the instructional level the technology to be introduced will not overly complex and will be adapted to the Tanzanian environment. Teaching methods, new or revised curricula and other innovations will be geared to the capabilities - financial, physical and staff - of the organization being assisted. This means that simpler changes will probably be introduced at the MATIs than at the FAF. The critical factor will be the capability of the organization to maintain the technology once the assistance is terminated. Technology meeting the above criteria will be suitable for reproduction.

Regarding commodities, the items introduced will be simple, and generally familiar and in use. A few audio-visual items may be new but of a type suitable and maintainable in Tanzania. Similarly, the construction activities will utilize available and known techniques. Least cost methods will be employed which still maintain standards and quality.

Directly the project will have almost no impact on employment. Hopefully the better trained graduates and participants in training programs will develop agricultural programs which will significantly effect rural employment. No meaningful assessment of the possible effect is possible.

#### 4. Environmental Aspects

For the Farmer Training Component of this project SER/Engineering determined that because the AID input consisted of training services it did not constitute major action significantly affecting the physical environment and therefore no environmental assessment was required (STATE 290675). The Mission believes the same rationale applies to the entire project and therefore no environmental assessment is required.

#### 5. Technical Soundness and Reasonableness of Cost

Considerable time and thought have gone into the technical design and costing of this project. The Mission is satisfied that the design is adequate to accomplish the purpose of the project and the costs as outlined are reasonable.

Standard Faculty of Agriculture and Forestry plans and specifications for the proposed technician housing will be used. These plans have been used previously for housing construction at the University and have been proven accurate and in sufficient detail for construction. The houses are adequate but not pretentious and will be located in the staff residence area of the University where utilities are available and accessible.

The student hostel will be of the type and design currently in use at the FAF. Land and utilities for the hostel are available. Approval of the final design will be a condition to the disbursement of any funds for construction.

Similarly the building for the Department of Agricultural Education and Extension, the Audio-Visual Center and the Center for Continuing Education in Agriculture will be compatible with existing FAF buildings. A site and utilities are available. A condition to disbursement of any funds for the construction of this facility will also be the approval of the final design and specifications.

Except for the houses, where recent experience with similar houses adjusted to the future is the basis of cost, the estimated construction costs are based on current square meter construction costs with an added inflation and contingency factor. With the condition that final

designs and specifications remain to be approved the project as proposed appears to be technically sound and feasible thus satisfying the requirement of Section 611(a) of the FAA of 1961, as amended.

6. Conclusion

Based on the analysis in the preceding sections wherein alternative planned project procedures are considered, the proposed course of action including the addition of physical facilities described is technically sound. The costs, as projected, are reasonable and necessary if the project purpose is to be attained (see Sections II.B and III.B for detailed cost estimates).

B. Financial Analysis

1. Recurrent Budget Analysis of Implementing Agencies

Since this project will provide support to both the Ministry of Agriculture and the University of Dar es Salaam, Faculty of Agriculture and Forestry, separate recurrent budget analyses of the two institutions and appropriate organizational divisions are presented below.

a) Ministry of Agriculture

With decentralization and the recent economic crisis, the total recurrent budget of the Ministry of Agriculture has declined over the past few years to a level of about U.S. \$12 million (1975/76). However, despite these pressures, the recurrent budget of the Manpower Development Division has been maintained at a level of \$3-4 million. Within the division, the MATI allocation remained at the \$750,000 level from 1972 to 1974 but rose dramatically to \$2.6 million in 1975/76 and is now the major item in the budget.

the

Over/six year period of MATI assistance the MinAg recurrent input is estimated at \$3.6 million or roughly \$600,000 annually. However, the majority of these costs are not additional or new recurrent expenditures but simply the average level of support, based on current budgets, for the MATI's being assisted. Any increases in the net recurrent cost during the life of the project will be small (estimate is \$47,000 per year).

Upon termination of AID support any additional cost to the MinAg may actually decline as the double encumbrances of MATI staff positions and training costs for participants are eliminated. But any decline may be offset by additional costs in implementing a more effective training effort. In any event, the relatively small amounts involved are considered to be well within MinAg financial capability.

b) University of Dar es Salaam

The total university recurrent budget has risen over 20 percent from \$8.08 million in 1974/75 to a projected \$9.77 million in 1976. Of the projected \$6.47 million in expenditure on the faculties and institutes (excludes administration and central expenditures of \$3.30 million) the Faculty of Agriculture and Forestry accounts for about 25 percent.

In absolute terms, the recurrent budget of the FAF has risen from \$1.36 million in 1974/75 to \$1.62 million in 1976/77. Within the FAF the 1976/77 budget for the new Agricultural Education and Extension Department is \$62,000. (This does not include items such as building maintenance and other centrally-funded services.) The Dean of the Faculty has indicated that as the Department develops, additional funds will be made available.

The project activities within the Department of Agricultural Education and Extension and the other departments will involve very few additional costs, primarily for audio-visual activities. An estimate is \$10,000 annually or well within Faculty capability.

For the Center for Continuing Education in Agriculture, no precise calculations of recurrent costs, which would all be new, are possible. The USAID/Tanzania estimate is that roughly \$40,000 would be required annually (fees will be charged for training which will cover most costs). To date, no provision for these costs has been made by the Faculty; however, FAF officials have assured AID that this level of expenditure can be absorbed within the Faculty budget. Based on the fact this amount represents less than 2.5 percent of the current budget, it is also USAID judgement that this should not pose any particular problems. The keen interest of the Faculty in the Center is a further positive indicator that the funds will be provided.

## 2. Financial Plan/Budget Tables

The following three tables provide the project budget and financial plan. For additional information see the detailed budgets shown in Section II, Project Background and Detailed Description.

TABLE 5

SUMMARY COST ESTIMATES AND FINANCIAL PLAN <sup>1/</sup>

29

USE	SOURCE									UNIT: \$ 000
	AID PROJECT			HOST COUNTRY			TOTAL			
	FX	LC	TOTAL	FX	LC	TOTAL	FX	LC	TOTAL	
1. Staff and Consultants	4,780	-	4,780	-	1,184	1,184	4,780	1,184	\$ 5,964	
2. Training	1,618	-	1,618	80	132	212	1,698	132	\$ 1,830	
3. Construction and Facilities	-	870	870	-	40	40	-	910	\$ 910	
4. Commodities	212	-	212	-	-	-	212	-	\$ 212	
5. Operating Budgets	-	-	-	337 <sup>2/</sup>	3,032	3,369	337	3,032	\$ 3,369	
6. Other Costs	147	147	294	-	150	150	147	297	\$ 444	
7. Inflation and Contingency	56	85	141	3/	3/	3/	56	85	\$ 141	
Total	\$6,813	\$1,102	\$7,915	\$417	\$4,538	\$4,955	\$7,230	\$5,640	\$12,870	

1/ Based on estimates prepared in July, 1976 by USAID/Tanzania and REDSO/EA

2/ 10 percent of projected operating budgets

3/ Included in above estimates

TABLE 6

## COSTING OF PROJECT OUTPUTS/INPUTS

PROJECT OUTPUTS <sup>a/</sup>

Project Inputs	1a	b	c	2a	b	3a	b	c	4a	c	d	e	Unit:\$'000	TOTAL
<u>AID APPROPRIATED</u>														
MinAg Headquarters Staff	112	66	23	22	62	55	58	30	27	366	58	-	46	925
MATI Staff	594	285		593	293					71	594			2,374
Agricultural Education/ Extension Staff	236	236				315								787
Continuing Education Center Staff							337	225						562
Commodities Including Vehicles	51			35		26	53	10			37			212
Misc, Other Costs	15	15	-	44	44	44	44	9		58	15	-	6	294
Facility Construction	56	56				121	365	272						870
MATI Participants		793												793
Ag Sector Participants		-	397											397
FAF Participants		321				64	43							428
Consultants	-	-	-	3	3	6	12	12	-	36	-	24	36	132
Inflation and Contingency	5	25	5	7	4	16	40	28		6	5			141
<u>Host Country</u>														
MATI Support	1,785	536		178	179					178	714			3,570
Participant Support Facilities		168	44			4	32	4						212
FAF Operating Budgets	166	74				285	185	78						40
Training Fees							39	156						788
Trust Fund Contribution	20	10		20	5	20	10			20	45			195
														150
Total	3,040	2,585	469	902	534	956	1,218	824	27	735	1,468	24	88	12,870

a/ Output numbers correspond to those in Logical Framework, Annex D.

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TABLE 7

## OBLIGATION SCHEDULE FOR U.S. INPUTS

UNITS: \$ '000'

	74	75	76	IQ	77	78	79	80	81	82	83	TOTAL
<u>MinAg, MATI's and Training</u>												
Personnel	290	270	429	-	547	739	727	172	154	43	-	\$3,371
Commodities	27	1	4	-	33	30	10	2	-	-	-	\$ 107
Participants	70	200	271	-	330	240	79	-	-	-	-	\$1,190
Other Costs	27	35	18	-	55	20	10	6	4	2	-	\$ 177
<b>(a) Sub-Total</b>	<b>\$414</b>	<b>\$506</b>	<b>\$722</b>	<b>-</b>	<b>\$965</b>	<b>\$1,029</b>	<b>\$ 826</b>	<b>\$180</b>	<b>\$158</b>	<b>\$ 45</b>	<b>-</b>	<b>\$4,845</b>
<u>Faculty of Agriculture and Forestry</u>												
Personnel	-	-	-	-	-	409	308	306	204	182	-	\$1,409
Commodities	-	-	-	-	-	78	4	4	15	4	-	\$ 105
Participants	-	-	-	-	-	143	218	67	-	-	-	\$ 428
Other Costs	-	-	-	-	-	924	12	45	4	2	-	\$ 987
<b>(b) Sub-Total</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1,554</b>	<b>542</b>	<b>422</b>	<b>223</b>	<b>188</b>	<b>-</b>	<b>\$2,929</b>
<b>(c) Contingency and Inflation <sup>1/</sup></b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>100</b>	<b>27</b>	<b>11</b>	<b>2</b>	<b>1</b>	<b>-</b>	<b>\$ 141</b>
<b>Total (a+b+c)</b>	<b>\$414</b>	<b>\$506</b>	<b>\$722</b>	<b>-</b>	<b>\$965</b>	<b>\$2,683</b>	<b>\$1,395</b>	<b>\$613</b>	<b>\$383</b>	<b>\$234</b>	<b>-</b>	<b>\$7,915</b>

<sup>1/</sup> On everything except personnel where the figures are already adjusted. The rate is 7 percent in 1978 increasing 1 percent each year thereafter to 11 percent in 1982.

C. Economic Analysis

Projects such as this which are institutional development in nature do not lend themselves to accurate, traditional economic analysis. Costs can be calculated but the benefits of better quality teaching staff, more highly trained agricultural administrators, more capable agricultural instructors, additional facilities or better agricultural training programs are very difficult to quantify, particularly in an economy which does not rely solely on market forces to determine prices and values. Therefore as an alternative a number of the possible options in attempting to achieve the identified outputs are examined in terms of feasibility and cost effectiveness.

First, the serious, development-inhibiting shortages of trained Tanzanian manpower at the levels and specialities proposed for provision in this project argue that delaying expenditures aimed directly at expanding the supply of manpower or developing training institutions is probably not cost-effective. Short-term savings would be outweighed by longer-run costs. The question then becomes whether the methods and related costs to expand the supply are the least-cost or, at least, reasonably priced.

The long-term academic training being provided cannot be conducted in-country. The capacity and specializations do not exist. Perhaps some of the training could be provided at a lower cost in other African countries but space limitations in nearly all African universities, the lack of certain specialized training and the Tanzanian preference for training in the U.S. requires that most of the training be conducted in the U.S.

An option in developing the MATI's and the Department of Agricultural Education and Extension would be to replace high-priced U.S. technicians with additional trained Tanzanians i.e. additional participant training. The problem is that an immediate manpower shortage needs to be filled at the respective institutions. Also academic training alone cannot replace or provide the experience, administrative ability, etc. which come with a U.S. technician. The length of time proposed is the minimum which expert judgement indicates is necessary to leave behind viable, effective institutions.

An alternative to developing in-country capabilities would be to provide the training in the U.S. or elsewhere. The much higher costs inherent in such a proposal given the large number of personnel involved and the conflict with TanGov long-run objectives makes this unacceptable in both cost and development terms.

Obviously there are other alternatives such as providing fewer personnel or lower level and consequently cheaper personnel but for technical reasons these alternatives were earlier judged as not acceptable if the outputs are to be achieved.

To conclude, the above analysis argues that the indicated inputs (at the indicated costs) are necessary to achieve the project outputs. A number of alternatives are unacceptable for either cost or other reasons. Therefore, there is a certain amount of evidence that the project is relatively cost effective. It should also be noted that only a very small improvement in agricultural sector performance (gross value of agricultural production in 1975 of roughly U.S. \$1.0 billion) would more than cover the 20 year annual costs of project assisted activities of roughly \$1,000,000 per year.

D. Social Soundness Analysis

1. Socio-Cultural Feasibility

Determining the socio-cultural feasibility of this manpower development and training project poses several problems.

First, the manpower being directly trained with project funds is from and will fill diverse positions in scattered locations from the MinAg to the MATI's to the University to parastatals. Second, the training is being provided in various fields - almost across the spectrum of agricultural specialities. Third, the institutions being developed are of different types in different areas and are providing or will provide instruction to varying numbers of students at five or six levels - graduate degree, degree, diploma, certificate, in-service and short course. Finally, the training and institutions involved do not deal directly with large numbers of people.

In this situation it seems appropriate that the social soundness analysis concentrate on possible alterations or changes expected in the institutions as a result of the project and the possible effects of these modifications on the institutions themselves, the students and ultimately the community at large. Again it should be noted that the diversity of activities means any generalization may or may not apply to a particular case.

Generally no socio-cultural problems are foreseen in introducing change in the MATI's. It is well recognized by MATI staff that current training operations are not optimal. With the introduction of a career system for MATI staff and consequently the development of a longer-term perspective by staff members there is greater interest in changing and improving the training. The project inputs will build on this interest and receptivity.

Assuming that the training provided and the modifications introduced in MATI training programs result in apparent improvements in graduates, this should lead to even greater concern and pride in performing the given task - success breeds success. It is judged that one of the important measures of success will be greater understanding and responsiveness by MATI graduates to the problems, expectations and desires

of the rural population coupled with a greater ability to provide the required technical expertise. To achieve this change in student attitudes the MATI's will need to expand their contacts with small farmers and the rural people. In turn this has implications for how the MATI's operate i.e. their curriculum, with perhaps greater emphasis on communication and understanding.

Implicit in the above change is an effect on students - higher technical ability and greater skill in communicating with rural residents. This requires a modification in traditional expert-ignorant farmer attitudes on the part of graduates to a more service-oriented, co-equal, mutual teaching - learning relationship.

If the MATI graduates are able to more effectively provide additional relevant and usable information to farmers a wide range of socio-cultural effects should result. None are here noted but within Tanzania's Ujamaa and equalitarian system which brings decision making to the village level it is believed the society would seek to ensure that the changes would not be for the benefit of one group at the expense of another but for society as a whole.

Turning to the Faculty of Agriculture and Forestry most of the above is also relevant. It is also judged that the development of the Department of Agricultural Education and Extension has equal potential for positive effects on rural development. At the moment the FAF turns out graduates who occupy leadership positions and may be technically trained but who lack training in how to effectively extend that knowledge, reducing their impact. As teachers and leaders, this ability and a concern in this area is particularly important. The project concept of providing this type of training to at least one person in each technical area in the Faculty is an important start toward the objective of an academic body with greater concern for extension and, concomitantly, with the relevance of what is to be extended. Equipping staff members with training in areas such as rural sociology can only improve the concern with socio-cultural issues.

Presumably a staff with this awareness and concern will transmit these feelings and the necessary skills on to the students. In turn, over time, this should result in socio-cultural factors being considered along with technical and economic factors in project planning, development and administration.

The Center for Continuing Education in Agriculture may also have several socio-cultural effects. First it will bring academic staff face to face with the needs and problems of personnel in the field. Hopefully this will result in a practical tempering of available technical knowledge and influence academic instruction. This would be clearly in concert with Tanzanian philosophy of making education and instruction relevant to the realities of Tanzanian life. At the same time the trainees with greater technical skill and hopefully greater skill in

communicating (of course this will depend on the particular objective of the training provided) will be able to perform their jobs more effectively.

## 2. Spread Effects

On the individual level the fact that individuals are being trained who will be assigned to all parts of Tanzania indicates that a diffusion of additional knowledge introduced is possible. This is true for U.S. degree trained personnel, Faculty of Agriculture and Forestry graduates, MATI graduates and short-course participants. However, while the potential for rapid diffusion exists, the rate will depend on the item, the geographic area, the resistance of the current system and the mass of people attempting to carryout the diffusion. No generalization about the rate to be expected can be made.

On the institutional level a spread effect is highly probably within the MATI system. As better training methods and other improvements are developed the results will be transmitted throughout the system. The regular meetings of senior MATI staff - principals and vice principals - and the overall direction from the MinAg Headquarters will facilitate the diffusion.

At the University the diffusion of ideas from the Faculty of Agriculture and Forestry to other Faculties will be slow. Within the Faculty the spread of innovations developed by the Department of Agricultural Education and Extension should be rapid through daily inter-departmental contact. In all cases relevancy to the teaching situation will be an important criteria.

The Center for Continuing Education in Agriculture provides a means for agricultural innovations from any source to be transmitted to leaders of various types. One of the most important functions of the Center will be to keep abreast of recent experience in Tanzania which might be suitable for wider application.

To conclude the opportunities for diffusion of ideas and technical knowledge should be improved by the project. Consequently whatever the project develops or brings in should rather rapidly spread throughout the system.

## 3. Benefit Incidence

Initially the project will benefit the students at the institutions assisted and those individuals selected for training. Ultimately small farmers throughout Tanzania should benefit as better technically trained extension agents better able to communicate relevant information are placed in the field to work with them. The Ujamaa village system will tend to widen the benefits from the exposure. No estimate of possible number of beneficiaries is possible.

#### 4. Effect on Women

##### a. Background<sup>14/</sup>

Traditionally, women have been viewed as mothers or housewives who keep the home and food shamba (garden) operating while many of the menfolk work in cash crops and off-farm activities. In reality, women have been required to provide labor for subsistence production and farm management skills as males have migrated to urban areas or other areas of employment opportunity. But women normally have not shown strong inclination toward access to development resources. Although there are active attempts to correct the situation within the Ujamaa village structure and through training programs for women's group leaders, guidance, determination and resources which are important to the women's role as agricultural producers are insufficient. Extension services in Tanzania favor the male farmer. Technological innovations, mechanical equipment and other devices to increase productivity and lighten the labor load of farmers apply less to food crops than cash crops. Men have been favored for agricultural credit and the cooperative organizations through which such credit is available are already largely male-controlled. Women have traditionally played more active roles in the marketing of agricultural produce but this has been largely on an informal basis in local markets

##### b. Discussion

The Reynolds report clearly points out the inferior status of women in traditional Tanzanian society. The report also makes the case that the move away from subsistence agriculture and the beginning of wage labor worked to the detriment of women -- at least in the rural areas. But Reynolds states that TanGov policy is equality of opportunity and role between the sexes, and that legal barriers to achieve it have largely been removed. Beyond that the TanGov has taken many positive steps to promote and encourage the development of women, few of which are mentioned in the paper.

In general, the continuing inferior social/economic/political status of women results not from government policy and efforts at equalization but largely long standing and deeply ingrained attitudes -- men's and women's -- particularly in the rural areas. In fact, Tanzania, in respect to the role of women, is not too far different from the United States prior to industrialization and the explosion in mass education.

Changing a social system is a complex and difficult task, and if not done with care will cause disruption and chaos detrimental to the ends sought of the measures open to the TanGov, education and overall development are the two that are most likely to be used. This means slow evolutionary changes, measured in decades rather than a sudden

<sup>14/</sup> Based on D. R. Reynolds "An Appraisal of Rural Women in Tanzania", REDSO/EA, December, 1975 (See Annex G).

revolutionary ripping of the social fabric. For AID, this dictates patience and support to TanGov programs. It also means learning much more than is now known about rural Tanzanian society --- particularly Ujamaa villages -- before sensible suggestions that will lead to social change can be put forward.

The paper written by Hilda Kokuhirwa of the Tanzanian Institute of Adult Education (Annex H) is a step in this direction. This paper attempts to detail the TanGov equity philosophy and how this philosophy has been translated into efforts designed to upgrade the quality of life for women in rural areas. Clearly, one of the uppermost goals of ujamaa living is to help the women and while the effort is in its very early stages, the commitment is there. It is interesting to note here that the Institute of Adult Education is one of the foremost Tanzanian institutions working in rural Tanzania and a good share of the Institute's programs are devoted to the problems of women.

### c. Conclusion

With the above in mind it appears that, in general, the project should have a positive effect on the role of women. The assistance is largely directed toward components of the educational network and, as pointed out above, education is probably one of the most acceptable and effective measures available to positively change traditional attitudes toward women. Further, for much of the training to be provided under revised curricula to be relevant, it must take into account the role rural women play in development and change efforts. Project staff will need to keep this in mind as they carryout their activities.

Within the project, technical assistance staff will be working with women at both the faculty and student level. At the MATI's and the Faculty of Agriculture and Forestry there are both women staff and students. Some of the participants sent for long-term academic training have been and will be women. The result should be additional women able to better perform their jobs and able to work for the overall improvement in the conditions affecting women.

Finally, the project will encourage the participation of women in all training activities. It is expected that some of the courses at the Center for Continuing Education in Agriculture will be directed specifically toward women and women will probably participate in all of the courses.

### 5. Summary

To summarize, the project activities seem to be socio-culturally feasible but the diversity of components makes any meaningful assessment of the ultimate impact highly speculative. The system and institutions involved are structured in a manner which facilitates the spread of project benefits throughout the system to the ultimate beneficiaries - the small farmers. Women are included in project activities and should

actively benefit although to what degree cannot be determined. In spite of the many uncertainties the TanGov and USAID/Tanzania are satisfied that the net project socio-cultural effects are infinitely more likely to be positive than negative.

#### IV. Implementation Arrangements

##### A. Analysis of the Recipient's and AID's Administrative Arrangements

###### 1. Recipient

The U.S. assistance will be provided to the MinAg, the Ukiriguru and Mpwapwa MATI's and the Faculty of Agriculture and Forestry, UDSM. Major responsibility for implementing the project will rest with the MinAg and the UDSM. All Project Agreements and implementing documents will be cleared by either one or both of the above organizational units before signing by the Ministry of Finance.

In the following, the structure and management capability of the MinAg and the UDSM, Faculty of Agriculture and Forestry are outlined and analyzed. Particular emphasis is placed on operational arrangements and projected staffing.

###### a) Ministry of Agriculture

The Ministry of Agriculture Manpower Development Division will have direct control over the MATI assistance and the selection of the 60 participants; day-to-day implementation will be the responsibility of the principals of two MATI's and the MDD. The Director of the MDD will supervise the field team members through both the AID-financed Contract Chief of Party stationed in the Ministry and the MATI principals. The yearly recurrent budget for this project is the responsibility of the MDD and any inputs necessary for the project will be provided by the MDD in close coordination with the AID-funded Chief of Party.

As are most MinAg Divisions, the MDD is thinly staffed. However the Director is extremely able and takes a very active interest in the operations of the MATI's. He is assisted by the Contract Chief of Party in discharging the necessary administrative control. To date their performance has been very good. For these reasons, it is believed that the administrative arrangements at the headquarters level are satisfactory.

At the MATI level the AID-financed staff will be under the supervision and direction of the respective Tanzanian principals. The arrangement is consistent with normal MATI operating procedure and should be workable. The assistance to be provided by one U.S. team member at each of the MATI's in Planning and Development should enable the Principal to devote more of his time to administration. Because the MATI principals are senior officers with administrative experience it is judged the arrangements will be satisfactory.

b) University of Dar es Salaam

The FAF through the Dean and Associate Dean will have direct control over the assistance to the Department of Agriculture Education and Extension and the Center for Continuing Education in Agriculture. The Head of the Department and the Director of the Center (both AID-financed) will be responsible for the day-to-day implementation of project activities and will supervise assigned staff. The recurrent costs for these activities are the responsibility of the FAF and will need to be planned for in close coordination with AID-funded FAF staff and the contract Chief of Party.

The administrative structure of the University appears fully capable of providing necessary project guidance and administration. While both the Dean and Associate Dean have teaching as well as administrative duties, the sizable number of effective support staff guarantees an efficient operation. The Dean has been in his position a number of years and has substantial administrative experience.

It is AID judgement that the proposed arrangement of having the Department Head and the Center Director report to the Dean is sound and when combined with the FAF's proven administrative capabilities will provide suitable administrative arrangement.

c). Links

The linkages between the project components are discussed in the Technical Analysis, Section III.A. of this paper and the Detailed Project Description Section IIB.

2. AID

AID will administer the project through a direct-hire Project Manager designated by the USAID/Tanzania Mission Director. The Project Manager will be responsible for necessary project monitoring, will provide guidance on AID requirements if necessary and will act as the USAID Contract backstop officer. He will inform top Mission management of problems, delays or any items requiring USAID resolution. The Project Manager will be responsible for ensuring that scheduled evaluations are completed on time and that the results therefore are used in subsequent project modifications.

The technical assistance will be provided through a cost reimbursement contract with a U.S. institution. Participants will be funded under the contract and most of the project commodities will be procured directly by AID. Funding of most local costs other than construction will be handled by the contractor.

### 3. The Contractor

The Chief of Party will act as contract administrative officer. He will be assisted by an American and a Tanzanian Administrative Assistant. The Chief of Party will be the primary contact point between AID and the contract staff and with assistance from the administrative assistant will handle items such as official time and leave records, procurement of commodities, customs clearances of commodities and personnel effects, the securing of visas and work permits etc. It is believed that with the assistance of the administrative staff the requirements of contract administration can be kept to a minimum so as not to interfere with project operations.

### B. Implementation Plan

The following revised implementation plan is historical for the first few actions showing what has happened to date. For the period July 1976 - July 1978, or until all staff are projected to be on-board, construction is completed and most vehicles and commodities have arrived the schedule is quite detailed. Thereafter less detail is provided. Additional implementation information is contained in Annex E, Project Performance Tracking Network.

<u>Date</u>	<u>Action</u>	<u>Responsible Organization</u>
9/73	PROP Submitted	USAID
12/73	PROP Approved	AID/W
2/74	ProAg Signed	USAID, TanGov
2/74	PIO/T Issued	USAID, TanGov
3/74	PIO/Cs Issued	USAID, TanGov
3/74	PIO/Ps Issued	USAID, TanGov
11/74	Contract Signed	AID/W, Contractor
2/75	Contract Chief of Party arrives	Contractor, USAID, TanGov
4/75	Scope of Work for Faculty of Agriculture & Forestry Study Team Developed	USAID, Contractor, TanGov
5/75	PIO/Ps Issued	USAID, TanGov, Contractor
6/75	Loan Commodities Ordered	USAID, TanGov
6-7/75	Study Team in Tanzania	Contractor
8/75	Career Service Requirement Satisfied	TanGov
9/75	First Contractor Work Plan Submitted	Contractor, TanGov
3/76	PAR Completed	USAID, Contractor
5/76	Six MATI Staff on-Board	Contractor

<u>Date</u>	<u>Action</u>	<u>Responsible Organization</u>
5-6/76	PIO/Ps Issued	USAID, TanGov
10/76	Project Paper Revision Submitted	USAID, Contractor, TanGov
10/76	Eight MATI Staff on-Board	Contractor
10/76	Work Plan Submitted	Contractor, TanGov
11/76	PP Revision Approved	AID/W
3/77	PAR Completed	USAID, Contractor, TanGov
5-6/77	PIO/Ps Prepared	TanGov, USAID, Contractor
6/77	Housing Located	TanGov
7/77	Two Technical Assistance Staff for Faculty of Agriculture and Forestry arrive <sup>15</sup>	Contractor
8/77	In-Depth Evaluation of MinAg Assistance conducted	USAID, Contractor, TanGov, AID/W
9/77	Work Plans Prepared	Contractor, TanGov
11/77	ProAg Including Funds for Facility Construction Signed	USAID, TanGov
	PIO/T for Assistance to FAF Issued	
1/78	<del>Construction Tender Issued</del>	TanGov
2/78	WVU/NCATSU Contract Amended	Contractor, AID/W
3/78	PAR Completed	USAID, Contractor, TanGov
4/78	Construction Contract Awarded	TanGov
5-6/78	PIO/Ps Issued	USAID, TanGov

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<sup>15</sup>/ Note: Although the additional funding for these staff members will not be available to the contract until November, 1978 it is planned, to avoid a year's delay, to field them at this time utilizing pipeline funds.

<u>Date</u>	<u>Action</u>	<u>Responsible Organization</u>
9/78	Work Plans Prepared	Contractor, TanGov
1/79	All Technical Assistance Staff for Faculty on-Board	Contractor
3/79	PAR Completed	USAID, Contractor, TanGov
5-6/79	PIO/Ps Issued	USAID, TanGov, Contractor
7/79	Construction Completed and Buildings Accepted	TanGov
8/79	In-Depth Evaluation of FAF and MinAg/MATI Assistance Completed	USAID, Contractor, TanGov, AID/W
9/79	Work Plans Completed	Contractor, TanGov
3/80	PAR Completed	USAID, Contractor, TanGov
6/80	MATI Technical Assistance Staff Depart	Contractor
3/81	PAR Completed	USAID, Contractor, TanGov
8/81	Two Faculty of Agriculture and Forestry Technical Assistance Staff Depart	Contractor
3/82	In Depth Evaluation of FAF and Center for Continuing Education in Agriculture	USAID, Contractor, TanGov, AID/W
3/82	PAR Completed	USAID, Contractor, TanGov
3/83	PAR Completed	USAID, Contractor, TanGov
7/83	Project Completed	

C. Evaluation Arrangements

1. Regular

Annual evaluations will be conducted during the life of the project. These evaluations will be primarily concerned with project performance and effectiveness and will examine the achievement of output and purpose level goals. In the examinations the evaluation will confirm the continuing validity of the targets and assumptions and the continuing importance and relevance of the project.

Specifically the evaluations will address:

- a) the staffing and curriculum of the Ukiriguru and Mwapwa MATI's,
- b) the effectiveness of the returned participant trainees; c) level of project activity support by the TanGov; d) efficiency of the MinAg Manpower Development Division; e) contract effectiveness; f) timely provision of project inputs; g) staffing and effectiveness of the Department of Agricultural Education and Extension - UDSM; and h) AID backstopping and support. As required, modification and re-direction of activities to reach project purposes will result from the evaluation.

Much of the information and data necessary for the evaluations will be routinely available from MATI, UDSM and MinAg records. Details on MATI staffing and curriculum changes will be available as will staffing and curriculum information from the FAF, UDSM. Such information from CY 1976 will serve as baseline data. These basic data sources will be supplemented by contractor reports and data generated by evaluations within the TanGov system (discussed below). In the evaluations AID and appropriate TanGov organizations will be involved.

## 2. In Depth

Three separate external in-depth evaluations of project activities are scheduled. The first, scheduled for the fourth quarter of FY 1977, will focus on the MinAg and the MATI system. This evaluation, by an AID-funded team in cooperation with the MinAg and the MATI's, was originally planned for May, 1976. However, delays in fielding technical assistance team members while the participant training component has proceeded on schedule has altered the conditions on which the original project planning was based. Therefore the conduct of this evaluation a little more than one year after the majority of the staff will be on-board, is judged appropriate at this point in project life. The evaluation will intensively examine the development of the MATI's being assisted. The evaluation will be expected to examine if the outputs can still be expected given the scheduled inputs or whether changes in input mix and timing are appropriate. The team will also need to relate output accomplishment to the achievement of purpose. Based on their findings the team will make recommendations as to the future course of the project.

The second in-depth evaluation will cover both the MATI elements of the project and the Department of Agricultural Education and Extension (including the Center for Continuing Education in Agriculture). This evaluation should take place two years after the contract assistance personnel to the Department are fielded, roughly August, 1979. The MATI sub-project will be nearing completion and the evaluation will concentrate on whether the project purpose has been achieved and whether additional assistance is required. In regard to the UDSM sub-project, the AID-funded team in cooperation-coordination with contract and UDSM personnel will review the role the Department of Agricultural Education and Extension is playing and is expected to play in providing a particular type of trained manpower and relate that to on-going and proposed assistance. As with the in-depth evaluation of the MATI assistance, described above, particular focus will be on whether the outputs will be achieved and what, if any, changes are needed, to most economically achieve them. The evaluation team will also review, comment on and recommend action regarding the quality, timeliness and overall effectiveness of USAID/Tanzania, contractor and AID/W services and performance.

A third in-depth evaluation will be scheduled for early CY 1982 with a particular focus on the Center for Continuing Education in Agriculture. The Center's impact and stage of development will be items of specific concern.

### 3. Within the TanGov

Obviously the ultimate measure of the project's significance and impact is the performance of the manpower being turned out by the institutions assisted. To improve the performance the training needs to be geared to changing needs and situations--with the system able to identify and implement needed improvements.

Within the Ministry of Agriculture no formal mechanism presently exists to measure staff performance with a view to changing the training provided. However the regular communication channels do provide some feedback from the field to headquarters and to the MATI's on the performance of graduates. As part of his responsibilities the Contractor Chief of Party will seek to regularize and, as necessary, to formalize the information feedback. This may require the design and development of special studies to measure manpower performance. The individual MATI's will also be encouraged to monitor the performance of graduates with a view to adjusting curriculum and course content to increase training effectiveness.

At the FAF it is not expected that a sophisticated system of evaluating the performance of Department of Agricultural Education graduates will be developed. Rather the University and Department faculty will need to rely on informal feedback from personnel in the field. The Center for Continuing Education in Agriculture will be provided feedback on its effectiveness by the demand for its services. Continuing adjustments in training practices and procedures are expected to maximize the impact of the training and to meet identified needs.

### D. Conditions, Covenants and Negotiating Status

The TanGov is in full agreement with the project described herein. The original project elements have been covered in previous Project Agreements and pose no problems. The new elements have been requested by the TanGov and no difficulty is foreseen in executing a Project Agreement covering these components.

A condition to the disbursement of any funds for the proposed construction at the Faculty of Agriculture and Forestry will be the AID approval of the final design and specifications for the facilities.

E - ANNEXES

- A. Summary and Recommendations of Yeaman, Schwencke and Wamunza, Agricultural Manpower Development in Tanzania
- B. Summary and Recommendations of Program Proposal for a Department of Agricultural Education and Extension and a Center for Continuing Education in Agriculture at The Faculty of Agriculture and Forestry at Morogoro, Tanzania, West Virginia University and North Carolina Agricultural and Technical State University, Contract Report USAID/Afr-C-1067. October, 1975.
- C. Draft Project Description
- D. Logical Framework
- E. Project Performance Tracking Network
- F. Application for Assistance
  - 1) MinAg, MATI's and Participant Training
  - 2) Faculty of Agriculture and Forestry
- G. "An Appraisal of Rural Women in Tanzania" by D. R. Reynolds, December, 1975 (see copy in AID/Washington as no extra copies available in Mission)
- H. "Towards the Social and Economic Promotion of Rural Women" by Hilda Kokuhirwa, Institute of Adult Education, Dar es Salaam, Tanzania, May 1975
- I. Guidelines for Selection of Participants for General Support Training and Types of Training Proposed
- J. Additional Project Details
  - 1) Organization Chart of Ministry of Agriculture
  - 2) Organization Chart of the University of DSM, Faculty of Agriculture and Forestry
  - 3) Costs Utilized in Project Budgets - Estimate of Tanzanian Financial Contribution
  - 4) Map of Assistance Locations
  - 5) Detailed Description of Inputs
- K. The University of Dar es Salaam, Faculty of Agriculture and Forestry, Morogoro
- L. An Analysis of the MATI System and Justification for AID Concentration at Ukiriguru and Mpwapwa.
- M. Waivers and Approvals
- N. Preliminary Job Descriptions for Senior Staff
- O. Proposed Syllabus for the Degree of Bachelor of Science (Agriculture)
- P. Teaching Materials/Visual Aids Equipment Recommended
- Q. List of Equipment Provided to Agricultural Manpower Project Under Agricultural Support Loan

55

SUMMARY AND RECOMMENDATIONS

The Second Five year Development Plan (1969-1974) places the highest priority on agriculture with special emphasis on agricultural training. Training is given this emphasis as the Agricultural Sector targets were not met in the first five year plan 1964-1969 partially due to the lack of trained agricultural manpower.

The Government plans to achieve full self-sufficiency at all skill levels by 1980. At present the high and middle level manpower force of the Ministry of Agriculture, as well as other government agencies, is still somewhat dependent on non-Tanzanians.

In order to reach the goal of having one teacher-in-the-fields (technical agricultural, or veterinary officer) to every 500 families by 1980, as stated in the second Five Year Plan, it will be necessary to provide between 1973-80 an additional 760 graduates (the 1972 stock is 320 of whom 87 are expatriates), 1,255 diplomates (the 1972 stock is 753 of whom 14 are expatriates), 8,090 certificate holders (the 1972 stock is 3126).

However, if the expanding training programs are geared to the 9% yearly increase in personal emoluments allowed the Ministry of Agriculture, it will be necessary to provide training in the 1973-80 period for an additional 226 graduates, 346 diplomates, and 2,276 certificate holders. These figures include agricultural trained manpower for other ministries and parastatal organizations. Their requirements represent ten to fifteen percent of the total projected needs in the diploma and certificate categories, and are trained for these organizations by the Ministry of Agriculture through its training institutes.

The Ministry of Agriculture with assistance from an IDA Development Credit Agreement, the NORDIC countries (Denmark, Norway, Sweden, Finland) and the Federal Republic of Germany is expanding training at the Diploma and Certificate level. Training has expanded from two institutes in 1967 to ten in 1972 and twelve will be in operation in 1976. If this expansion schedule can be met it is expected that in the 1973-80 period approximately 754 graduates, 1861 diplomates, and 4991 certificate holders will have received training.

From Yeaman, Schwencke, and Wamunza, Agricultural Manpower Development in Tanzania, August 1972. Dar es Salaam.

The expansion from two to ten training institutes in the period 1967-72 has resulted in training programs that are very poorly staffed, only partially equipped, and unable to provide highly qualified graduates. Also in 1969 a Faculty of Agriculture was established. The Faculty of Agriculture provides higher education courses in Crop Science and Production, Animal Science and Production, Soil Science and Agricultural Chemistry, Agricultural Engineering, and Rural Economy and Extension. This institution has fine facilities, but is very short on adequate numbers of trained staff to provide high quality instruction for its students.

Teachers for the training institutes and for the Faculty of Agriculture will for some time continue to be a problem both in quantity and qualifications. In order to staff these schools it will be necessary to provide by 1980 an additional 59 graduate teachers (the 1972 stock is 71), 24 diploma level teachers (the 1972 stock is 47), and approximately 42 certificate level teachers (the 1972 stock is 51). All of these new teachers should have special training in the subject matter they will teach and training in teaching methods. The present staff should receive intensive inservice training in teaching methods and subject matter to upgrade them to the new teacher standards. It is suggested that the Ministry of Agriculture seek donor assistance for a Manpower and Training Specialist to assist in program administration. This specialist along with the technical experts provided for in the World Bank - Tanzania Education Project, should be able to provide guidance for development of a sound agricultural manpower development program.

The study team after visiting all Ministry of Agriculture Training Institutes and the Faculty of Agriculture and discussing agricultural education with Tanzanian and donor officials provides for consideration by the Tanzania Government the following recommendations:

- (1) Higher Education in Agriculture. It is recommended that the Faculty of Agriculture:
  - (a) Establish as soon as possible a new Department of Agricultural Education and Extension for the purpose of better preparing teachers for all agricultural training both within the Ministry of Agriculture and other Ministries.
  - (b) Seek donor assistance for education grants to accelerate training of Faculty of Agriculture teachers and also seek expatriate teachers to fill vacancies until Tanzanians are available to fill teaching positions.

- (c) When adequate teaching personnel become available provide at the bachelor's level, in addition to the general degree in agriculture degrees having a major in one of the six departments: (1) Crop Science and Production; (2) Animal Science and Production; (3) Soil Science and Agricultural Engineering; (5) Rural Economy; and (6) Agricultural Education and Extension. Thus higher quality education can be provided in both teaching methods and course content for future teachers in the diploma, certificate, secondary, and rural training programs throughout the country.
- (2) Ministry of Agriculture Diploma and Certificate Training Programs. With the development of such a large agricultural education program within the Ministry of Agriculture more consideration for planning and administration will be required, thus, it is recommended that the Ministry of Agriculture:
- (a) Establish a new division for agricultural education responsible for all preservice and inservice training as soon as possible to include an administrative staff in Dar es Salaam and the administrative and teaching staff in Ministry of Agriculture Training Institutes.
- (b) Staff through the establishment of a permanent career administrative and teaching cadre the new division for agricultural education mentioned in (a) above.
- (3) Agricultural Diploma Education. In order to make the most economical use of funds, teaching staff, and facilities and to provide the highest quality agricultural diploma level of training, it is recommended that the Ministry of Agriculture:
- (a) Consolidate diploma level training programs at only two school sites as soon as adequate facilities can be made usable. One for Animal Health-Veterinary training should be at Mpwapwa and the second for all other agricultural diploma training should be at Lyamungu or Tengeru.
- (b) Improve teaching staff quality by posting as new teachers only those trained in agricultural education and sponsor inservice teacher training programs to provide present teachers with training in teaching methods and in the subject matter courses that they are expected to teach.
- (c) As qualified teachers become available, use only graduates as teachers.

- (d) Seek donor assistance to: (1) accelerate training of teachers both locally and out of the country, and (2) fill the teaching vacancies with expatriates until Tanzanians are trained.
  - (e) Standardize the training period to one year (1920 hours of instruction) for all students who have graduated from the suggested expanded (up to 3040 hours of instruction) certificate training courses.
  - (f) Provide separate training lands, equipment, and workshops especially designed for teaching at all school sites. (At present research, production and training all share the same facilities).
  - (g) Discontinue out-of-country diploma education in 1973 for all subjects except very special or unusual training because the in-country diploma training program will provide all manpower requirements at this level if training progresses as planned.
- (4) Agricultural Certificate Education. Again to make the most efficient and effective use of agricultural education resources, it is recommended that the Ministry of Agriculture:
- (a) Improve teaching staff quality by posting as new teachers only those trained in agricultural education and sponsor in-service teacher training short courses to provide present teachers with training in teaching methods and in the subject matter courses that they are expected to teach.
  - (b) Seek donor assistance to (i) accelerate training of teachers both locally and out of country and (ii) fill the teaching vacancies with expatriates until Tanzanians are trained.
  - (c) As qualified teachers become available use only graduates as teachers.
  - (d) Standardize and expand the basic curriculum to a full two-year period (3040 hours) for all certificate training institutes.
  - (e) Provide separate training lands, equipment, and workshops especially designed for teaching at all school sites. (At present research, production and training all use the same facilities).
  - (f) Discontinue Maruku and Tumbi as certificate training institutes as they will be expensive to develop into 200-student

Summary and Recommendations of Program Proposal for a Department of Agricultural Education and Extension and a Center for Continuing Education in Agriculture at the Faculty of Agriculture & Forestry

I. Summary<sup>1</sup>

A. General

President Julius Nyerere's policy statement released in March 1967, the Arusha Declaration and the Tanganyika African National Union policy statement have placed in national prominence the issue dealing with the importance of agricultural education in Tanzania. The Faculty of Agriculture and Forestry has recognized and accepted its role as indicated by the following quotation from the Faculty's Third Five Year Plan, 1975-1980

"The fact that the demand by the country for trained manpower in both agriculture and forestry continues to be high, means that the Faculty of Agriculture and Forestry must increase the intake of students. This in turn calls for more staff, equipment, lecture and seminar rooms, student accommodation and staff houses. Furthermore, the recent demand by the agricultural sector for specialist graduates has forced the University to reorganize the Bachelor of Science (Agriculture) degree curriculum in lines being followed by several older Universities. This means that during the first two years, the students will follow a common course, but in the third year, they will go into option streams and specialize in either; crop science and production, animal science and production, agricultural economics and farm management, agricultural engineering, and agricultural chemistry and soil science."

More recently, the University of Dar es Salaam senate approved the establishment of two new departments effective in July 1975. They are the Departments of Agricultural Education and Extension and Food Science and Technology.

B. Department of Agricultural Education and Extension

The purpose of the Department of Agricultural Education and Extension is to provide graduates able to fill positions as: teacher of agriculture in the MATIs, officers in charge of farmer training and

1. Based on the October 1975 report prepared by West Virginia University and North Carolina Agricultural & Technical State University

development centers, teachers in secondary schools, agricultural extension workers and agricultural parastatal staff members. To provide better trained people in this area it is suggested that certain modifications in the proposed curricula be implemented which would increase the exposure of students to agricultural education and agricultural extension techniques. In implementing the specialization and the curricula modifications, an increase in staff will be required. Competence will be necessary in fields such as agricultural education, agricultural extension, rural sociology, audio visual technology and in the preparation of teaching material. The team also recommends the establishment of a self-learning center in connection with the audio visual laboratory.

To ensure the long-term development of the Department, participant training is recommended. Also to meet the shortage of classrooms and laboratories caused by past and expected growth in student numbers, additional classrooms and laboratories will be required. To accommodate a future Department of 40-50 students will require the following facilities:

a)	One lecture room, 50 students @ 2 sq.m. ea.	100 sq. m.
b)	Two seminar rooms, 25 students each	100 sq. m.
c)	Five offices, 15 sq. m. each	75 sq. m.
d)	Storage room	25 sq. m.
e)	Reference room	25 sq. m.

Finally, the team recommends that the University construct a large teaching and audio visual aids preparation laboratory, an equipment room, a room for the self-learning center which is easily accessible to students, a mimeograph room, or copy machine room and a storage room. It is estimated that this section should be provided with at least 175 sq. m. of floor space.

### C. Center for Continuing Education in Agriculture

New agricultural information is constantly being generated. Transmission of the information is often difficult and agricultural staff are poorly informed. At the same time, criticism is voiced regarding the ineffectiveness and the small amount of information extended for agricultural development. In-service and short course training for agricultural workers is one effective method of improving the extension of knowledge and the capabilities of agricultural workers.

Therefore, to create more interest, to discuss existing problems, to teach the principles of self-reliance, to encourage rural development and to extend modern day principles of agricultural technology, it is recommended that a Center for Continuing Education in Agriculture be developed by the Faculty of Agriculture and Forestry. Such a center could become the nucleus for the refresher training of any group or body

concerned with improving agriculture. Much of the country's agricultural knowledge is located at this institution and provides an excellent recourse for the operation of a center for the continuation of agricultural expertise. The Center should draw upon this expertise to conduct seminar and short courses for the 20,000 professional and semi-professional agricultural workers in Tanzania. The Director of the Center may be recognized as an Assistant Dean for Continuing Agriculture Education.

To develop such a Center would require staff, participant training and facilities. Specifically required are: A continuing education specialist, an assistant, participant training in agricultural education and extension to a faculty staff member who would consequently assist in conducting courses at the Center, a lecture room, two seminar rooms, four offices and storage space totaling 300 sq. m. The facilities should be built as an integral part of the building which houses the Department of Agricultural Education and Extension. A hostel would also be needed.

#### D. Other

The report also recommends that textbooks and reference material, housing and vehicles be provided for the Department and the Center.

## II. Recommendations

Recommendations outlined in this report as written by a four member Study Team from North Carolina Agricultural and Technical State University (NCATSU) and West Virginia University (WVU) are as follows:

1. The introduction and implementation of the Department of Agricultural Education as requested by the University of Dar es Salaam should proceed as rapidly as resources can be provided.
2. A Center for Continuing Education should be established in the Faculty of Agriculture & Forestry to improve the instruction methodology and agricultural technology for some 20,000 agricultural workers in Tanzania.
3. The following changes in the Agricultural Education and Extension syllabus should be considered.
  - a. Reduce the required number of lecture and seminar hours in the areas of crop science, animal science, soil science and rural economy and add a course entitled Introduction to the Principles of Extension Education during the first year.

- b. Provide practicals in production agriculture, agricultural extension and agricultural education for Agricultural Education and Extension majors.
  - c. Add a course in administration and supervision during the third year.
4. An academic section should be established dealing with audio visual aids, the preparation of teaching material and the operation of a self-learning center.
5. Four U.S. staff members should be employed by July 1976 to organize and implement the new Department of Agricultural Education and Extension and the Center for Continuing Education in Agriculture. The staff should include:
  - a. One agricultural education specialist
  - b. One agricultural extension/rural sociology specialist
  - c. One teaching materials and audio visual aids specialist
  - d. One extension education specialist with considerable experience in continuing education as Director of the new Continuing Education Center.
6. Twenty (20) Tanzanians, now possessing a Diploma in Agriculture, a Bachelor or Master of Science Degree in Agriculture should be sent to the United States to obtain further training in Agricultural education, agricultural extension, rural sociology, administration of adult education, preparation of teaching material and audio visual technology. Tanzania trainees should return to the Faculty to operate the Department of Agricultural Education and Extension, the Center for Continuing Education and assume extension responsibilities in each of the Faculty Departments.
7. Facilities should be constructed, totaling 800 sq. m. of floor space, to house the Department of Agricultural Education and Extension, the Audio Visual and Teaching Material Section and the Center for Continuing Education in Agriculture.
8. Four (4) staff houses should be constructed as a part of the entire project.

9. Three (3) Landrover Station Wagons should be purchased for use in the Department and Center.
10. One fifty (50) passenger Leyland Bus should be purchased to transport students for practice teaching and extension courses.
11. Textbooks, reference material and audio visual equipment should be purchased as outlined in Appendix B and E of this report.
12. USAID should provide the personnel, facilities and equipment necessary to implement this program.
13. The USAID program continue for a four to six year period (1976/1982).
14. The Faculty of Agriculture and Forestry should provide such other support as required to implement the Department and the Center.

ANNEX C

Project Description

USAID/Tanzania determined that the project description as it will appear in the ProAg should be prepared after AID/W reviews this P.P.

PROJECT DESIGN SUMMARY  
LOGICAL FRAMEWORK

Life of Project: \_\_\_\_\_  
From FY 1974 to FY 1983  
Total U. S. Funding \$7.9 million  
Date Prepared: 7/25/76

Project Title: AGRICULTURAL MANPOWER DEVELOPMENT

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p>Program or Sector Goal: The broader objective to which this project contributes:</p> <p>To assist the Government of Tanzania (TanGov) achieve its objectives of increased self-sufficiency in the food crops and livestock agricultural subsectors.</p> <p>(NOTE: This project will address a main constraint to this goal, trained managerial and technical manpower for the agricultural sector.)</p>	<p>Measures of Goal Achievement:</p> <ol style="list-style-type: none"> <li>1. Imports of food crops and livestock products are reduced.</li> <li>2. Production of food crops, livestock and livestock products are increased.</li> <li>3. Domestically produced food crops and livestock meat products are available in sufficient supply and properly marketed and distributed to meet national demand.</li> </ol>	<ol style="list-style-type: none"> <li>1. TanGov agricultural statistics.</li> <li>2. TanGov and international foreign trade statistics.</li> <li>3. TanGov statistics of sales of major food and livestock products by concerned parastatals.</li> <li>4. TanGov statistics on purchases of major food crops, livestock, and livestock products by concerned parastatals.</li> </ol>	<p>Assumptions for achieving goal targets:</p> <p>The TanGov continues to emphasize support to the food crop/livestock subsectors. Essential financial, manpower and policy issues will be resolved by the TanGov so as to provide a permissive environment for increased productivity of food crops and livestock by Tanzanian producers.</p>

**PROJECT DESIGN SUMMARY  
LOGICAL FRAMEWORK**

ANNEX D

Life of Project: \_\_\_\_\_  
 From FY 1974 to FY 1983 \_\_\_\_\_  
 Total U. S. Funding \$7.9 million \_\_\_\_\_  
 Date Prepared: 7/25/76 \_\_\_\_\_

Project Title: **AGRICULTURAL MANPOWER DEVELOPMENT**

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p>Project Purpose:</p> <p>1. To assist the TanGov in developing its professional and sub-professional training activities and capabilities.</p> <p>2. To expand the supply of highly trained agricultural manpower.</p>	<p>Conditions that will indicate purpose has been achieved: End of project status.</p> <p><b>1.A. MinAg Headquarters</b></p> <p>a. The TanGov has established a professional career system for the administrative and technical staffs of the MATI system.</p> <p>b. Regular in-service training programs underway.</p> <p>c. A system of evaluating agricultural manpower effectiveness will be in use with the results feeding into the further improvement of training programs.</p> <p>d. Future trained agricultural manpower needs have been identified with training underway or planned to meet the needs.</p> <p><b>1.B. Ukiriguru &amp; Mpwapwa MATIs</b></p> <p>a. New and improved curricula in use.</p> <p>b. Approx. 2/3's of the teaching positions filled with B.S. degree holding (or higher) personnel.</p> <p>c. Adequate laboratory and field space provided for student needs.</p> <p>d. Proper balance achieved between classroom, laboratory and field teaching.</p> <p>e. In-service technical &amp; administrative training courses being used to provide MinAg staff with specific skills.</p> <p>f. Additional facilities and equipment in use.</p>	<p><b>1.A. MinAg records and contractor reports.</b></p> <p><b>1.B. MATI records, on-site inspections, contractor reports and professional evaluations of:</b></p> <p>a. Teaching/training.</p> <p>b. Performance of MATI graduates.</p> <p><b>1.C. University of Dar es Salaam records, on-site inspections, contractor reports and expert evaluation.</b></p>	<p>Assumptions for achieving purpose:</p> <p>TanGov will be able to provide necessary capital and recurrent costs.</p> <p>TanGov will effectively coordinate inputs.</p> <p>TanGov projects/programs will effectively utilize project trained manpower.</p>

PROJECT DESIGN SUMMARY  
LOGICAL FRAMEWORK

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NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p>Project Purpose:</p>	<p>Conditions that will indicate purpose has been achieved: End of project status.</p> <p>1.c. <u>Faculty of Agriculture and Forestry at Morogoro, University of Dar es Salaam</u></p> <ul style="list-style-type: none"> <li>a. Functioning Department of Agric. Education &amp; Extension</li> <li>b. Revised agricultural education and extension syllabus in use.</li> <li>c. A significant number of Faculty of Agriculture and Forestry staff members with U.S. training in agricultural education, agricultural extension, rural sociology, or related fields.</li> <li>d. Functioning Center for Continuing Education in Agriculture.</li> <li>e. Refresher courses for professional agriculturalists being provided.</li> <li>f. Adequate facilities and equipment available, including classroom space and an audio-visual and teaching material section.</li> </ul> <p>2a. Key MinAg and parastatal agencies have better qualified administrative, management and technical staff. More Tanzanians occupying senior positions.</p> <p>2b. Planning, management and operations of crop production and livestock projects are improved.</p>	<p>2. MinAg and parastatal records. Professional evaluations of crop/livestock production programs/projects.</p>	<p>Assumptions for achieving purpose:</p>

29

PROJECT DESIGN SUMMARY  
LOGICAL FRAMEWORK

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PAGE 3

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS								
Outputs:	Magnitude of Outputs:		Assumptions for achieving outputs:								
<p>1. <u>Manpower</u></p> <p>a. Trained Students (annual output)</p> <p>b. Trained Teaching Staff</p> <p>c. Trained TanGov and parastatal staff</p>	<p>End of Proj. Status</p> <p>1.a. <u>Ukiriguru MATI</u></p> <table border="1"> <tr> <td>Certificate</td> <td>100</td> <td>115</td> <td>125</td> </tr> <tr> <td>Diploma</td> <td>0</td> <td>0</td> <td>40</td> </tr> </table>	Certificate	100	115	125	Diploma	0	0	40	<p>1.a.b.c. MATI/MinAg/U-DSM records. TanGov records. Professional evaluation.</p>	<p>The TanGov and all donors will continue to coordinate their efforts, support and inputs.</p>
Certificate	100	115	125								
Diploma	0	0	40								
<p>2. <u>Quality of Training at Two MATIs</u></p> <p>a. Revised curricula, lesson plans, training materials.</p> <p>b. In-service training courses.</p>	<p><u>Mpwapwa MATI</u></p> <table border="1"> <tr> <td>Certificate</td> <td>110</td> <td>110</td> <td>110</td> </tr> <tr> <td>Diploma</td> <td>36</td> <td>36</td> <td>36</td> </tr> </table>	Certificate	110	110	110	Diploma	36	36	36	<p>2.a.b. MATI records, plans.</p>	<p>Required capital and recurrent budget support will be provided by the Tan Gov.</p>
Certificate	110	110	110								
Diploma	36	36	36								
<p>3. <u>Scope of Training in the Faculty of Agriculture &amp; Forestry</u></p> <p>a. Revised curricula, particularly for agricultural education/extension students.</p> <p>b. Functioning Center for Continuing Education in Agriculture.</p>	<p><u>Faculty of Ag/Forestry</u></p> <p>B.Sc. Degree (Ag Ed/Ext.) - 0 <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">20</span></p> <p>Students from other ag. spec. receiving instruction &amp; course work in agric. education &amp; extension. - 0 76</p>	<p>3.a.b.c. MATI/MinAg records. Professional evaluation.</p> <p>4.a.b. MinAg records.</p> <p>4.c. MATI records. Contract staff records and reports.</p>	<p>The TanGov will provide suitable staff for training at the proper time to accomplish the phased training schedule.</p>								
<p>4. <u>Other</u></p> <p>a. Permanent career service for teaching and administrative staff of MATIs.</p> <p>b. Manpower development and training programs for MinAg staff.</p> <p>c. Classroom instruction (MATIs).</p> <p>d. Requirements analysis of establishing Agricultural Education program at Faculty of Agriculture and Forestry, U of DSM.</p>	<p>1.b. Degree holding staff at Ukiriguru raised from 5 in 1972 to 13 in 1980. Degree holding staff at Mpwapwa raised from 6 in 1972 to 14 in 1980. Degree holding staff in entire MATI system raised from 30 in 1972 to over 100 in 1980.</p> <p>Faculty of Agriculture and Forestry staff with U.S. grad. degrees in areas relevant to agricultural education and extension raised from 22 in 1976 to 38 in 1980.</p>										

69

PROJECT DESIGN SUMMARY  
LOGICAL FRAMEWORK

Life of Project:  
From FY 1974 to FY 1983  
Total U. S. Funding \$7.9 million  
Date Prepared: 7/76

Project Title: AGRICULTURAL MANPOWER DEVELOPMENT

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p>Outputs:</p> <p>e. Agricultural manpower survey for use in planning training programs.</p>	<p>Magnitude of Outputs:</p> <p>1.c. 20 individuals in key food crops/livestock positions with U.S. training.</p> <p>2.a.b. Baseline data to be collected by contractor and used to establish targets. Changes should be in areas of increased hours of instruction, additional laboratory/field instruction, additional teaching/training materials, regular in-service training courses, etc.</p> <p>3.a. Up to 30 lecture hours on principles of extension education. Up to 50 lecture hours on the administration and supervision of programs of agricultural education and extension. Additional practicals in extension, agricultural education and agricultural production. Other changes as determined by project staff.</p> <p>3.b. In place and in use.</p> <p>3.c. Precise numbers and courses to be determined. Estimated that at least 700 individuals will receive an average of 2 weeks training.</p>		<p>Assumptions for providing outputs:</p>

70

PROJECT DESIGN SUMMARY  
LOGICAL FRAMEWORK

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Project Title & Number: AGRICULTURAL MANPOWER DEVELOPMENT

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p>Output:</p>	<p>Magnitude of Outputs:</p> <p>4.a. In force.</p> <p>b. Number and types of courses to be determined by contract staff.</p> <p>c. Courses and hours to be determined by Senior Contract Staff. Expect 6 contract members to carry full teaching loads for a period of 4 years. Two others to carry at least half-time teaching load for 4 years.</p> <p>d. Report completed.</p> <p>e. Results available for planning.</p>	<p>\</p>	<p>Assumptions for achieving outputs:</p>

16

PROJECT DESIGN SUMMARY  
LOGICAL FRAMEWORK

Life of Project:  
From FY 1974 to FY 1983  
Total U.S. Funding \$7.9 million  
Date Prepared: 7/25/76

Project Title & Number: AGRICULTURAL MANPOWER DEVELOPMENT

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p>Inputs:</p> <p>1. <u>AID Grant</u></p> <p>a. <u>U.S. Technical Assistance Personnel</u></p> <p>(1) D.H. Project Manager (1) 8 yrs</p> <p>(2) MinAg/MATI Staff</p> <p>(a) Contract Chief of Party 7-2/3 years</p> <p>(b) Special Asst. (1) Mpuapwa 4 years</p> <p>(c) Special Asst. (1) Ukiriguru 4 years</p> <p>(d) Instructor/Trainers (2) Mpuapwa 4 years each</p> <p>(e) Instructor/Trainers (4) Ukiriguru 4 years each</p> <p>(f) American Admin Assistant 5 1/2 years</p> <p>(3) Requirements Analysis Team 4 men one month each</p> <p>(4) Staff for the Dept. of Agric. Education &amp; Extension UDSM</p> <p>(a) Agricultural Education Specialist 4 years</p> <p>(b) Agricultural Extension/Rural Sociology Specialist - 4 yrs.</p> <p>(c) Agricultural teaching materials and audio visual aids Specialist - 5 years</p> <p>(d) Extension-Education Specialist &amp; Director of Center for Continuing Education in Agriculture 4 1/2 yrs</p> <p>(5) Consultants (22 staff months)</p> <p>1/Includes roughly \$20,000 for local support staff.</p>	<p>Implementation Target (Type and Quantity)</p> <p>(1) Funding not included.</p> <p>(2) \$3,299,000</p> <p>(3) (Est. \$ 20,000 included above)</p> <p>(4) \$1,349,000</p> <p>(5) \$132,000</p>	<p>AID Project Agreements and PIO/T's.</p> <p>Project Implementation Plans.</p> <p>Project Evaluations.</p> <p>TanGov and other donor records.</p>	<p>Assumptions for providing inputs:</p> <ol style="list-style-type: none"> <li>1. Adequate TanGov recurrent budget resources.</li> <li>2. Properly qualified contract staff can be located in a timely manner.</li> <li>3. Personnel are available for training.</li> <li>4. AID management is adequate.</li> </ol>

26

PROJECT DESIGN SUMMARY  
LOGICAL FRAMEWORK

Life of Project:  
From FY 1974 to FY 1983  
Total U. S. Funding \$7.9 million  
Date Prepared: 7/25/76

Project Title: AGRICULTURAL MANPOWER DEVELOPMENT

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Inputs:	Implementation Target (Type and Quantity)		Assumptions for providing inputs:
b. <u>Commodities</u>			
(1) 13 Landrovers and 1 bus	(1) \$158,000		
(2) Audio-visual aids, teaching equipment & misc.	(2) \$ 54,000		
c. <u>Participants</u>			
(1) MinAg, MATIs & other agric. institutions - 60	(1) \$1,190,000		
(2) Faculty of Agriculture and Forestry - 20	(2) \$ 428,000		
d. <u>Other Costs</u>			
(1) Evaluation of MinAg/MATIs	(1) \$ 25,000		
(2) Evaluation of Faculty of Agriculture & Forestry, Dept. of Agricultural Education and MinAg/MATIs	(2) \$ 35,000		
(3) Facilities at Faculty of Agriculture			
(a) Building of 800 sq. me. for the Department of Agric. Education & Extension and the Center for Continuing Education in Agric. - included will be lecture rooms, seminar rooms, an audio visual laboratory, offices and storage.			
(b) a hostel for 50 students			
(c) 4 senior staff houses	(3) \$ 870,000		
(4) Misc. such as invitational travel, supplemental household furniture, certain teaching materials, etc.	(4) \$ 234,000		
e. <u>Inflation &amp; Contingency</u>	<u>\$ 141,000</u>		
<b>TOTAL AID GRANT</b>	<b>\$7,915,000</b>		

73

PROJECT DESIGN SUMMARY  
LOGICAL FRAMEWORK

Project Title & Number: AGRICULTURAL MANPOWER DEVELOPMENT

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Inputs:	Implementation Target (Type and Quantity)		Assumptions for providing inputs:
<p>2. <u>AID Loan</u> (not part of this project) Agricultural Project Support Loan II (1) Equipment (teaching) (2) Construction (9 houses)</p> <p>TOTAL AID LOAN</p>	<p>\$ 310,000 \$ 135,000</p> <p><u>\$ 445,000</u></p>		
<p>3. <u>TanGov</u> a. <u>MinAp/MATIs</u> (1) Recurrent budget for operation of MATIs (2) Trust Fund contribution (3) Participant airfare &amp; salaries     Sub-Total</p> <p>b. <u>U-DSM/FAF</u> (1) Recurrent Budget (2) Participant Support (3) Centralized Services (4) Land Facilities (5) Training Fees (6) Trust Fund contribution     Sub-Total TOTAL</p>	<p>(1) \$3,570,000 (2) \$ 105,000 (3) \$ 132,000 <u>\$3,807,000</u></p> <p>(1) \$ 502,000 (2) \$ 80,000 (3) \$ 286,000 (4) \$ 40,000 (5) \$ 195,000 (6) \$ 45,000 <u>\$1,148,000</u> <u>\$4,955,000</u></p>		
<p>4. <u>Other Inputs Related to But Not Part of Project</u> a. AID Agricultural Sector Loan I (Improvements in MhAG Training Facilities) b. IDA Loan for facility construc. in MATI system (\$839,000 for Ukiriguru and Mpungwa) c. NORDIC AID to MATI System - facilities &amp; technical assistance (all to Mbeya)</p>	<p>\$1,000,000  \$1,839,000  \$2,586,000</p>		

74



Country: Tanzania	Project No: 621-11-190-119	Project Title: AGRICULTURAL MANPOWER DEVELOPMENT	Date: 9/76	/XX/ Original / / Revision:	Apprvd:
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CPI DESCRIPTION

1. FY 74 Participants return and working in project, total to date 7.
  2. FY 75 Participants return and working in project, total to date 24.
  3. FY 76 Participants return and working in project, total to date 39.
  4. FY 77 Participants return and working in project, total to date 62.
  5. FY 78 Participants return and working in project, total to date 74.
  6. FY 79 Participants return and working in project, total to date 80.
  7. Career Service Requirement for MATI<sup>a/</sup> staff satisfied, Project Phase II started and 7 contract technicians for the MinAg and MATI project component on board.
  8. Last 2 contract technicians for MATI's on board.
  9. MATI U.S. staff depart and MATI component of project completed
  10. Loan commodities ordered and loan funded staff houses at MATI's under construction
  11. Work plan submitted
  12. Work plan submitted
  13. Work plan submitted
  14. Work plan submitted
  15. Work plan submitted
  16. University of Dar es Salaam, Faculty of Agriculture and Forestry at Morogoro requirements analysis completed
  17. PP revision submitted to AID/W.
  18. PP revision approved by AID/W
  19. ProAg including Faculty of Agriculture and Forestry at Morogoro component signed and PIO/T issues.
  20. Consortium Contract amended to include the Faculty of Agriculture and Forestry component
  21. 2 contract technicians arrive for the Faculty of Agriculture and Forestry component<sup>b/</sup>
  22. All contract staff for Faculty of Agriculture & Forestry at Morogoro (FAF) on board.
  23. 2 FAF staff depart
  24. Last U.S. Staff depart and FAF component of project completed
  25. Tender for construction from FAF facilities issued
  26. Awards made for construction of FAF facilities
  27. Construction of FAF facilities completed
  28. Local hire employees go off the project; all participants returned and working; project completed.
- a/ MATI - Ministry of Agriculture Training Institute
- b/ 2 technicians planned to be on-board before ProAg and PIO/T signed. Will be funded from project pipeline for MATI component.

COPY OF LETTER

MINISTRY OF AGRICULTURE  
ADMINISTRATIVE DIVISION  
P. O. BOX 9192  
DAR ES SALAAM

30th March, 1973

Ref. No. ANC/26/118

Dr. William D. Green, Director  
United States Agency for  
International Development  
P. O. Box 9130  
Dar es Salaam

Dear Dr. Green

MANPOWER DEVELOPMENT - USAID

The purpose of this letter is to outline the position of this Ministry with regard to agricultural manpower development for Tanzania by USAID assistance. A joint USAID Kilimo team has made a study of the subject and a report (Agricultural Manpower Development in Tanzania by Donald R. Yeaman, Frank P. Schwencke, and Adam Wamunza) was published in August 1972.

2. The report made a number of recommendations, and I wish to comment on these for your information and as a guide to planning USAID assistance in this field. The recommendations are summarized and our comments given below:

(1) RECOMMENDATION I: Establish a new Department of Agricultural Education and Extension at the Faculty of Agriculture to better prepare Agricultural teachers.

COMMENTS: The recommendation is accepted in principle and subject to specific recommendations by the two-man AID study team (schedule to arrive in 1974) to analyse the agricultural education/extension capabilities of the University of Dar es Salaam, Faculty of Agriculture, discussion on the implementation of the recommendations will be initiated with the Ministries of National Education, Development and Economic Planning and

Treasury and the University of Dar es Salaam.

(2) RECOMMENDATION II: Establish a new division for agricultural education in the Ministry of Agriculture responsible for all pre-service and in-service training as soon as possible to include an administrative staff in Dar es Salaam and the administrative and teaching staff in the Ministry of Agriculture Training Institutes.

The recommendation is acceptable; the Ministry has already recommended to Government on the creation of a manpower development division out of the present Research and Training Division.

(3) RECOMMENDATION III: Staff through the establishment of a permanent career administrative and teaching cadre the new division for agricultural education

COMMENTS: This recommendation appears designed to improve the quality of teaching and administrative staff by reducing or eliminating frequent transfers of administrative and teaching personnel in and out of training institutes and to provide channels for promotion within the training system itself. The recommendation is accepted. It will be facilitated by the creation of the Manpower Development Division.

(4) RECOMMENDATION IV: Consolidate diploma level training programmes at only two school sites as soon as adequate facilities can be made useable.

COMMENTS: We appreciate the purpose of this recommendation which is to economise on and utilise efficiently personnel, facilities, and finances. Consolidation of diploma training is accepted in principle but at present we still doubt that only two sites will be sufficient for all our needs for this type of personnel.

(5) RECOMMENDATION V: As qualified teachers become available use only graduates as teachers for certificate and diploma institutes.

COMMENTS: The recommendation is accepted. Because of the limited supply of graduates from the Faculty of Agriculture and the demand for them, we shall continue to

require training abroad of B.Sc. graduates to help staff the training institutes. Training abroad at this time also permits future training institute teachers to have training in agricultural education and to major or specialise in certain fields, such as agronomy, horticulture, livestock or veterinary, which they will later teach. Such agricultural education training and majoring in various subject matter fields is not presently available at our Faculty of Agriculture.

(6) RECOMMENDATION VI: Improve teaching staff quality by posting as new teachers only those trained in agricultural education and provide in-service training for present teachers.

COMMENTS: The recommendation is accepted and will be implemented as qualified teachers become available.

(7) RECOMMENDATION VII: Discontinue out-of-country diploma training in 1973 for all subjects except very special or unusual training as the in-country diploma training will provide for requirements at this level.

COMMENTS: The recommendation is accepted in principle but its adoption will very much depend on how soon we establish adequate facilities in the country.

(8) RECOMMENDATION VIII: Revise and standardize curricula at certificate and diploma training institutes with the diploma training period of standardised at one year (1920 hours of instruction and the certificate training period standardised at two years (3040 hours) of instruction.

COMMENTS: The recommendation is accepted. Implementation of this recommendation will require rather extensive reform of existing curricula and consultation with the present institute principals and we think that there will be a need for AID technical assistance for this.

(9) RECOMMENDATION IX: For both certificate and diploma institutes seek donor assistance to (1) accelerate training of teachers both locally and out-of-country, and (2) fill the teaching vacancies with expatriates until Tanzanians are trained.

COMMENTS: The recommendation is accepted.

(10) RECOMMENDATION X: Sponsor in-service teacher training short courses to provide present teachers with training in teaching methods and in the subject matter courses they are accepted to teach.

COMMENTS: The recommendation is accepted and plans for implementation will proceed as funds and in-service instructors are available.

(11) RECOMMENDATION XI: Provide separate training lands, equipment and workshops especially designed for teaching at all training institute sites.

COMMENTS: The recommendation is accepted in principle, but I expect that implementation may be slow because of insufficient funds to provide quickly separate lands, equipment, and workshops for training.

(12) RECOMMENDATION XII: Discontinue Maruku and Tumbi as certificate training institutes and utilise them to provide "topping off" of certificate holders in tea, coffee, banana and tobacco growing.

COMMENTS: The recommendation is accepted.

(13) RECOMMENDATION XIII: Provide intensive in-service training for all administrative, management and supervisory extension and training staff in the areas of extension administration, programme planning, plans of work, supervision, evaluation and extension methods.

COMMENTS: The recommendation is accepted. Implementation will proceed as funds and instructors for the in-service training are available.

(14) RECOMMENDATION XIV: Provide intensive in-service training for field level extension and training cadre (Field Officers, Assistant Field Officers and Field Assistants) to improve technical competence, extension methodology and motivation.

COMMENTS: The recommendation is accepted. Implementation will proceed as funds and instructors for the in-service training are available.

Turning to the matter of USAID assistance in the field of agricultural manpower development we propose that USAID assistance at this time be directed primarily at upgrading the capabilities of certificate and diploma training institutes, particularly those involved in food crops and livestock training. Our needs fall into three general categories:

(a) provision of scholarships in the United States to train teaching, administrative and planning personnel;

(b) provision of teaching and agricultural education planning personnel; and

(c) funds to improve facilities and purchase books, teaching materials and equipment, laboratory equipment and farm equipment to improve equipment and facilities at the training institutes.

I comment on each of these categories in turn:

(a) United States Scholarships:

Pending establishment of a Department of Agricultural Education and Extension at the Faculty of Agriculture and revision of the curriculum to permit majors or specialisation in various subjects, we are largely dependent on foreign scholarships for training graduate instructors for our certificate and training institutes.

We need graduate instructors who have had training in agricultural education and extension and who have had specialised training or majors in the particular fields in which they are to teach. We expect that most of this training abroad will be at the B.Sc. level, but we may be able to provide a few people for M.Sc. training. We expect that a total of 60-70 scholarships will be needed to provide minimum upgrading of training institute staff and will try to provide 5-10 Tanzanian citizens each year to begin scholarship training. We regard these scholarships as a temporary means of meeting our personnel requirements pending establishment of an in-country agricultural teacher training capability.

(b) Teaching and Planning Personnel:

We hope that USAID will consider provision of an expert in agricultural education planning and development to assist in implementing the recommendations made in the study.

The special Assistant to the Chief Training Officer, under the direction of the Chief Training Officer, will assist in the planning and development of all Ministry of Agriculture certificate and diploma institutes. He should have particular competence in curricula development, personnel development and financial planning.

For the training institutes themselves we hope that USAID will provide teaching and planning personnel for the two institutes, viz: Mpwapwa and Ukiriguru. For each one assisted we propose, in general, that USAID provide a special Assistant to the Principal to teach half time and to assist the principal with curriculum and staff development and financial planning and eight graduate (B.Sc. level or higher) lecturers qualified in agricultural education and in the special subjects they are to teach.

(c) Funds to improve facilities and purchase teaching materials and books:

The recently completed study adequately documented the generally poor and inadequate facilities and the generally inadequate and insufficient equipment. This condition has been known to my Ministry for sometime, but an acute shortage of funds has prevented us from making needed improvements. The current IDA Credit will provide some construction funds at Ukiriguru and Mpwapwa, but the amount provided for teaching, laboratory and workshop equipment is quite small and really inadequate. The Mbeya institute is assisted by NORDIC aid, but we have no other assistance in sight for the two training institutes.

We propose, therefore, that USAID provide loan assistance to enable us to upgrade the facilities and equipment of our certificate and training institutes to enable USAID supplied teaching personnel and their Tanzanian colleagues to function effectively. These funds we propose to use to procure such things as text books, reference books, visual aid equipment, laboratory equipment, office and classroom equipment, workshop equipment, and other non-recurrent items needed to do an effective teaching job. The exact amount of funds needed will be worked out later, but I suggest we think in terms of an initial loan of \$ 300,000. This loan will be partly utilised in filling up the gaps in our staff housing requirements at the MATIs.

COPY OF LETTER

ANNEX F

page 7

It is my hope that a project proposal along the above lines may be prepared soon for forwarding to your Washington Headquarters and that we may have early approval.

Sincerely yours,

(A. Mushi)  
PRINCIPAL SECRETARY,  
KILIMO

AM/GMN.

# UNIVERSITY OF DAR ES SALAAM

P.O. Box 33091 -- DAR ES SALAAM -- TANZANIA PROJ: 621-0135

Telephone No. 33611

Telegrams: UNIVERSITY  
DAR ES SALAAM

Our Ref: CG/FA/13

24th November, 1975.

Your Ref:

Dr. Vernon C. Johnson,  
Director,  
USAID Mission to Tanzania,  
P.O. Box 9130,  
DAR ES SALAAM.

Dear Sir,

**RE: FINAL REPORT - UDSM STUDY TEAM FOR**  
**DEPARTMENT OF AGRICULTURAL EDUCATION**  
**AND EXTENSION, FACULTY OF AGRICULTURE**  
**MOROGORO**

We have received the Final Report of the UDSM Team and have reviewed its contents. The recommendations and suggestions of the Study Team for the development of our Department of Agricultural Education and Extension are quite pleasing and acceptable to the Faculty. By this letter we are officially requesting USAID assistance in the implementation of the suggestions and recommendations made by the Study Team. The following may illustrate our interest in the rapid initiation of activities under the proposed project.

DISTR	AG	MFO
DIR		X
AD		X
MCH		
PRN		X
MFO		
AD	M	
TRG		
GR		
STG		
EFT		
GR		
RF		X
GR		X

- The Third Five Year Plan (in draft) has emphasized the increasing need for high level manpower in the rural and agricultural development activities of this country. Much of this high level manpower will be needed in the field services (extension) of the Ministry of Agriculture if the country is to meet the goal set by the manpower training policy statement as laid out in the draft plan. The Faculty is the only institution in Tanzania involved in such training of an agricultural nature. The Faculty is also under increasing pressure to provide short term in-service training and up-grading in agriculture for a wide variety of civil servants. In addition, we are being asked by the Ministries of Agriculture and National Education to train degree level teachers of agriculture for schools and training institutes. The proposed project would greatly assist us in meeting these demands.
- As you know, we have been planning for this new Department for some time. We made our initial request through the Senate for the department in 1973, which was subsequently approved in 1974. Our establishment for the department is six senior staff. We have one staff member for the department under contract at the moment, and have made arrangements through UNDP to support and recruit a further two positions. If this project can be quickly initiated, and the three proposed staff recruited by mid-year 76, we will have a fully staffed department when our third year students begin their year of specialisation. Our budget estimates included a total of shs. 410,734/- for the operation of the department during the 1975/76 academic year. Due to financial stringencies throughout the country, we were unable to get the total amount estimated. We are now estimating a total of shs. 533,954/- for the operation of the department in the 1976/77 academic year. We have the land available for the proposed new buildings and tentative site selection has been done. Preliminary discussions on building layout and design have been held with the UDSM architects. In conjunction with Ministry of Agriculture we have been able to earmark a sum of shs. 400,000/- for the initial

phase of construction. This construction does not include staff housing, which is a very serious problem for the Faculty. The USAID project should include funds for the construction of four senior staff houses, which would help us a great deal in meeting the ever-increasing need for senior staff housing on the Morogoro Campus. We feel that the tools, equipment and related teaching materials recommended in the project combined with our estimated recurrent and capital development funds will allow this new department to function quite effectively.

3. We will be most happy to provide staff assistance in the preparation of further project documents, or background information, that may be required.

The development of the Department of Agricultural Education and Extension along with the Center for continuing Education in Agriculture is a very important project within the Faculty. We await your early and positive response to this request for USAID assistance.

Yours sincerely,



VICE CHANCELLOR  
UNIVERSITY OF DAR ES SALAAM

- c. c. The Dean,  
Faculty of Agriculture and Forestry,  
MOROGORO.
- c. c. Mr. H. M. Kasiga,  
Director,  
Manpower Development Division,  
P. O. Box 2066,  
DAR ES SALAAM.

ANNEX C

"An Appraisal of Rural Women in Tanzania"

by

D. R. Reynolds

December 1975

(See copy in AID/Washington as there are no  
extra copies in USAID/Tanzania)

"An Appraisal of Rural Women in Tanzania"

by

D. R. Reynolds

December 1975

(See copy in AID/Washington as there are no  
extra copies in USAID/Tanzania)

TOWARDS THE SOCIAL AND ECONOMIC PROMOTION  
OF RURAL WOMEN IN TANZANIA 1/

By

2/

Hilda Kokubirwa  
Institute for Adult Education  
Dar es Salaam, Tanzania

Introduction:

The purpose of this brief descriptive paper is to make an attempt at showing roughly the changing image of the women in rural Tanzania and the various agencies responsible for social, economic, cultural, and political promotion of women in rural Tanzania. In Tanzania, emphasis is placed on rural development where the majority of the people live and work. It is the women who do most of the agricultural work and agriculture is the basis of our economy. If our country is to make full and quick progress now, the women must have their talents developed, and their economic level in terms of income must be raised.

General Background

Tanzania (mainland) which achieved her independence on 9th December, 1961, is one of the largest countries in East Africa, covering an area of 362,820 square miles, of which 20,650 is covered by water in lakes and rivers.

Reports from the 1967 census indicate that the population of Tanzania is about 12.3 million people, but ever since, the population has been increasing very rapidly and it is now estimated that the population is about 13 million people. There are three major ethnic groups, the Africans who are the majority (98%), the Asians and the Europeans. The African population is composed of 123 tribes, all different in cultural traditions but all united by one language, Swahili, the official language of the country. About 95% of the population live and work in rural areas. Most of these are peasant farmers.

Policy and Administrative set up

Tanzania through TANU - "Tanganyika African National Union" - has adapted a policy of socialism in developing the economy of the country which is predominantly agricultural. The manner in which this policy was to be applied in Tanzania was clearly spelled out in the Arusha Declaration of 1967. The fundamental principles underlying this policy are:

1/ Reproduced from "FKARA", May 1975, a publication on Adult Education published by the Tanzania Institute of Adult Education.

2/ Miss Kokubirwa is Assistant Resident Tutor, Institute of Adult Education, Dar es Salaam.

- 1) Social equality involving the extension of developmental benefits as widely as possible throughout society.
- 2) The development of cooperative forms of economic activity particularly in the rural areas through the formation of Ujamaa villages.
- 3) Self reliance which involves the maximum possible development of domestic resources through the mobilization of the people.
- 4) Economic and social transformation in order to expand production capacity.
- 5) African economic integration through the extension of economic cooperation with other African states.

Administratively, Tanzania is divided into 20 regions which are further subdivided into 80 districts. The government adapted the policy of decentralization in 1972 whereby the regions are responsible for the planning and implementation of the economic and social activities within them. Decentralization apart from being a structural device of administration, is a development strategy for transforming the Tanzanian rural society. Development in the Tanzanian context implies:

- the giving to the people power in deciding on matters that affect them that is - freedom to manage their affairs.
- effecting increases in their material well-being.

The people must participate in considering, planning and implementing their development plans. The obligation of the Party TANU is to ensure that the leaders and experts implement the plans that have been agreed upon by the people themselves.

There has been established at the regional level a Regional Office headed by the Regional Commissioner who coordinates the political and executive functions of the government. Below him is the Regional Development Director who is the effective head of development affairs within the region assisted by a team of three senior officers namely:

- The Regional Personnel Officer
- The Regional Financial Controller
- The Regional Planning Officer, and a number of functional managers each responsible for one of the following:

- Agriculture
- Health
- Land Development
- Ujamaa and Cooperatives
- Water
- Education
- Engineering
- Natural Resources
- Livestock
- Commerce and Industry

All these form a regional team of experts and their activities are coordinated at the regional level instead of the national level as in the previous system. This administrative structure repeats itself at the district level. Alongside this administrative structure are "Development Committees" at different levels in order to facilitate people's participation in and control of development, as well as to involve the Party in the development process.

Funds earmarked for development have been decentralized as well as the control of funds and decision making on expenditure. The rural areas possess a great potential for the fast economic development.

#### Pre-Independence and the Role of Women in Society

In African traditional society, the position of women was considered inferior to that of men and their lives were limited to the domestic duties, while in the public roles were allocated to men. Women played the role of child-bearing; care of home and husband and work on the fields. Decisions on major family and tribal issues were men's domain. Even in issues of choosing a life partner it was the right of men alone.

Tanzania was no exception to this, although the society was based on the traditional practice of Ujamaa (familyhood) namely: respect for one another; sharing of property and the obligation to work. This is confirmed by Mwalimu Nyerere's words in "Socialism and Rural Development" that ..... "it is true that the women in traditional society were regarded as having a place in the community which was not only different, but was also to some extent inferior. It is impossible to deny that the woman did, and still do, more than their fair share of the work in the fields and in the homes. By virtue of their sex, they suffered from inequalities which had nothing to do with their contribution to the family welfare. Although it is wrong to suggest that they have always been an oppressed group it is true that within traditional society ill-treatment and enforced subservience could be their lot'....."

Under such circumstances, women's capacity to develop was stunted and human resources lay dormant. As a result, Africa has suffered because of the lack of the necessary women's contribution to continental developmental goals.

- 4 -

With the dawn of colonialism in Tanzania, the situation was worsened because neither Christianity nor Islam advocated the equality between men and women. The policy of colonial education favoured men, while women were left to lag behind men. For instance in 1961, when Tanzania got independence after nearly 80 years of colonialism, only five girls had completed Higher Cambridge! Worse still, the church education instructed women to be submissive to husbands and to be subservient to childbearing, the kitchen and the Church for this was the surest way to heaven! Some of the most educated women could join the nunnery life which emphasized absolute obedience more than critical and liberal thinking. Under colonialism, both men and women suffered, but women's suffering doubled under the suppression of the colonial masters and under their own men!

The resignation of Tanzanian women from the second place position of humanity can only come by political and social education which is right now the major involvement of women throughout Tanzania as we shall see in the next pages.

#### After Independence: The Changing Image of Rural Women

Tanzania, as we have seen before, invests in rural development because it gives the fastest returns of inputs and is less demanding in capital investment. It also gives a chance for equality for the majority of the people. About 95% of the total population lives in rural areas and, therefore, the emphasis is on rural development. There are more women than there are men in the rural areas and it is these women who do most of the agricultural work which is mainly subsistence, on top of the housework. The contradiction here is that it is mostly men who receive training in agronomy! "It is the responsibility of the Government and Cooperative Societies to see to it that our people get the necessary tools, training and leadership in modern methods of agriculture" (Arusha Declaration). Talking about the people in this context, we should not consider men alone but women, too, should get access to the necessary facilities since they are the very people who do most of the agricultural work. Nevertheless, these days women are active participants in all educational programs pertaining to agriculture.

Educational programs for rural women are all aimed at and integrated into our total development planning. Tanzania firmly believes in education as being central to the development process. The priority in the development process is on the rural areas where the majority of the people live. There are more women than there are men here. Considering the fact that women have generally lagged behind men in terms of development, effort is being made to narrow this gap. Various institutions have been formed to cater for the welfare of rural women and they have much to contribute towards the promotion of rural women in the social, economic, political and cultural fields.

The U.W.T. - Union of Women of Tanganyika

With the victory of Independence in 1961, TANU, in the following year, 1962, initiated the formation of a women's organization, the Union of Women of Tanganyika which since then has been catering to the needs and problems of women. This organization which is an affiliate of TANU was formed with the following objectives:

1. To bring together all the women of mainland Tanzania so that they can think, speak and act together.
2. To preserve and propagate the good reputation and unity of our nation.
3. To foster the development of women and their active participation in economic, educational, political, cultural and health activities.
4. To act as a Liaison and cooperate with the government and the Party on all matters which are of special concern to women.
5. To campaign for and preserve the rights and dignity of women in our nation and the rest of Africa and the world.
6. In order to achieve these objectives, the organization will seek to cooperate and act as a liaison with other organizations in the world whose aims are similar or close to those of U.W.T. The colour, creed, or racial background of the members of such organizations will not stand in the way of cooperation provided that those policies and objectives being followed are deeply rooted in socialism, in quality and in self-reliance.

Membership is open to any Tanzanian woman who is sixteen years and above. Groups of women can join the U.W.T. as well as individuals.

Administrative Structure:

On the National level, the U.W.T. has a chairman who is elected by the U.W.T. national conference and holds this post for five years. She is the leader and spokeswoman of the organization. She is assisted by the vice chairwoman who is also elected by the national conference. The general secretary is appointed by the President of the United Republic who is the chairman of the National Executive Committee (NEC). The current general secretary, Ndugu Thecla Mchauru, is the first presidentially appointed secretary. Prior to her appointment, she was

Principal Rural Training Officer and, therefore, her familiarity with the rural areas cannot be doubted. Although the President appoints the secretary, women are given the opportunity to recommend names of suitable candidates to the President. The National Treasurer is also appointed by the National Executive Committee after the suitable candidates have been recommended by the U.W.T. Under the General Secretary are assistant secretaries to assist her in her day to day activities.

On the regional level, the structure is repeated but there is only one secretary. The regional chairwoman and secretary are paid personnel since August 1974. The government pays them, e.g. the chairman gets \$100 (800/- Tanzanian shillings) per month. The regional secretaries are well-trained former community development officers with an experience of up to 20 years. Most of them are trained in the country but a few are graduates from abroad. Many of these have been Home Economics Trainers. Secretaries are charged with the duty of coordinating the U.W.T. activities down to the district level. The government, together with UNICEF, gives assistance to regions by providing them with transport which is mostly used by the secretaries.

Below the regional level, is a district where the administrative structure is similar to that of the region. Some of the district secretaries are ex-Rural Development Assistants and are also well-trained persons. Not every district has a secretary who is a former rural development assistant. In this case, the Community Development Officers have to act as secretaries.

On the divisional level, and below, the leaders are all volunteers most of whom are retired teachers, nurses, mission workers and outstanding women with a good level of literacy.

#### U.W.T. and the Training of Rural Women

The government has given U.W.T. its own institution for the training of rural women. This is the Rungamba Leaders Training Centre in Iringa Region. Here women from all over rural Tanzania are trained for a period of three months whether they are or are not members of U.W.T. The three-month course covers leadership training and home economics and includes:

- child care
- income and budgeting
- needlework
- home management
- nutrition and hygiene
- agriculture

On completion of the course, these women go back to their villages where they train other women in the same field. They organize women in groups and share with them the knowledge that they have gained. Most of these women have had a primary school level of education. These courses are sponsored financially by the government and UNICEF. About 120 women are trained annually. The trainers at Rungamba are trained either in Tanzania or abroad. To enable the women to attend these courses effectively, a nursery school has been established within the institution.

Besides Rungamba, other centres which train rural women leaders are:

- Buhare Home Economics Training Centre
- Ndanda Homecraft Centre
- Bigwa

These centres train U.W.T. leaders, extension workers and various women group leaders. By 1980, each district will have its own Rural Training Centre. There are 34 District Rural Training Centres all under the Prime Minister's office. These centres train peasant farmers in modern methods of agriculture and various other crafts. Women are not excluded from these short courses which may last from a few days to two weeks, depending on the objectives of the program. Among other things, women are taught here how to run day care centres.

#### Income-Generating Activities (Cooperatives)

There are many problems facing women which hinder them from increasing their income in their homes. Some of these problems are:

- illiteracy
- bad health
- lack of knowledge and experience
- lack of support from the home
- Limited environment which gives a woman no chance of hearing from others and sharing their experiences and this way she can hardly expand her horizon of knowledge
- mishandling of funds because women have no knowledge in budgeting and savings. This problem is more found in cooperative activities like shopkeeping where many cooperative shops have been forced to close down.

The role of U.W.T. in curbing such problems has been to encourage the women to participate actively in literacy classes. There are literacy classes conducted by U.W.T. in various branches in the villages.

Throughout the country, the U.W.T. branches run small scale businesses in cooperative forms to enable the women to get a little income. Such activities include:

- Consumer cooperative shops
- community farms and gardens
- textile cooperative shops
- canteens
- poultry raising
- bars and restaurants and a good many other activities on cooperative basis
- small scale industries using local materials e.g.
- pottery
- weaving
- carving
- fabric dyeing
- various handicrafts
- needlework

#### Day care Centres

In order to enable women in Ujamaa villages to participate fully in development activities, U.W.T. in collaboration with the Ministry of Labour and Social Welfare, has established day care centres throughout the country in Ujamaa villages. Some of the 78,681 day care centres in the country as of 1974 are run by the U.W.T. Each day care centre has an average of 50 children.

The few examples that have been listed are a demonstration of the role played by the U.W.T., the only national organization instituted to cater for women's welfare in the social and economic promotion of rural women. Through U.W.T. women are now beginning to feel that they have a positive contribution to make towards the development of this nation. Despite the shortcomings of the organization e.g. lack of funds, lack of trained staff, lack of experts in the matters of administration, finance, planning and legal affairs, the U.W.T. is trying very hard to fight for the welfare of women.

#### Functional Adult Education:

Generally speaking, the education of women in Tanzania is very much behind that of men and this is perhaps demonstrated by the predominance of women in rural adult education classes. The majority of the women living in rural areas are illiterate.

The Second Five-Year Development Plan, which started in 1969, laid down clearly the policy of adult education, which was to emphasize learning wherever it would help development. 1970 was declared an "Adult Education Year" in Tanzania and the President clearly outlined the objectives of adult education as:

1. To shake people out of their resignation and to realize what they can do for their communities and themselves
2. To provide people with the skills necessary to bring about change in their environment
3. To foster nation-wide understanding of the policies of socialism and self-reliance.

During that year, Tanzania had a population of about 13 million people out of which 7,000,000 were adults of over 15 years. Seventy five percent of these adults were illiterates. In other words, there were 5,250,000 adults who were illiterate. Of this 57% were women and 43% men. The enrolment figures of 1970 into literacy classes show the following:

- women = 2.1 million = 57%  
 - men = 1.7 million = 43%

The general picture is that women responded more positively than men; they want to run while men walk !

In order to enable those who had not participated in formal or informal education, Tanzania has launched an enormous literacy and education program for everybody, including follow-up stages. Such educational programs include health campaigns e.g. "Man is Health" which was launched in 1973 and "Food is Life" a nutrition campaign of 1975; agricultural campaigns, eg. "Politics is Agriculture" of 1972, political and cultural campaigns. These campaigns are national and are for all regardless of the educational background. During such adult education activities which are broadcast over the radio, written in the press, discussed in seminars, people especially in the rural areas, assemble in their study groups for discussions during which they decide and implement their decisions. For example, a group might decide to dig a well or a trench, clear bush nearby, cultivate or carry on any activity as a response to what has been taught.

#### Women and Functional Literacy

All training in literacy is training for productivity. Here theory and practice are like sides of the same coin. As previously mentioned, women predominate adult education classes quantitywise in rural areas. These classes assemble and learn in primary schools; TANU branch offices, houses, churches and mosques, tree shades and anywhere else. Here one can see women in large numbers, some of them with babies on their backs or on their laps who try to grab the primers from their mothers, who are so attentive to the teacher that they are hardly disturbed.

The Unesco Work Oriented Literacy Project started in Tanzania in 1968 in the four lake regions, an area which is known for its cotton production. Cotton is one of the major export crops in Tanzania hence the selection of the area for this project. The project started with developing functional literacy primers for the improvement of cotton production, but later on more primers for other occupations were: fishing, cattle raising and banana growing. Women do participate

fully in all these programs and a special primer has been developed to cater to better health, home and child care. Productivity for each person increases as his health and nutrition is improved and this is an economic factor.

It was resolved in 1970 by TANU that Tanzania would mount a campaign which would eliminate illiteracy in the nation by 1975! To this effect, the Lake Regions Functional Literacy Project, in cooperation with the Ministry of National Education, has developed the following primers to be used nationally:

- |                   |   |
|-------------------|---|
| - National Rights | - Maize Growing                             |
| - Wheat Growing   | - Tobacco Growing                           |
| - Rice Growing    | - Cotton Growing                            |
| - Cattle Raising  | - Fishing                                   |
| - Banana Growing  | - Better Living (House Economics for women) |

These primers will be used in various parts of the country where such economic activities take place. Each topic will have two primers, Levels I and II and a teachers' guide.

#### Special Centres for Skills:

Alongside with literacy, in 1971 each district got special centres for rural skills such as:

- agriculture for both women and men
- homecraft (for women)
- crafts e.g. masonry, carpentry, carving, etc.
- health (for both men and women)

In 1973 these centres were extended to each division. There are about 400 divisions in the country. The 1974/75 budget year allocated some funds to these centres which were extended to each ward. There are about 2,000 wards. The allocation of funds to these centres was as follows:

- |               |         |                     |
|---------------|---------|---------------------|
| - agriculture | 2,000/- | Tanzanian shillings |
| - crafts      | 2,000/- | Tanzanian shillings |
| - health      | 500/-   | Tanzanian shillings |
| - homecraft   | 4,000/- | Tanzanian shillings |

The homecraft centres got more funds because the teaching materials are many and expensive.

It is difficult to list all the agencies which cater to the welfare of rural women in the country. Apart from the public institutions, there are volunteer agencies which are seriously engaged in the social and economic development of rural women. These include:

- homecraft centres run by Missions, especially, Christian Missions
- Rehabilitation centres
- The Lushoto Integrated Development Project (Lidep) and a good many other volunteer groups. The Missions, especially, Christian Missions have been a nucleus for development wherever they exist in rural and urban areas. Here women are taught, apart from religion, literacy, various handicrafts, child care and health in general. The sisters have played a big role in this.

The mass media in general has played a big role in education of the rural women. Special programs for women are given out on Radio Tanzania every day apart from the general adult education programs. Subjects like nutrition, better farming, health, child care and home management are taught to women through the radio.

#### Rural Women in Ujamaa Villages:

An Ujamaa village is a rural economic and social community where people live together and work together for the good of all. The principles of Ujamaa (familyhood) are: equality and respect for each other, the sharing of property, work by all and exploitation by none.

An Ujamaa village may be composed of 100 or more family units. Each village chooses its own chairman, secretary and treasurer, and each village has its own constitution. Apart from the communal farms owned by the whole village, each household has its own plot on which to grow subsistence crops. Traditionally, it was women who did all the farming but in an Ujamaa village things are quite different. Agricultural work is for all, both men and women, and participation is registered. When the harvest is sold, women get equal shares with men!

The day to day activities of a woman living in an Ujamaa village include:

- waking up in the morning about six a.m. (6 a.m.)
- making breakfast for the family if any
- cultivating on the communal farm or family plot up to mid-day
- fetching firewood and water
- fetching grass for cattle (sometimes)
- feeding the children
- pounding and grinding grain
- cooking lunch for the family
- washing clothes and cleaning the house
- attending adult education classes in the afternoon
- cooking and other household drudgery
- gardening
- caring for the children
- finally resting (usually after 10 p.m.)

Although women in Ujamaa villages are enjoying the benefits of staying and working together for the benefit of all, they still do quite a lot of work, and they hardly have time to rest. However, women do participate fully in educational programs including agriculture, health, cooperative, education, and others. Ministry of Agriculture trains young adults who will work in the Ujamaa villages. Ten-month courses are offered to young men and women in national service camps. Mobile clinic services are offered to rural women and the rural medical aids train these women in child care, health, nutrition and sometimes family planning, as they attend these clinics. Each village has a community centre where women can meet regularly to discuss matters concerning their social welfare. Again each village has a day care centre to enable women to participate in development projects. The radio study groups, which attract both men and women together, have encouraged women to talk freely before men and express themselves with confidence. Women are also seriously engaged in small scale industries to uplift their income level.

Tanzania is now gaining momentum in its effort to make people live together in development villages where it is easy for the people to get facilities like: schools, hospitals, water, building materials, roads, social welfare facilities and the rest. This is a movement which touches the whole family but more so the woman, for a home has more sense to the woman than to the man. It has been resolved that by 1976 all rural Tanzanians live in planned villages to facilitate the social services as earlier mentioned.

The success of the whole national revolution depends on the understanding participation of the Tanzanian women as a revolutionary of the 20th century. The social and economic promotion of the rural women in Tanzania cannot depend on external agencies alone but on her own effort and initiative, through the development of her talents which for quite long have laid dormant.

The revolution has started in Tanzania through socialism and it is an uphill task. There is still much to be done towards the achievement of equality, development and peace, the objectives of 1975, an International Women's Year.

GUIDELINES FOR SELECTION OF PARTICIPANTS FOR GENERAL  
SUPPORT TRAINING AND TYPES OF TRAINING PROPOSED

General Selection Guidelines

1. Regular employee of TanGov or parastatal organization.
2. Must hold a position directly related to a production oriented program in either food crops or livestock.
3. Must be in or expected to occupy upon completion of training a supervisory position.
4. Preference will be given to administrative rather than technical agricultural training.

Types of Training Proposed

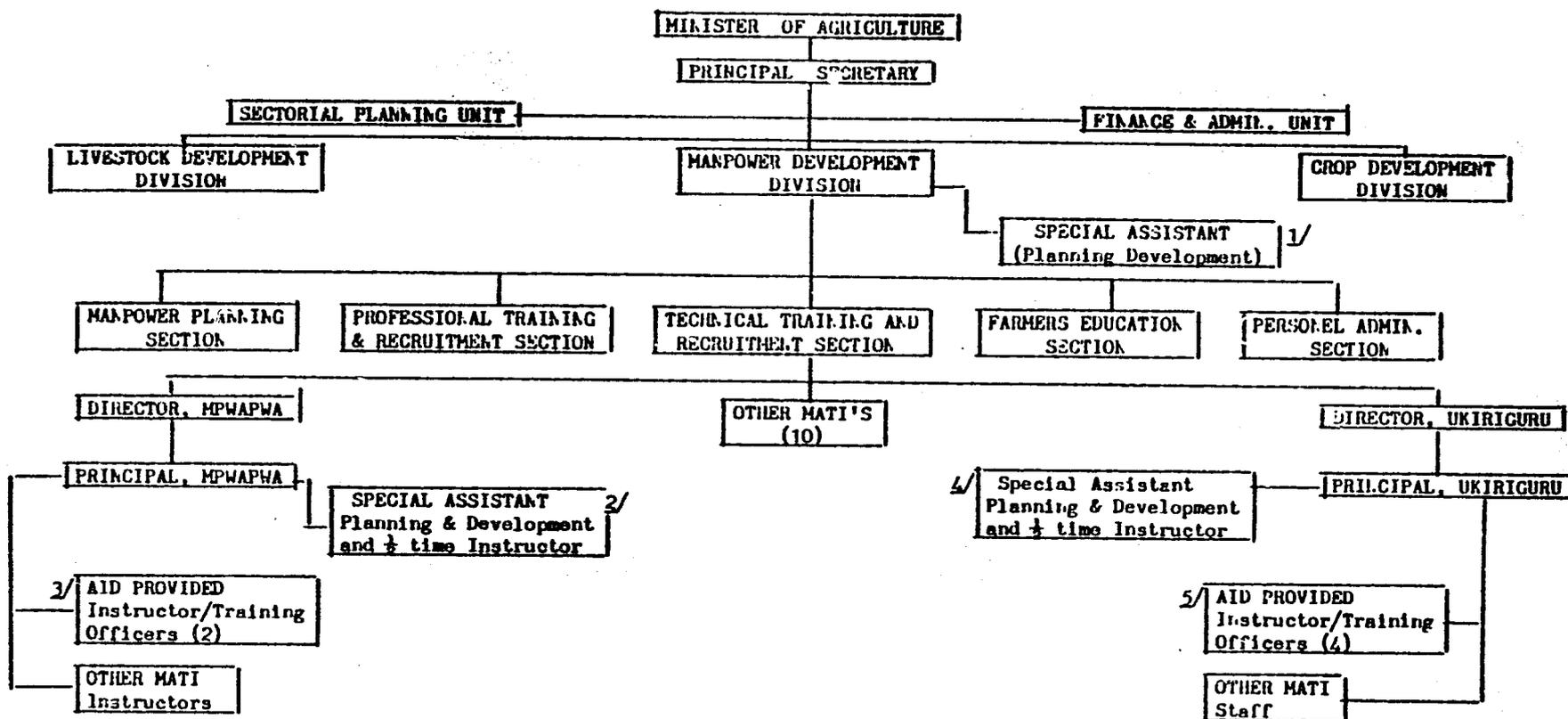
1. It is expected that all training will be long term degree training.
2. Administrative/management training will be included in any technical training program.

Illustrative Positions Expected to be Filled by Returned Participants

1. Senior Administrative/Technical Staff of MinAg and parastatals.
2. Senior Regional Agricultural/Livestock Officers.
3. TanGov Estate or Farm Managers.
4. National or Regional Planning and Program Development Officers for Food Crops/Livestock (MinAg or other TanGov organizations).

ADDITIONAL PROJECT DETAILS

I. Organization of the Ministry of Agriculture Government of Tanzania (Details shown of Manpower Development, MATI System)

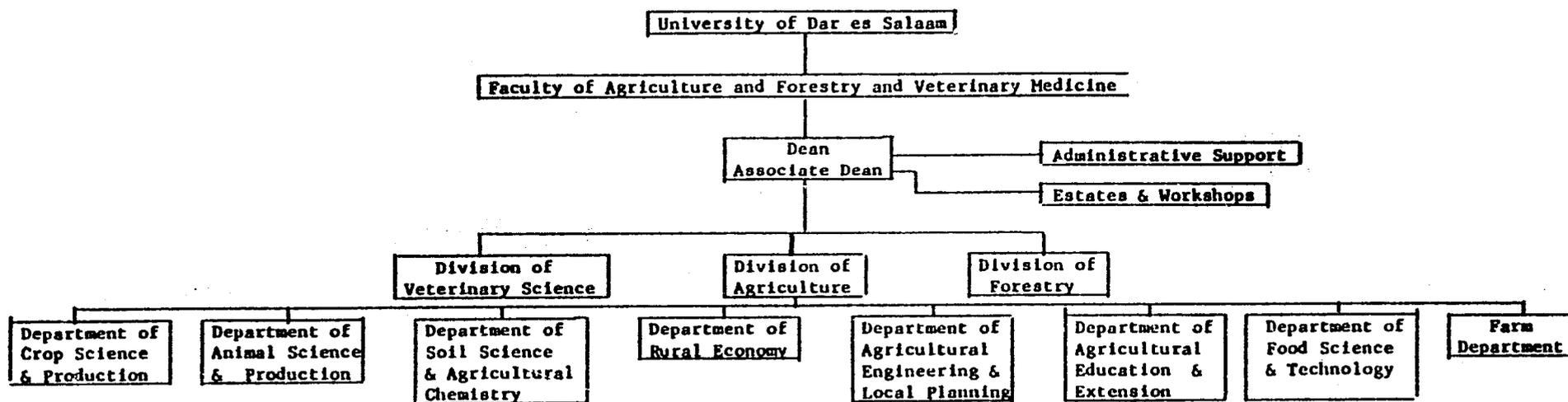


- NOTES: 1/ Provided Senior position by AID. Will act as Chief of Party for Contract in regular TanGov position.  
 2/ & 3/ A total of three (3) AID provided positions. Technical skills projected to be covered by the AID inputs are: 1) Veterinary Range Management and 3) Animal Husbandry.  
 4/ & 5/ A total of five (5) AID provided positions. Technical skills projected to be covered by the AID inputs are: 1) Production Economics and Management 2) Rural Economics and Extension 3) Agronomy 4) Agricultural Engineering and 5) Land utilization.

101

11. ORGANIZATION CHART OF THE UNIVERSITY OF DAR ES SALAAM - FACULTY OF AGRICULTURE AND FORESTRY AND VETERINARY MEDICINE 1/

ANNEX J



be

1/ Veterinary Medicine remains to/implemented at the Faculty. Throughout the paper Faculty of Agriculture and Forestry is used to refer to the Faculty as a whole.

102

**ESTIMATE OF TANZANIA FINANCIAL CONTRIBUTION****Related to FAF Assistance**

	1978	1979	1980	1981	1982	1983	Total
A. Recurrent Budget of Department of Agricultural Education and Extension - FAF 1/	71	82	90	99	-	-	342
B. Participant Support - FAF 2/ (Travel and Salaries)	20	27	24	9	-	-	80
C. Value of Centralized Services FAF 3/	38	42	70	77	28	31	286
D. Recurrent Budget of Center for Continuing Education in Agriculture - FAF 4/	-	-	40	40	40	40	160
E. Land, Equipment and Facilities - FAF 4/	30	-	10	-	-	-	40
F. Training Fees Paid to Center - Miscellaneous Organizations 5/	-	-	42	46	51	56	195
G. TanGov Contribution to Trust Fund for AID-provided Contract Technicians (18 staff years) 6/	6	9	10	9	6	5	45
<b>FAF TOTAL</b>	<b>165</b>	<b>160</b>	<b>286</b>	<b>280</b>	<b>125</b>	<b>132</b>	<b>1,148</b>

1/ Based on estimated growth in 1976/77 budget (\$62,000) of 15% for 1978/79 and 10% for 1980/81.

2/ Calculated at \$4,000 per participant based on \$1,000 for travel and \$3,000 for salary.

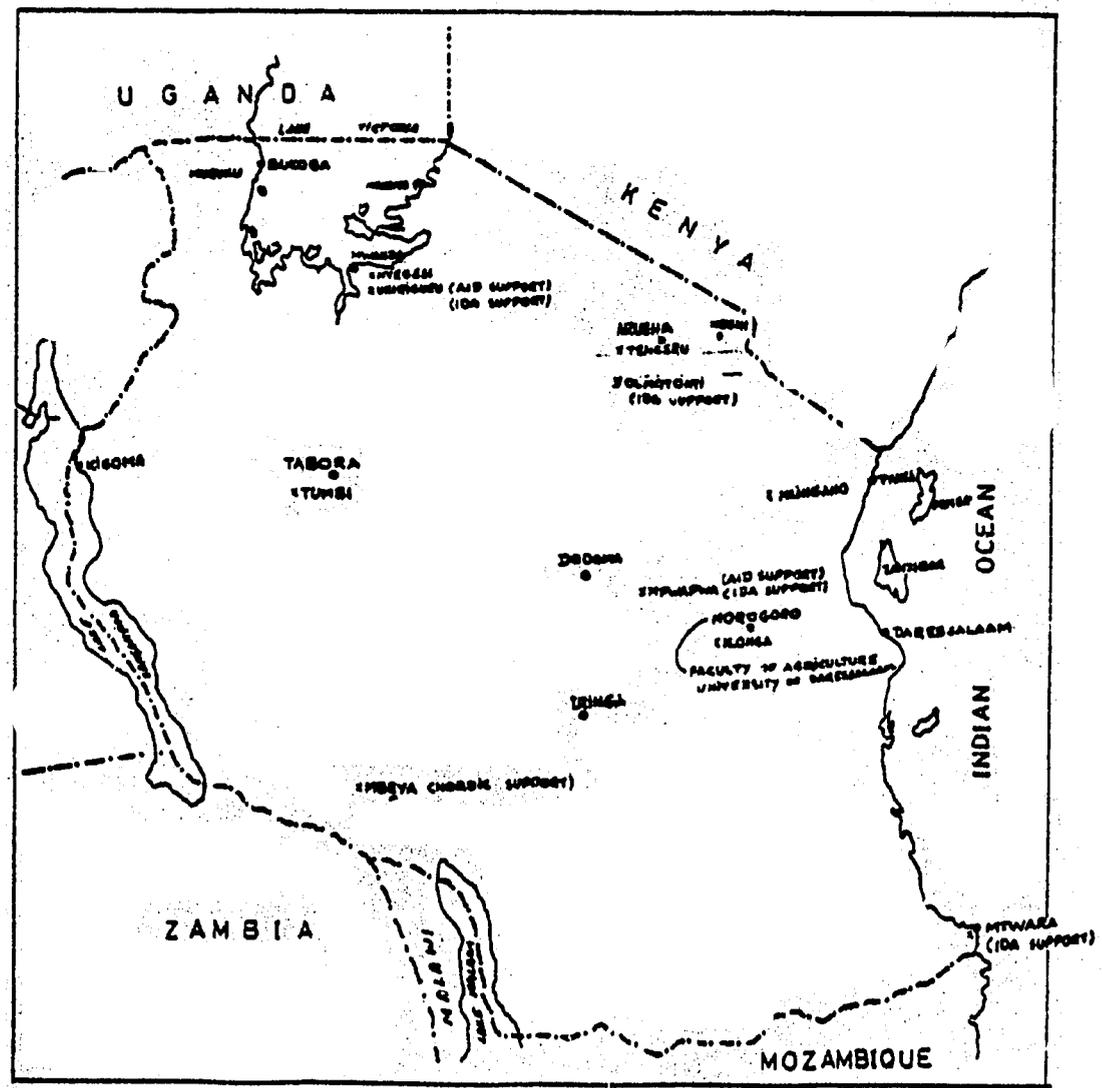
3/ For 1978/79 calculated at 10% of 1976/77 budget amount (\$351,000) which is assumed to be increasing 10% each year. For 1980/81 the value is calculated at 15% to reflect the growth of the Department of Agriculture Education & Extension and the operation of the Center for Continuing Education. For 1982/83 the rate used is 5% as assistance to the DAEE will no longer be provided.

4/ Estimated

5/ Assumes 8,400 man days of training provided in year (12 days each for 700 participants) at a cost of \$5.00 per man day. Increased by 10% each year.

6/ @ Shs. 21,600 (\$2,571) per man year

IV. MAP OF TANZANIA SHOWING LOCATIONS  
OF MINISTRY OF AGRICULTURE TRAINING INSTITUTES  
(For Certificate /or Diploma Training)



X AGRICULTURE TRAINING INSTITUTIONS (MATI)  
• PRINCIPAL TOWNS

SUMMARY AND RECOMMENDATIONS

The Second Five year Development Plan (1969-1974) places the highest priority on agriculture with special emphasis on agricultural training. Training is given this emphasis as the Agricultural Sector targets were not met in the first five year plan 1964-1969 partially due to the lack of trained agricultural manpower.

The Government plans to achieve full self-sufficiency at all skill levels by 1980. At present the high and middle level manpower force of the Ministry of Agriculture, as well as other government agencies, is still somewhat dependent on non-Tanzanians.

In order to reach the goal of having one teacher-in-the-fields (technical agricultural, or veterinary officer) to every 500 families by 1980, as stated in the second Five Year Plan, it will be necessary to provide between 1973-80 an additional 760 graduates (the 1972 stock is 320 of whom 87 are expatriates), 1,255 diplomates (the 1972 stock is 753 of whom 14 are expatriates), 8,090 certificate holders (the 1972 stock is 3126).

However, if the expanding training programs are geared to the 9% yearly increase in personal emoluments allowed the Ministry of Agriculture, it will be necessary to provide training in the 1973-80 period for an additional 226 graduates, 346 diplomates, and 2,276 certificate holders. These figures include agricultural trained manpower for other ministries and parastatal organizations. Their requirements represent ten to fifteen percent of the total projected needs in the diploma and certificate categories, and are trained for these organizations by the Ministry of Agriculture through its training institutes.

The Ministry of Agriculture with assistance from an IDA Development Credit Agreement, the NORDIC countries (Denmark, Norway, Sweden, Finland) and the Federal Republic of Germany is expanding training at the Diploma and Certificate level. Training has expanded from two institutes in 1967 to ten in 1972 and twelve will be in operation in 1976. If this expansion schedule can be met it is expected that in the 1973-80 period approximately 754 graduates, 1861 diplomates, and 4991 certificate holders will have received training.

From Yeaman, Schwencke, and Wamunza, Agricultural Manpower Development in Tanzania, August 1972. Dar es Salaam.

The expansion from two to ten training institutes in the period 1967-72 has resulted in training programs that are very poorly staffed, only partially equipped, and unable to provide highly qualified graduates. Also in 1969 a Faculty of Agriculture was established. The Faculty of Agriculture provides higher education courses in Crop Science and Production, Animal Science and Production, Soil Science and Agricultural Chemistry, Agricultural Engineering, and Rural Economy and Extension. This institution has fine facilities, but is very short on adequate numbers of trained staff to provide high quality instruction for its students.

Teachers for the training institutes and for the Faculty of Agriculture will for some time continue to be a problem both in quantity and qualifications. In order to staff these schools it will be necessary to provide by 1980 an additional 59 graduate teachers (the 1972 stock is 71), 24 diploma level teachers (the 1972 stock is 47), and approximately 42 certificate level teachers (the 1972 stock is 51). All of these new teachers should have special training in the subject matter they will teach and training in teaching methods. The present staff should receive intensive inservice training in teaching methods and subject matter to upgrade them to the new teacher standards. It is suggested that the Ministry of Agriculture seek donor assistance for a Manpower and Training Specialist to assist in program administration. This specialist along with the technical experts provided for in the World Bank - Tanzania Education Project, should be able to provide guidance for development of a sound agricultural manpower development program.

The study team after visiting all Ministry of Agriculture Training Institutes and the Faculty of Agriculture and discussing agricultural education with Tanzanian and donor officials provides for consideration by the Tanzania Government the following recommendations:

- (1) Higher Education in Agriculture. It is recommended that the Faculty of Agriculture:
  - (a) Establish as soon as possible a new Department of Agricultural Education and Extension for the purpose of better preparing teachers for all agricultural training both within the Ministry of Agriculture and other Ministries.
  - (b) Seek donor assistance for education grants to accelerate training of Faculty of Agriculture teachers and also seek expatriate teachers to fill vacancies until Tanzanians are available to fill teaching positions.

- (c) When adequate teaching personnel become available provide at the bachelor's level, in addition to the general degree in agriculture degrees having a major in one of the six departments: (1) Crop Science and Production; (2) Animal Science and Production; (3) Soil Science and Agricultural Engineering; (5) Rural Economy; and (6) Agricultural Education and Extension. Thus higher quality education can be provided in both teaching methods and course content for future teachers in the diploma, certificate, secondary, and rural training programs throughout the country.
- (2) Ministry of Agriculture Diploma and Certificate Training Programs. With the development of such a large agricultural education program within the Ministry of Agriculture more consideration for planning and administration will be required, thus, it is recommended that the Ministry of Agriculture:
- (a) Establish a new division for agricultural education responsible for all preservice and inservice training as soon as possible to include an administrative staff in Dar es Salaam and the administrative and teaching staff in Ministry of Agriculture Training Institutes.
  - (b) Staff through the establishment of a permanent career administrative and teaching cadre the new division for agricultural education mentioned in (a) above.
- (3) Agricultural Diploma Education. In order to make the most economical use of funds, teaching staff, and facilities and to provide the highest quality agricultural diploma level of training, it is recommended that the Ministry of Agriculture:
- (a) Consolidate diploma level training programs at only two school sites as soon as adequate facilities can be made usable. One for Animal Health-Veterinary training should be at Mpwapa and the second for all other agricultural diploma training should be at Lyamungu or Tengeru.
  - (b) Improve teaching staff quality by posting as new teachers only those trained in agricultural education and sponsor inservice teacher training programs to provide present teachers with training in teaching methods and in the subject matter courses that they are expected to teach.
  - (c) As qualified teachers become available, use only graduates as teachers.

- (d) Seek donor assistance to: (1) accelerate training of teachers both locally and out of the country, and (2) fill the teaching vacancies with expatriates until Tanzanians are trained.
  - (e) Standardize the training period to one year (1920 hours of instruction) for all students who have graduated from the suggested expanded (up to 3040 hours of instruction) certificate training courses.
  - (f) Provide separate training lands, equipment, and workshops especially designed for teaching at all school sites. (At present research, production and training all share the same facilities).
  - (g) Discontinue out-of-country diploma education in 1973 for all subjects except very special or unusual training because the in-country diploma training program will provide all manpower requirements at this level if training progresses as planned.
- (4) Agricultural Certificate Education. Again to make the most efficient and effective use of agricultural education resources, it is recommended that the Ministry of Agriculture:
- (a) Improve teaching staff quality by posting as new teachers only those trained in agricultural education and sponsor in-service teacher training short courses to provide present teachers with training in teaching methods and in the subject matter courses that they are expected to teach.
  - (b) Seek donor assistance to (i) accelerate training of teachers both locally and out of country and (ii) fill the teaching vacancies with expatriates until Tanzanians are trained.
  - (c) As qualified teachers become available use only graduates as teachers.
  - (d) Standardize and expand the basic curriculum to a full two-year period (3040 hours) for all certificate training institutes.
  - (e) Provide separate training lands, equipment, and workshops especially designed for teaching at all school sites. (At present research, production and training all use the same facilities).
  - (f) Discontinue Maruku and Tumbi as certificate training institutes as they will be expensive to develop into 200-student

schools and will not be needed to train certificate personnel for the project manpower requirements. The facilities at these schools now will handle around fifty people and it is recommended that they be utilized to provide "topping-off" of certificate holders in tea, coffee, banana and tobacco growing. Topping off can be an important method of getting the degree of specialization considered necessary for various disciplines after the general agriculture certificate education. Training can be accommodated at available Ministry of Agriculture stations (such as Maruku or Tumbi) and at parastatal training sites. Also, short courses could be provided for teachers, extension personnel, and farmers at these sites.

- (5) In-service Training. In order to improve the effectiveness of the existing educational organization (see Annex D), it is recommended that the Ministry of Agriculture:
- (a) Initiate intensive in-service training for all administrative, management, and supervisory extension and training staff in the areas of extension administration, program planning, plans of work, supervision, evaluation, and extension methods.
  - (b) Initiate intensive in-service training program for field level extension and training cadre (Field Officers, Assistant Field Officers, and Field Assistants) to improve technical competence, extension methodology and motivation.
  - (c) Continue in-services training for all extension and training staff at least annually to maintain and improve standards reached through the intensive training programs mentioned under items (a) and (b).

Summary and Recommendations of Program Proposal for a Department of Agricultural Education and Extension and a Center for Continuing Education in Agriculture at the Faculty of Agriculture & Forestry

I. Summary<sup>1</sup>

A. General

President Julius Nyerere's policy statement released in March 1967, the Arusha Declaration and the Tanganyika African National Union policy statement have placed in national prominence the issue dealing with the importance of agricultural education in Tanzania. The Faculty of Agriculture and Forestry has recognized and accepted its role as indicated by the following quotation from the Faculty's Third Five Year Plan, 1975-1980

"The fact that the demand by the country for trained manpower in both agriculture and forestry continues to be high, means that the Faculty of Agriculture and Forestry must increase the intake of students. This in turn calls for more staff, equipment, lecture and seminar rooms, student accommodation and staff houses. Furthermore, the recent demand by the agricultural sector for specialist graduates has forced the University to reorganize the Bachelor of Science (Agriculture) degree curriculum in lines being followed by several older Universities. This means that during the first two years, the students will follow a common course, but in the third year, they will go into option streams and specialize in either; crop science and production, animal science and production, agricultural economics and farm management, agricultural engineering, and agricultural chemistry and soil science."

More recently, the University of Dar es Salaam senate approved the establishment of two new departments effective in July 1975. They are the Departments of Agricultural Education and Extension and Food Science and Technology.

B. Department of Agricultural Education and Extension

The purpose of the Department of Agricultural Education and Extension is to provide graduates able to fill positions as: teacher of agriculture in the MATIs, officers in charge of farmer training and

1. Based on the October 1975 report prepared by West Virginia University and North Carolina Agricultural & Technical State University

development centers, teachers in secondary schools, agricultural extension workers and agricultural parastatal staff members. To provide better trained people in this area it is suggested that certain modifications in the proposed curricula be implemented which would increase the exposure of students to agricultural education and agricultural extension techniques. In implementing the specialization and the curricula modifications, an increase in staff will be required. Competence will be necessary in fields such as agricultural education, agricultural extension, rural sociology, audio visual technology and in the preparation of teaching material. The team also recommends the establishment of a self-learning center in connection with the audio visual laboratory.

To ensure the long-term development of the Department, participant training is recommended. Also to meet the shortage of classrooms and laboratories caused by past and expected growth in student numbers, additional classrooms and laboratories will be required. To accommodate a future Department of 40-50 students will require the following facilities:

a)	One lecture room, 50 students @ 2 sq.m. ea.	100 sq. m.
b)	Two seminar rooms, 25 students each	100 sq. m.
c)	Five offices, 15 sq. m. each	75 sq. m.
d)	Storage room	25 sq. m.
e)	Reference room	25 sq. m.

Finally, the team recommends that the University construct a large teaching and audio visual aids preparation laboratory, an equipment room, a room for the self-learning center which is easily accessible to students, a mimeograph room, or copy machine room and a storage room. It is estimated that this section should be provided with at least 175 sq. m. of floor space.

### C. Center for Continuing Education in Agriculture

New agricultural information is constantly being generated. Transmission of the information is often difficult and agricultural staff are poorly informed. At the same time, criticism is voiced regarding the ineffectiveness and the small amount of information extended for agricultural development. In-service and short course training for agricultural workers is one effective method of improving the extension of knowledge and the capabilities of agricultural workers.

Therefore, to create more interest, to discuss existing problems, to teach the principles of self-reliance, to encourage rural development and to extend modern day principles of agricultural technology, it is recommended that a Center for Continuing Education in Agriculture be developed by the Faculty of Agriculture and Forestry. Such a center could become the nucleus for the refresher training of any group or body

concerned with improving agriculture. Much of the country's agricultural knowledge is located at this institution and provides an excellent recourse for the operation of a center for the continuation of agricultural expertise. The Center should draw upon this expertise to conduct seminar and short courses for the 20,000 professional and semi-professional agricultural workers in Tanzania. The Director of the Center may be recognized as an Assistant Dean for Continuing Agriculture Education.

To develop such a Center would require staff, participant training and facilities. Specifically required are: A continuing education specialist, an assistant, participant training in agricultural education and extension to a faculty staff member who would consequently assist in conducting courses at the Center, a lecture room, two seminar rooms, four offices and storage space totaling 300 sq. m. The facilities should be built as an integral part of the building which houses the Department of Agricultural Education and Extension. A hostel would also be needed.

#### D. Other

The report also recommends that textbooks and reference material, housing and vehicles be provided for the Department and the Center.

## II. Recommendations

Recommendations outlined in this report as written by a four member Study Team from North Carolina Agricultural and Technical State University (NCATSU) and West Virginia University (WVU) are as follows:

1. The introduction and implementation of the Department of Agricultural Education as requested by the University of Dar es Salaam should proceed as rapidly as resources can be provided.
2. A Center for Continuing Education should be established in the Faculty of Agriculture & Forestry to improve the instruction methodology and agricultural technology for some 20,000 agricultural workers in Tanzania.
3. The following changes in the Agricultural Education and Extension syllabus should be considered.
  - a. Reduce the required number of lecture and seminar hours in the areas of crop science, animal science, soil science and rural economy and add a course entitled Introduction to the Principles of Extension Education during the first year.

- b. Provide practicals in production agriculture, agricultural extension and agricultural education for Agricultural Education and Extension majors.
  - c. Add a course in administration and supervision during the third year.
4. An academic section should be established dealing with audio visual aids, the preparation of teaching material and the operation of a self-learning center.
5. Four U.S. staff members should be employed by July 1976 to organize and implement the new Department of Agricultural Education and Extension and the Center for Continuing Education in Agriculture. The staff should include:
  - a. One agricultural education specialist
  - b. One agricultural extension/rural sociology specialist
  - c. One teaching materials and audio visual aids specialist
  - d. One extension education specialist with considerable experience in continuing education as Director of the new Continuing Education Center.
6. Twenty (20) Tanzanians, now possessing a Diploma in Agriculture, a Bachelor or Master of Science Degree in Agriculture should be sent to the United States to obtain further training in Agricultural education, agricultural extension, rural sociology, administration of adult education, preparation of teaching material and audio visual technology. Tanzania trainees should return to the Faculty to operate the Department of Agricultural Education and Extension, the Center for Continuing Education and assume extension responsibilities in each of the Faculty Departments.
7. Facilities should be constructed, totaling 800 sq. m. of floor space, to house the Department of Agricultural Education and Extension, the Audio Visual and Teaching Material Section and the Center for Continuing Education in Agriculture.
8. Four (4) staff houses should be constructed as a part of the entire project.

9. Three (3) Landrover Station Wagons should be purchased for use in the Department and Center.
10. One fifty (50) passenger Leyland Bus should be purchased to transport students for practice teaching and extension courses.
11. Textbooks, reference material and audio visual equipment should be purchased as outlined in Appendix B and E of this report.
12. USAID should provide the personnel, facilities and equipment necessary to implement this program.
13. The USAID program continue for a four to six year period (1976/1982).
14. The Faculty of Agriculture and Forestry should provide such other support as required to implement the Department and the Center.

Project Description

USAID/Tanzania determined that the project description as it will appear in the ProAg should be prepared after AID/W reviews this P.P.

PROJECT DESIGN SUMMARY  
LOGICAL FRAMEWORK

Life of Project: \_\_\_\_\_  
From FY 1974 to FY 1983  
Total U.S. Funding \$7.9 million  
Date Prepared: 7/25/76

Project Title: AGRICULTURAL MANPOWER DEVELOPMENT

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p>Program or Sector Goal: The broader objective to which this project contributes:</p> <p>To assist the Government of Tanzania (TanGov) achieve its objectives of increased self-sufficiency in the food crops and livestock agricultural subsectors.</p> <p>(NOTE: This project will address a main constraint to this goal, trained managerial and technical manpower for the agricultural sector.)</p>	<p>Measures of Goal Achievement:</p> <ol style="list-style-type: none"> <li>1. Imports of food crops and livestock products are reduced.</li> <li>2. Production of food crops, livestock and livestock products are increased.</li> <li>3. Domestically produced food crops and livestock meat products are available in sufficient supply and properly marketed and distributed to meet national demand.</li> </ol>	<ol style="list-style-type: none"> <li>1. TanGov agricultural statistics.</li> <li>2. TanGov and international foreign trade statistics.</li> <li>3. TanGov statistics of sales of major food and livestock products by concerned parastatals.</li> <li>4. TanGov statistics on purchases of major food crops, livestock, and livestock products by concerned parastatals.</li> </ol>	<p>Assumptions for achieving goal targets:</p> <p>The TanGov continues to emphasize support to the food crop/livestock subsectors. Essential financial, manpower and policy issues will be resolved by the TanGov so as to provide a permissive environment for increased productivity of food crops and livestock by Tanzanian producers.</p>

111

**PROJECT DESIGN SUMMARY  
LOGICAL FRAMEWORK**

ANNEX D

Life of Project:  
From FY 1976 to FY 1983  
Total U. S. Funding \$7.9 million  
Date Prepared: 7/23/76

Project Title: AGRICULTURAL MANPOWER DEVELOPMENT

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p>Project Purpose:</p> <ol style="list-style-type: none"> <li>1. To assist the TanGov in developing its professional and sub-professional training activities and capabilities.</li> <li>2. To expand the supply of highly trained agricultural manpower.</li> </ol>	<p>Conditions that will indicate purpose has been achieved: End of project status.</p> <ol style="list-style-type: none"> <li>1.A. <u>MinAg Headquarters</u> <ol style="list-style-type: none"> <li>a. The TanGov has established a professional career system for the administrative and technical staffs of the MATI system.</li> <li>b. Regular in-service training programs underway.</li> <li>c. A system of evaluating agricultural manpower effectiveness will be in use with the results feeding into the further improvement of training programs.</li> <li>d. Future trained agricultural manpower needs have been identified with training underway or planned to meet the needs.</li> </ol> </li> <li>1.B. <u>Ukiriguru &amp; Mpwapwa MATIs</u> <ol style="list-style-type: none"> <li>a. New and improved curricula in use.</li> <li>b. Approx. 2/3's of the teaching positions filled with B.S. degree holding (or higher) personnel.</li> <li>c. Adequate laboratory and field space provided for student needs.</li> <li>d. Proper balance achieved between classroom, laboratory and field teaching.</li> <li>e. In-service technical &amp; administrative training courses being used to provide MinAg staff with specific skills.</li> <li>f. Additional facilities and equipment in use.</li> </ol> </li> </ol>	<ol style="list-style-type: none"> <li>1.A. MinAg records and contractor reports.</li> <li>1.B. MATI records, on-site inspections, contractor reports and professional evaluations of:               <ol style="list-style-type: none"> <li>a. Teaching/training.</li> <li>b. Performance of MATI graduates.</li> </ol> </li> <li>1.C. University of Dar es Salaam records, on-site inspections, contractor reports and expert evaluation.</li> </ol>	<p>Assumptions for achieving purpose:</p> <p>TanGov will be able to provide necessary capital and recurrent costs.</p> <p>TanGov will effectively coordinate inputs.</p> <p>TanGov projects/programs will effectively utilize project trained manpower.</p>

PROJECT DESIGN SUMMARY  
LOGICAL FRAMEWORK

Life of Project: \_\_\_\_\_  
From FY 1974 to FY 1983  
Total U.S. Funding \$7.9 million  
Date Prepared: 7/25/76

Project Title & Number: AGRICULTURAL MANPOWER DEVELOPMENT

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p>Project Purpose:</p>	<p>Conditions that will indicate purpose has been achieved: End of project status.</p> <p>1.C. <u>Faculty of Agriculture and Forestry at Morogoro, University of Dar es Salaam</u></p> <p>a. Functioning Department of Agric. Education &amp; Extension</p> <p>b. Revised agricultural education and extension syllabus in use.</p> <p>c. A significant number of Faculty of Agriculture and Forestry staff members with U.S. training in agricultural education, agricultural extension, rural sociology, or related fields.</p> <p>d. Functioning Center for Continuing Education in Agriculture.</p> <p>e. Refresher courses for professional agriculturalists being provided.</p> <p>f. Adequate facilities and equipment available, including classroom space and an audio-visual and teaching materials section.</p> <p>2a. Key MinAg and parastatal agencies have better qualified administrative, management and technical staff. More Tanzanians occupying senior positions.</p> <p>2b. Planning, management and operations of crop production and livestock projects are improved.</p>	<p>2. MinAg and parastatal records. Professional evaluations of crop/livestock production programs/projects.</p>	<p>Assumptions for achieving purpose:</p>

811

PROJECT DESIGN SUMMARY  
LOGICAL FRAMEWORK

Life of Project:  
From FY 1974 to FY 1983  
Total U.S. Funding \$7.9 million  
Date Prepared: 7/25/76

Project Title & Number: AGRICULTURAL MANPOWER DEVELOPMENT

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS																
Outputs:	Magnitude of Outputs:		Assumptions for achieving outputs:																
<p>1. <u>Manpower</u></p> <p>a. Trained Students (annual output)</p> <p>b. Trained Teaching Staff</p> <p>c. Trained TanGov and parastatal staff</p>	<table border="1"> <thead> <tr> <th></th> <th>Bgn Status</th> <th>Current Status</th> <th>End of Proj. Status</th> </tr> </thead> <tbody> <tr> <td>1.a. <u>Ukiriguru MATI</u></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Certificate</td> <td>100</td> <td>115</td> <td>125</td> </tr> <tr> <td>Diploma</td> <td>0</td> <td>0</td> <td>40</td> </tr> </tbody> </table>		Bgn Status	Current Status	End of Proj. Status	1.a. <u>Ukiriguru MATI</u>				Certificate	100	115	125	Diploma	0	0	40	<p>1.a.b.c. MATI/MinAg/U-DSM records. TanGov records. Professional evaluation.</p>	<p>The TanGov and all donors will continue to coordinate their efforts, support and inputs.</p>
	Bgn Status	Current Status	End of Proj. Status																
1.a. <u>Ukiriguru MATI</u>																			
Certificate	100	115	125																
Diploma	0	0	40																
<p>2. <u>Quality of Training at Two MATIs</u></p> <p>a. Revised curricula, lesson plans, training materials.</p> <p>b. In-service training courses.</p>	<table border="1"> <thead> <tr> <th></th> <th>Bgn Status</th> <th>Current Status</th> <th>End of Proj. Status</th> </tr> </thead> <tbody> <tr> <td><u>Mpwapwa MATI</u></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Certificate</td> <td>110</td> <td>110</td> <td>110</td> </tr> <tr> <td>Diploma</td> <td>36</td> <td>36</td> <td>36</td> </tr> </tbody> </table>		Bgn Status	Current Status	End of Proj. Status	<u>Mpwapwa MATI</u>				Certificate	110	110	110	Diploma	36	36	36	<p>2.a.b. MATI records, plans.</p>	<p>Required capital and recurrent budget support will be provided by the Tan Gov.</p>
	Bgn Status	Current Status	End of Proj. Status																
<u>Mpwapwa MATI</u>																			
Certificate	110	110	110																
Diploma	36	36	36																
<p>3. <u>Scope of Training in the Faculty of Agriculture &amp; Forestry</u></p> <p>a. Revised curricula, particularly for agricultural education/extension students.</p> <p>b. Functioning Center for Continuing Education in Agriculture.</p>	<table border="1"> <thead> <tr> <th></th> <th>Bgn Status</th> <th>Current Status</th> <th>End of Proj. Status</th> </tr> </thead> <tbody> <tr> <td><u>Faculty of Ag/Forestry</u></td> <td></td> <td></td> <td></td> </tr> <tr> <td>B.Sc. Degree (Ag Ed/Ext.)</td> <td>-</td> <td>0</td> <td>20</td> </tr> </tbody> </table>		Bgn Status	Current Status	End of Proj. Status	<u>Faculty of Ag/Forestry</u>				B.Sc. Degree (Ag Ed/Ext.)	-	0	20	<p>3.a.b.c. MATI/MinAg records. Professional evaluation.</p>	<p>The TanGov will provide suitable staff for training at the proper time to accomplish the phased training schedule.</p>				
	Bgn Status	Current Status	End of Proj. Status																
<u>Faculty of Ag/Forestry</u>																			
B.Sc. Degree (Ag Ed/Ext.)	-	0	20																
<p>4. <u>Other</u></p> <p>a. Permanent career service for teaching and administrative staff of MATIs.</p> <p>b. Manpower development and training programs for MinAg staff.</p> <p>c. Classroom instruction (MATIs).</p> <p>d. Requirements analysis of establishing Agricultural Education program at Faculty of Agriculture and Forestry, U of DSM.</p>	<p>Students from other ag. spec. receiving instruction &amp; course work in agric. education &amp; extension. - 0 76</p> <p>1.b. Degree holding staff at Ukiriguru raised from 5 in 1972 to 13 in 1980. Degree holding staff at Mpwapwa raised from 6 in 1972 to 14 in 1980. Degree holding staff in entire MATI system raised from 30 in 1972 to over 100 in 1980.</p> <p>Faculty of Agriculture and Forestry staff with U.S. grad. degrees in areas relevant to agricultural education and extension raised from 22 in 1976 to 38 in 1980.</p>	<p>4.a.b. MinAg records.</p> <p>4.c. MATI records. Contract staff records and reports.</p>																	

119

PROJECT DESIGN SUMMARY  
LOGICAL FRAMEWORK

Life of Project:  
From FY 1976 to FY 1983  
Total U. S. Funding \$7.9 million  
Date Prepared: 7/25/76

Project Title: AGRICULTURAL MANPOWER DEVELOPMENT

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p>Outputs:</p> <p>e. Agricultural manpower survey for use in planning training programs.</p>	<p>Magnitude of Outputs:</p> <p>1.c. 20 individuals in key food crops/livestock positions with U.S. training.</p> <p>2.a.b. Baseline data to be collected by contractor and used to establish targets. Changes should be in areas of increased hours of instruction, additional laboratory/field instruction, additional teaching/training materials, regular in-service training courses, etc.</p> <p>3.a. Up to 30 lecture hours on principles of extension education. Up to 50 lecture hours on the administration and supervision of programs of agricultural education and extension. Additional practicals in extension, agricultural education and agricultural production. Other changes as determined by project staff.</p> <p>3.b. In place and in use.</p> <p>3.c. Precise numbers and courses to be determined. Estimated that at least 700 individuals will receive an average of 2 weeks training.</p>		<p>Assumptions for providing outputs:</p>

**PROJECT DESIGN SUMMARY  
LOGICAL FRAMEWORK**

AID 1923-28 (7-71)  
SUPPLEMENT 1

Life of Project:  
From FY 1974 to FY 1983  
Total U.S. Funding \$7.9 million  
Date Prepared: 2/25/76

Project Title & Number: AGRICULTURAL MANPOWER DEVELOPMENT

PAGE 3

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
	<p>Magnitude of Outputs:</p> <p>4.a. In force.</p> <p>b. Number and types of courses to be determined by contract staff.</p> <p>c. Courses and hours to be determined by Senior Contract Staff. Expect 6 contract members to carry full teaching loads for a period of 4 years. Two others to carry at least half-time teaching load for 4 years.</p> <p>d. Report completed.</p> <p>e. Results available for planning.</p>		<p>Assumptions for achieving outputs:</p>

121

PROJECT DESIGN SUMMARY  
LOGICAL FRAMEWORK

Life of Project:  
From FY 1976 to FY 1983  
Total U.S. Funding \$7.9 million  
Date Prepared: 7/25/76

Project Title & Number: AGRICULTURAL MANPOWER DEVELOPMENT

PAGE 4

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p>Inputs:</p> <p><u>AID Grant</u></p> <p>a. <u>U.S. Technical Assistance Personnel</u></p> <p>(1) D.H. Project Manager (1) 8 yrs</p> <p>(2) MinAg/MATI Staff</p> <p>(a) Contract Chief of Party 7-2/3 years</p> <p>(b) Special Asst. (1) Mpwapwa 4 years</p> <p>(c) Special Asst. (1) Ukiriguru 4 years</p> <p>(d) Instructor/Trainers (2) Mpwapwa 4 years each</p> <p>(e) Instructor/Trainers (4) Ukiriguru 4 years each</p> <p>(f) American Admin Assistant 5 1/2 years</p> <p>(3) Requirements Analysis Team 4 men one month each</p> <p>(4) Staff for the Dept. of Agric. Education &amp; Extension UDSM</p> <p>(a) Agricultural Education Specialist 4 years</p> <p>(b) Agricultural Extension/Rural Sociology Specialist - 4 yrs.</p> <p>(c) Agricultural teaching materials and audio visual aids Specialist - 5 years</p> <p>(d) Extension-Education Specialist &amp; Director of Center for Continuing Education in Agriculture 4 1/2 yrs</p> <p>(5) Consultants (22 staff months)</p> <p>1/Includes roughly \$20,000 for local support staff.</p>	<p>Implementation Target (Type and Quantity)</p> <p>(1) Funding not included.</p> <p>(2) \$3,299,000</p> <p>(3) (Est. \$ 20,000 included above)</p> <p>(4) \$1,349,000</p> <p>(5) \$132,000</p>	<p>AID Project Agreements and PIO/T's.</p> <p>Project Implementation Plans.</p> <p>Project Evaluations.</p> <p>TanGov and other donor records.</p>	<p>Assumptions for providing inputs:</p> <ol style="list-style-type: none"> <li>1. Adequate TanGov recurrent budget resources.</li> <li>2. Properly qualified contract staff can be located in a timely manner.</li> <li>3. Personnel are available for training.</li> <li>4. AID management is adequate.</li> </ol>

122

PROJECT DESIGN SUMMARY  
LOGICAL FRAMEWORK

Life of Project:  
From FY 1974 to FY 1983  
Total U. S. Funding \$7.9 million  
Date Prepared: 7/25/76

Project Title: AGRICULTURAL MANPOWER DEVELOPMENT

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS Implementation Target (Type and Quantity)	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Inputs:			Assumptions for providing inputs:
b. <u>Commodities</u>			
(1) 13 Landrovers and 1 bus	(1) \$158,000		
(2) Audio-visual aids, teaching equipment & misc.	(2) \$ 54,000		
c. <u>Participants</u>			
(1) MinAg, MATIs & other agric. institutions - 60	(1) \$1,190,000		
(2) Faculty of Agriculture and Forestry - 20	(2) \$ 428,000		
d. Other Costs			
(1) Evaluation of MinAg/MATIs	(1) \$ 25,000		
(2) Evaluation of Faculty of Agriculture & Forestry, Dept. of Agricultural Education and MinAg/MATIs	(2) \$ 35,000		
(3) Facilities at Faculty of Agriculture			
(a) Building of 800 sq. ms. for the Department of Agric. Education & Extension and the Center for Continuing Education in Agric. - included will be lecture rooms, seminar rooms, an audio visual laboratory, offices and storage.			
(b) a hostel for 50 students			
(c) 4 senior staff houses	(3) \$ 870,000		
(4) Misc. such as invitational travel, supplemental household furniture, certain teaching materials, etc.	(4) \$ 234,000		
e. Inflation & Contingency	\$ 141,000		
TOTAL AID GRANT.	\$7,915,000		

PROJECT DESIGN SUMMARY  
LOGICAL FRAMEWORK

Life of Project:  
From FY 1974 to FY 1983  
Total U.S. Funding \$7.9 million  
Date Prepared: 7/25/76

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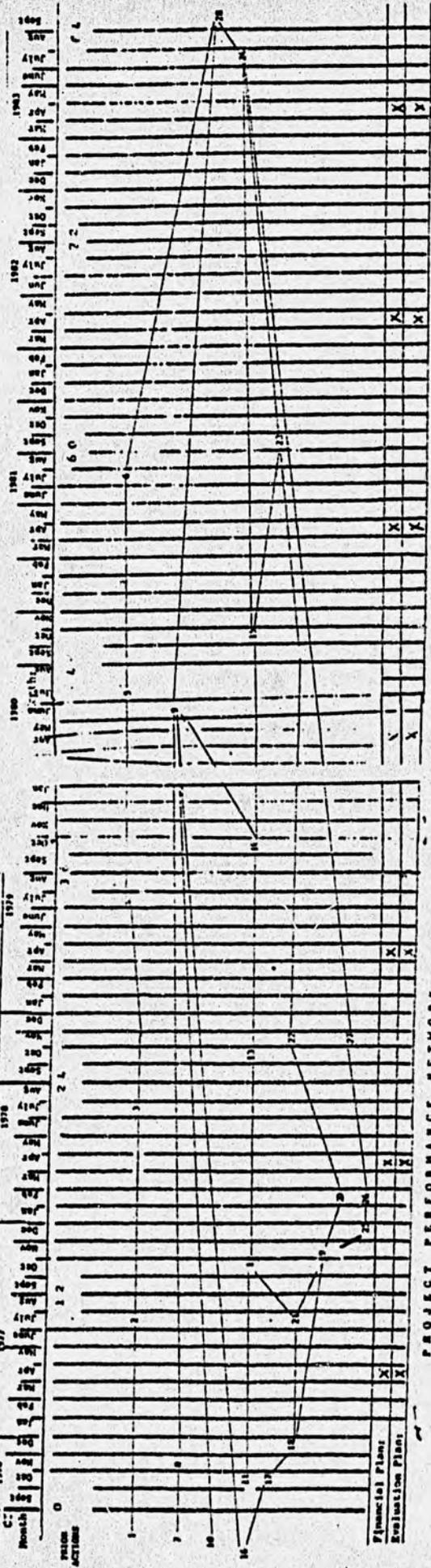
PAGE 4

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Inputs:	Implementation Target (Type and Quantity)		Assumptions for providing inputs:
2. <u>AID Loan</u> (not part of this project) Agricultural Project Support Loan II (1) Equipment (teaching) (2) Construction (9 houses)  TOTAL AID LOAN	\$ 310,000 \$ 135,000  \$ 445,000		
3. <u>TanGov</u> a. <u>MinAg/MATIs</u> (1) Recurrent budget for operation of MATIs (2) Trust Fund contribution (3) Participant airfare & salaries Sub-Total  b. <u>U-DSM/FAF</u> (1) Recurrent Budget (2) Participant Support (3) Centralized Services (4) Land Facilities (5) Training Fees (6) Trust Fund contribution Sub-Total TOTAL	(1) \$3,570,000 (2) \$ 105,000 (3) \$ 132,000 \$3,807,000  (1) \$ 502,000 (2) \$ 80,000 (3) \$ 286,000 (4) \$ 40,000 (5) \$ 195,000 (6) \$ 45,000 \$1,148,000 \$4,955,000		
4. <u>Other Inputs Related to But Not Part            of Project</u> a. AID Agricultural Sector Loan I (Improvements in MIRAG Training Facilities) b. IDA Loan for facility construc. in MATI system (\$839,000 for Ukiriguru and Mpunpwa) c. NORDIC AID to MATI System - facilities & technical assistance (all to Mbeya)	\$1,000,000  \$1,839,000  \$2,586,000		

124

ANNEX E

Country: **Guatemala** Project No.: **1377** Project Title: **Agricultural Support** Dates: **km / Original** **1971-82**  
**9/7/76** / **Actuals**



Country: Tanzania	Project No: 621-11-190-119	Project Title: AGRICULTURAL MANPOWER DEVELOPMENT	Date: 9/76	/XX/ Original / / Revision:	Apprvd:
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CPI DESCRIPTION

1. FY 74 Participants return and working in project, total to date 7.
  2. FY 75 Participants return and working in project, total to date 24.
  3. FY 76 Participants return and working in project, total to date 39.
  4. FY 77 Participants return and working in project, total to date 62.
  5. FY 78 Participants return and working in project, total to date 74.
  6. FY 79 Participants return and working in project, total to date 80.
  7. Career Service Requirement for MATI<sup>a/</sup> staff satisfied, Project Phase II started and 7 contract technicians for the MinAg and MATI project component on board.
  8. Last 2 contract technicians for MATI's on board.
  9. MATI U.S. staff depart and MATI component of project completed
  10. Loan commodities ordered and loan funded staff houses at MATI's under construction
  11. Work plan submitted
  12. Work plan submitted
  13. Work plan submitted
  14. Work plan submitted
  15. Work plan submitted
  16. University of Dar es Salaam, Faculty of Agriculture and Forestry at Morogoro requirements analysis completed
  17. PP revision submitted to AID/W.
  18. PP revision approved by AID/W
  19. ProAg including Faculty of Agriculture and Forestry at Morogoro component signed and PIO/T issues.
  20. Consortium Contract amended to include the Faculty of Agriculture and Forestry component
  21. 2 contract technicians arrive for the Faculty of Agriculture and Forestry component<sup>b/</sup>
  22. All contract staff for Faculty of Agriculture & Forestry at Morogoro (FAF) on board.
  23. 2 FAF staff depart
  24. Last U.S. Staff depart and FAF component of project completed
  25. Tender for construction from FAF facilities issued
  26. Awards made for construction of FAF facilities
  27. Construction of FAF facilities completed
  28. Local hire employees go off the project; all participants returned and working; project completed.
- <sup>a/</sup> MATI - Ministry of Agriculture Training Institute
- <sup>b/</sup> 2 technicians planned to be on-board before ProAg and PIO/T signed. Will be funded from project pipeline for MATI component.

1976

COPY OF LETTER

MINISTRY OF AGRICULTURE  
ADMINISTRATIVE DIVISION  
P. O. BOX 9192  
DAR ES SALAAM

30th March, 1973

Ref. No. ANC/26/118

Dr. William D. Green, Director  
United States Agency for  
International Development  
P. O. Box 9130  
Dar es Salaam

Dear Dr. Green

MANPOWER DEVELOPMENT - USAID

The purpose of this letter is to outline the position of this Ministry with regard to agricultural manpower development for Tanzania by USAID assistance. A joint USAID Kilimo team has made a study of the subject and a report (Agricultural Manpower Development in Tanzania by Donald R. Yeaman, Frank P. Schwencke, and Adam Wamunza) was published in August 1972.

2. The report made a number of recommendations, and I wish to comment on these for your information and as a guide to planning USAID assistance in this field. The recommendations are summarized and our comments given below:

(1) RECOMMENDATION I: Establish a new Department of Agricultural Education and Extension at the Faculty of Agriculture to better prepare Agricultural teachers.

COMMENTS: The recommendation is accepted in principle and subject to specific recommendations by the two-man AID study team (schedule to arrive in 1974) to analyse the agricultural education/extension capabilities of the University of Dar es Salaam, Faculty of Agriculture, discussion on the implementation of the recommendations will be initiated with the Ministries of National Education, Development and Economic Planning and

Treasury and the University of Dar es Salaam.

(2) RECOMMENDATION II: Establish a new division for agricultural education in the Ministry of Agriculture responsible for all pre-service and in-service training as soon as possible to include an administrative staff in Dar es Salaam and the administrative and teaching staff in the Ministry of Agriculture Training Institutes.

The recommendation is acceptable; the Ministry has already recommended to Government on the creation of a manpower development division out of the present Research and Training Division.

(3) RECOMMENDATION III: Staff through the establishment of a permanent career administrative and teaching cadre the new division for agricultural education

COMMENTS: This recommendation appears designed to improve the quality of teaching and administrative staff by reducing or eliminating frequent transfers of administrative and teaching personnel in and out of training institutes and to provide channels for promotion within the training system itself. The recommendation is accepted. It will be facilitated by the creation of the Manpower Development Division.

(4) RECOMMENDATION IV: Consolidate diploma level training programmes at only two school sites as soon as adequate facilities can be made useable.

COMMENTS: We appreciate the purpose of this recommendation which is to economise on and utilise efficiently personnel, facilities, and finances. Consolidation of diploma training is accepted in principle but at present we still doubt that only two sites will be sufficient for all our needs for this type of personnel.

(5) RECOMMENDATION V: As qualified teachers become available use only graduates as teachers for certificate and diploma institutes.

COMMENTS: The recommendation is accepted. Because of the limited supply of graduates from the Faculty of Agriculture and the demand for them, we shall continue to

require training abroad of B.Sc. graduates to help staff the training institutes. Training abroad at this time also permits future training institute teachers to have training in agricultural education and to major or specialise in certain fields, such as agronomy, horticulture, livestock or veterinary, which they will later teach. Such agricultural education training and majoring in various subject matter fields is not presently available at our Faculty of Agriculture.

(6) RECOMMENDATION VI: Improve teaching staff quality by posting as new teachers only those trained in agricultural education and provide in-service training for present teachers.

COMMENTS: The recommendation is accepted and will be implemented as qualified teachers become available.

(7) RECOMMENDATION VII: Discontinue out-of-country diploma training in 1973 for all subjects except very special or unusual training as the in-country diploma training will provide for requirements at this level.

COMMENTS: The recommendation is accepted in principle but its adoption will very much depend on how soon we establish adequate facilities in the country.

(8) RECOMMENDATION VIII: Revise and standardize curricula at certificate and diploma training institutes with the diploma training period of standardised at one year (1920 hours of instruction and the certificate training period standardised at two years (3040 hours) of instruction.

COMMENTS: The recommendation is accepted. Implementation of this recommendation will require rather extensive reform of existing curricula and consultation with the present institute principals and we think that there will be a need for AID technical assistance for this.

(9) RECOMMENDATION IX: For both certificate and diploma institutes seek donor assistance to (1) accelerate training of teachers both locally and out-of-country, and (2) fill the teaching vacancies with expatriates until Tanzanians are trained.

COMMENTS: The recommendation is accepted.

(10) RECOMMENDATION X: Sponsor in-service teacher training short courses to provide present teachers with training in teaching methods and in the subject matter courses they are accepted to teach.

COMMENTS: The recommendation is accepted and plans for implementation will proceed as funds and in-service instructors are available.

(11) RECOMMENDATION XI: Provide separate training lands, equipment and workshops especially designed for teaching at all training institute sites.

COMMENTS: The recommendation is accepted in principle, but I expect that implementation may be slow because of insufficient funds to provide quickly separate lands, equipment, and workshops for training.

(12) RECOMMENDATION XII: Discontinue Maruku and Tumbi as certificate training institutes and utilise them to provide "topping off" of certificate holders in tea, coffee, banana and tobacco growing.

COMMENTS: The recommendation is accepted.

(13) RECOMMENDATION XIII: Provide intensive in-service training for all administrative, management and supervisory extension and training staff in the areas of extension administration, programme planning, plans of work, supervision, evaluation and extension methods.

COMMENTS: The recommendation is accepted. Implementation will proceed as funds and instructors for the in-service training are available.

(14) RECOMMENDATION XIV: Provide intensive in-service training for field level extension and training cadre (Field Officers, Assistant Field Officers and Field Assistants) to improve technical competence, extension methodology and motivation.

COMMENTS: The recommendation is accepted. Implementation will proceed as funds and instructors for the in-service training are available.

Turning to the matter of USAID assistance in the field of agricultural manpower development we propose that USAID assistance at this time be directed primarily at upgrading the capabilities of certificate and diploma training institutes, particularly those involved in food crops and livestock training. Our needs fall into three general categories:

- (a) provision of scholarships in the United States to train teaching, administrative and planning personnel;
- (b) provision of teaching and agricultural education planning personnel; and
- (c) funds to improve facilities and purchase books, teaching materials and equipment, laboratory equipment and farm equipment to improve equipment and facilities at the training institutes.

I comment on each of these categories in turn:

(a) United States Scholarships:

Pending establishment of a Department of Agricultural Education and Extension at the Faculty of Agriculture and revision of the curriculum to permit majors or specialisation in various subjects, we are largely dependent on foreign scholarships for training graduate instructors for our certificate and training institutes.

We need graduate instructors who have had training in agricultural education and extension and who have had specialised training or majors in the particular fields in which they are to teach. We expect that most of this training abroad will be at the B.Sc. level, but we may be able to provide a few people for M.Sc. training. We expect that a total of 60-70 scholarships will be needed to provide minimum upgrading of training institute staff and will try to provide 5-10 Tanzanian citizens each year to begin scholarship training. We regard these scholarships as a temporary means of meeting our personnel requirements pending establishment of an in-country agricultural teacher training capability.

(b) Teaching and Planning Personnel:

We hope that USAID will consider provision of an expert in agricultural education planning and development to assist in implementing the recommendations made in the study.

131

The special Assistant to the Chief Training Officer, under the direction of the Chief Training Officer, will assist in the planning and development of all Ministry of Agriculture certificate and diploma institutes. He should have particular competence in curricula development, personnel development and financial planning.

For the training institutes themselves we hope that USAID will provide teaching and planning personnel for the two institutes, viz: Mpwapwa and Ukiriguru. For each one assisted we propose, in general, that USAID provide a special Assistant to the Principal to teach half time and to assist the principal with curriculum and staff development and financial planning and eight graduate (B.Sc. level or higher) lecturers qualified in agricultural education and in the special subjects they are to teach.

(c) Funds to improve facilities and purchase teaching materials and books:

The recently completed study adequately documented the generally poor and inadequate facilities and the generally inadequate and insufficient equipment. This condition has been known to my Ministry for sometime, but an acute shortage of funds has prevented us from making needed improvements. The current IDA Credit will provide some construction funds at Ukiriguru and Mpwapwa, but the amount provided for teaching, laboratory and workshop equipment is quite small and really inadequate. The Mbeya institute is assisted by NORDIC aid, but we have no other assistance in sight for the two training institutes.

We propose, therefore, that USAID provide loan assistance to enable us to upgrade the facilities and equipment of our certificate and training institutes to enable USAID supplied teaching personnel and their Tanzanian colleagues to function effectively. These funds we propose to use to procure such things as text books, reference books, visual aid equipment, laboratory equipment, office and classroom equipment, workshop equipment, and other non-recurrent items needed to do an effective teaching job. The exact amount of funds needed will be worked out later, but I suggest we think in terms of an initial loan of \$ 300,000. This loan will be partly utilised in filling up the gaps in our staff housing requirements at the MATIs.

COPY OF LETTER

ANNEX F

page 7

It is my hope that a project proposal along the above lines may be prepared soon for forwarding to your Washington Headquarters and that we may have early approval.

Sincerely yours,

(A. Mushi)  
PRINCIPAL SECRETARY,  
KILIMO

AM/GMN.

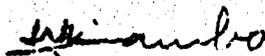


phase of construction. This construction does not include staff housing, which is a very serious problem for the Faculty. The USAID project should include funds for the construction of four senior staff houses, which would help us a great deal in meeting the ever-increasing need for senior staff housing on the Morogoro Campus. We feel that the tools, equipment and related teaching materials recommended in the project combined with our estimated recurrent and capital development funds will allow this new department to function quite effectively.

3. We will be most happy to provide staff assistance in the preparation of further project documents, or background information, that may be required.

The development of the Department of Agricultural Education and Extension along with the Center for continuing Education in Agriculture is a very important project within the Faculty. We await your early and positive response to this request for USAID assistance.

Yours sincerely,



↓ VICE CHANCELLOR  
UNIVERSITY OF DAR ES SALAAM

c. c. The Dean,  
Faculty of Agriculture and Forestry,  
MOROGORO.

c. c. Mr. H.M. Kasiga,  
Director,  
Manpower Development Division,  
P.O. Box 2066,  
DAR ES SALAAM.

ANNEX G

"An Appraisal of Rural Women in Tanzania"

by

D. R. Reynolds

December 1975

(See copy in AID/Washington as there are no  
extra copies in USAID/Tanzania)

"An Appraisal of Rural Women in Tanzania"

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TOWARDS THE SOCIAL AND ECONOMIC PROMOTION  
OF RURAL WOMEN IN TANZANIA 1/

By

2/

Hilda Kokubirwa  
Institute for Adult Education  
Dar es Salaam, Tanzania

Introduction:

The purpose of this brief descriptive paper is to make an attempt at showing roughly the changing image of the women in rural Tanzania and the various agencies responsible for social, economic, cultural, and political promotion of women in rural Tanzania. In Tanzania, emphasis is placed on rural development where the majority of the people live and work. It is the women who do most of the agricultural work and agriculture is the basis of our economy. If our country is to make full and quick progress now, the women must have their talents developed, and their economic level in terms of income must be raised.

General Background

Tanzania (mainland) which achieved her independence on 9th December, 1961, is one of the largest countries in East Africa, covering an area of 362,820 square miles, of which 20,650 is covered by water in lakes and rivers.

Reports from the 1967 census indicate that the population of Tanzania is about 12.3 million people, but ever since, the population has been increasing very rapidly and it is now estimated that the population is about 13 million people. There are three major ethnic groups, the Africans who are the majority (98%), the Asians and the Europeans. The African population is composed of 123 tribes, all different in cultural traditions but all united by one language, Swahili, the official language of the country. About 95% of the population live and work in rural areas. Most of these are peasant farmers.

Policy and Administrative set up

Tanzania through TANU - "Tanganyika African National Union" - has adapted a policy of socialism in developing the economy of the country which is predominantly agricultural. The manner in which this policy was to be applied in Tanzania was clearly spelled out in the Arusha Declaration of 1967. The fundamental principles underlying this policy are:

1/ Reproduced from "FIKARA", May 1975, a publication on Adult Education published by the Tanzania Institute of Adult Education.

2/ Miss Kokubirwa is Assistant Resident Tutor, Institute of Adult Education, Dar es Salaam.

- 1) Social equality involving the extension of developmental benefits as widely as possible throughout society.
- 2) The development of cooperative forms of economic activity particularly in the rural areas through the formation of Ujamaa villages.
- 3) Self reliance which involves the maximum possible development of domestic resources through the mobilization of the people.
- 4) Economic and social transformation in order to expand production capacity.
- 5) African economic integration through the extension of economic cooperation with other African states.

Administratively, Tanzania is divided into 20 regions which are further subdivided into 80 districts. The government adapted the policy of decentralization in 1972 whereby the regions are responsible for the planning and implementation of the economic and social activities within them. Decentralization apart from being a structural device of administration, is a development strategy for transforming the Tanzanian rural society. Development in the Tanzanian context implies:

- the giving to the people power in deciding on matters that affect them that is - freedom to manage their affairs.
- effecting increases in their material well-being.

The people must participate in considering, planning and implementing their development plans. The obligation of the Party TANU is to ensure that the leaders and experts implement the plans that have been agreed upon by the people themselves.

There has been established at the regional level a Regional Office headed by the Regional Commissioner who coordinates the political and executive functions of the government. Below him is the Regional Development Director who is the effective head of development affairs within the region assisted by a team of three senior officers namely:

- The Regional Personnel Officer
- The Regional Financial Controller
- The Regional Planning Officer, and a number of functional managers each responsible for one of the following:

- Agriculture
- Health
- Land Development
- Ujamaa and Cooperatives
- Water
- Education
- Engineering
- Natural Resources
- Livestock
- Commerce and Industry

All these form a regional team of experts and their activities are coordinated at the regional level instead of the national level as in the previous system. This administrative structure repeats itself at the district level. Alongside this administrative structure are "Development Committees" at different levels in order to facilitate people's participation in and control of development, as well as to involve the Party in the development process.

Funds earmarked for development have been decentralized as well as the control of funds and decision making on expenditure. The rural areas possess a great potential for the fast economic development.

#### Pre-Independence and the Role of Women in Society

In African traditional society, the position of women was considered inferior to that of men and their lives were limited to the domestic duties, while in the public roles were allocated to men. Women played the role of child-bearing; care of home and husband and work on the fields. Decisions on major family and tribal issues were man's domain. Even in issues of choosing a life partner it was the right of men alone.

Tanzania was no exception to this, although the society was based on the traditional practice of Ujamaa (familyhood) namely: respect for one another; sharing of property and the obligation to work. This is confirmed by Mwalimu Nyerere's words in "Socialism and Rural Development" that ..... "it is true that the women in traditional society were regarded as having a place in the community which was not only different, but was also to some extent inferior. It is impossible to deny that the women did, and still do, more than their fair share of the work in the fields and in the homes. By virtue of their sex, they suffered from inequalities which had nothing to do with their contribution to the family welfare. Although it is wrong to suggest that they have always been an oppressed group it is true that within traditional society ill-treatment and enforced subservience could be their lot....."

Under such circumstances, women's capacity to develop was stunted and human resources lay dormant. As a result, Africa has suffered because of the lack of the necessary women's contribution to continental developmental goals.

- 4 -

With the dawn of colonialism in Tanzania, the situation was worsened because neither Christianity nor Islam advocated the equality between men and women. The policy of colonial education favoured men, while women were left to lag behind men. For instance in 1961, when Tanzania got independence after nearly 80 years of colonialism, only five girls had completed Higher Cambridge! Worse still, the church education instructed women to be submissive to husbands and to be subservient to childbearing, the kitchen and the Church for this was the surest way to heaven! Some of the most educated women could join the nunnery life which emphasized absolute obedience more than critical and liberal thinking. Under colonialism, both men and women suffered, but women's suffering doubled under the suppression of the colonial masters and under their own men!

The resignation of Tanzanian women from the second place position of humanity can only come by political and social education which is right now the major involvement of women throughout Tanzania as we shall see in the next pages.

#### After Independence: The Changing Image of Rural Women

Tanzania, as we have seen before, invests in rural development because it gives the fastest returns of inputs and is less demanding in capital investment. It also gives a chance for equality for the majority of the people. About 95% of the total population lives in rural areas and, therefore, the emphasis is on rural development. There are more women than there are men in the rural areas and it is these women who do most of the agricultural work which is mainly subsistence, on top of the housework. The contradiction here is that it is mostly men who receive training in agronomy! "It is the responsibility of the Government and Co-operative Societies to see to it that our people get the necessary tools, training and leadership in modern methods of agriculture" (Arusha Declaration). Talking about the people in this context, we should not consider men alone but women, too, should get access to the necessary facilities since they are the very people who do most of the agricultural work. Nevertheless, these days women are active participants in all educational programs pertaining to agriculture.

Educational programs for rural women are all aimed at and integrated into our total development planning. Tanzania firmly believes in education as being central to the development process. The priority in the development process is on the rural areas where the majority of the people live. There are more women than there are men here. Considering the fact that women have generally lagged behind men in terms of development, effort is being made to narrow this gap. Various institutions have been formed to cater for the welfare of rural women and they have much to contribute towards the promotion of rural women in the social, economic, political and cultural fields.

The U.W.T. - Union of Women of Tanganyika

With the victory of Independence in 1961, TANU, in the following year, 1962, initiated the formation of a women's organization, the Union of Women of Tanganyika which since then has been catering to the needs and problems of women. This organization which is an affiliate of TANU was formed with the following objectives:

1. To bring together all the women of mainland Tanzania so that they can think, speak and act together.
2. To preserve and propagate the good reputation and unity of our nation.
3. To foster the development of woman and their active participation in economic, educational, political, cultural and health activities.
4. To act as a liaison and cooperate with the government and the Party on all matters which are of special concern to women.
5. To campaign for and preserve the rights and dignity of women in our nation and the rest of Africa and the world.
6. In order to achieve these objectives, the organization will seek to cooperate and act as a liaison with other organizations in the world whose aims are similar or close to those of U.W.T. The colour, creed, or racial background of the members of such organizations will not stand in the way of cooperation provided that those policies and objectives being followed are deeply rooted in socialism, in quality and in self-reliance.

Membership is open to any Tanzanian woman who is sixteen years and above. Groups of women can join the U.W.T. as well as individuals.

Administrative Structure:

On the National level, the U.W.T. has a chairman who is elected by the U.W.T. national conference and holds this post for five years. She is the leader and spokeswoman of the organization. She is assisted by the vice chairwoman who is also elected by the national conference. The general secretary is appointed by the President of the United Republic who is the chairman of the National Executive Committee (NEC). The current general secretary, Ndugu Thecla Mchauru, is the first presidentially appointed secretary. Prior to her appointment, she was

Principal Rural Training Officer and, therefore, her familiarity with the rural areas cannot be doubted. Although the President appoints the secretary, women are given the opportunity to recommend names of suitable candidates to the President. The National Treasurer is also appointed by the National Executive Committee after the suitable candidates have been recommended by the U.W.T. Under the General Secretary are assistant secretaries to assist her in her day to day activities.

On the regional level, the structure is repeated but there is only one secretary. The regional chairwoman and secretary are paid personnel since August 1974. The government pays them, e.g. the chairman gets \$100 (800/- Tanzanian shillings) per month. The regional secretaries are well-trained former community development officers with an experience of up to 20 years. Most of them are trained in the country but a few are graduates from abroad. Many of these have been Home Economics Trainers. Secretaries are charged with the duty of coordinating the U.W.T. activities down to the district level. The government, together with UNICEF, gives assistance to regions by providing them with transport which is mostly used by the secretaries.

Below the regional level, is a district where the administrative structure is similar to that of the region. Some of the district secretaries are ex-Rural Development Assistants and are also well-trained persons. Not every district has a secretary who is a former rural development assistant. In this case, the Community Development Officers have to act as secretaries.

On the divisional level, and below, the leaders are all volunteers most of whom are retired teachers, nurses, mission workers and outstanding women with a good level of literacy.

#### U.W.T. and the Training of Rural Women

The government has given U.W.T. its own institution for the training of rural women. This is the Rungemba Leaders Training Centre in Iringa Region. Here women from all over rural Tanzania are trained for a period of three months whether they are or are not members of U.W.T. The three-month course covers leadership training and home economics and includes:

- child care
- income and budgeting
- needlework
- home management
- nutrition and hygiene
- agriculture

On completion of the course, these women go back to their villages where they train other women in the same field. They organize women in groups and share with them the knowledge that they have gained. Most of these women have had a primary school level of education. These courses are sponsored financially by the government and UNICEF. About 120 women are trained annually. The trainers at Rungemba are trained either in Tanzania or abroad. To enable the women to attend these courses effectively, a nursery school has been established within the institution.

Besides Rungemba, other centres which train rural women leaders are:

- Buhare Home Economics Training Centre
- Ndanda Homecraft Centre
- Bigwa

These centres train U.W.T. leaders, extension workers and various women group leaders. By 1980, each district will have its own Rural Training Centre. There are 34 District Rural Training Centres all under the Prime Minister's office. These centres train peasant farmers in modern methods of agriculture and various other crafts. Women are not excluded from these short courses which may last from a few days to two weeks, depending on the objectives of the program. Among other things, women are taught here how to run day care centres.

#### Income-Generating Activities (Cooperatives)

There are many problems facing women which hinder them from increasing their income in their homes. Some of these problems are:

- illiteracy
- bad health
- lack of knowledge and experience
- lack of support from the home
- Limited environment which gives a woman no chance of hearing from others and sharing their experiences and this way she can hardly expand her horizon of knowledge
- mishandling of funds because women have no knowledge in budgeting and savings. This problem is more found in cooperative activities like shopkeeping where many cooperative shops have been forced to close down.

The role of U.W.T. in curbing such problems has been to encourage the women to participate actively in literacy classes. There are literacy classes conducted by U.W.T. in various branches in the villages.

Throughout the country, the U.W.T. branches run small scale businesses in cooperative forms to enable the women to get a little income. Such activities include:

- Consumer cooperative shops
- community farms and gardens
- textile cooperative shops
- canteens
- poultry raising
- bars and restaurants and a good many other activities on cooperative basis
- small scale industries using local materials e.g.
- pottery
- weaving
- carving
- fabric dyeing
- various handicrafts
- needlework

#### Day care Centres

In order to enable women in Ujamaa villages to participate fully in development activities, U.W.T. in collaboration with the Ministry of Labour and Social Welfare, has established day care centres throughout the country in Ujamaa villages. Some of the 78,681 day care centres in the country as of 1974 are run by the U.W.T. Each day care centre has an average of 50 children.

The few examples that have been listed are a demonstration of the role played by the U.W.T., the only national organization instituted to cater for women's welfare in the social and economic promotion of rural women. Through U.W.T. women are now beginning to feel that they have a positive contribution to make towards the development of this nation. Despite the shortcomings of the organization e.g. lack of funds, lack of trained staff, lack of experts in the matters of administration, finance, planning and legal affairs, the U.W.T. is trying very hard to fight for the welfare of women.

#### Functional Adult Education:

Generally speaking, the education of women in Tanzania is very much behind that of men and this is perhaps demonstrated by the predominance of women in rural adult education classes. The majority of the women living in rural areas are illiterate.

The Second Five-Year Development Plan, which started in 1969, laid down clearly the policy of adult education, which was to emphasize learning wherever it would help development. 1970 was declared an "Adult Education Year" in Tanzania and the President clearly outlined the objectives of adult education as:

1. To shake people out of their resignation and to realize what they can do for their communities and themselves
2. To provide people with the skills necessary to bring about change in their environment
3. To foster nation-wide understanding of the policies of socialism and self-reliance.

During that year, Tanzania had a population of about 13 million people out of which 7,000,000 were adults of over 15 years. Seventy five percent of these adults were illiterates. In other words, there were 5,250,000 adults who were illiterate. Of this 57% were women and 43% men. The enrolment figures of 1970 into literacy classes show the following:

- women = 2.1 million = 57%
- men = 1.7 million = 43%

The general picture is that women responded more positively than men; they want to run while men walk !

In order to enable those who had not participated in formal or informal education, Tanzania has launched an enormous literacy and education program for everybody, including follow-up stages. Such educational programs include health campaigns e.g. "Man is Health" which was launched in 1973 and "Food is Life" a nutrition campaign of 1975; agricultural campaigns, eg. "Politics is Agriculture" of 1972, political and cultural campaigns. These campaigns are national and are for all regardless of the educational background. During such adult education activities which are broadcast over the radio, written in the press, discussed in seminars, people especially in the rural areas, assemble in their study groups for discussions during which they decide and implement their decisions. For example, a group might decide to dig a well or a trench, clear bush nearby, cultivate or carry on any activity as a response to what has been taught.

#### Women and Functional Literacy

All training in literacy is training for productivity. Here theory and practice are like sides of the same coin. As previously mentioned, women predominate adult education classes quantitywise in rural areas. These classes assemble and learn in primary schools; TANU branch offices, houses, churches and mosques, tree shades and anywhere else. Here one can see women in large numbers, some of them with babies on their backs or on their laps who try to grab the primers from their mothers, who are so attentive to the teacher that they are hardly disturbed.

The Unesco Work Oriented Literacy Project started in Tanzania in 1968 in the four lake regions, an area which is known for its cotton production. Cotton is one of the major export crops in Tanzania hence the selection of the area for this project. The project started with developing functional literacy primers for the improvement of cotton production, but later on more primers for other occupations were: fishing, cattle raising and banana growing. Women do participate

fully in all these programs and a special primer has been developed to cater to better health, home and child care. Productivity for each person increases as his health and nutrition is improved and this is an economic factor.

It was resolved in 1970 by TANU that Tanzania would mount a campaign which would eliminate illiteracy in the nation by 1975! To this effect, the Lake Regions Functional Literacy Project, in cooperation with the Ministry of National Education, has developed the following primers to be used nationally:

- |                   |   |
|-------------------|---|
| - National Rights | - Maize Growing                               |
| - Wheat Growing   | - Tobacco Growing                             |
| - Rice Growing    | - Cotton Growing                              |
| - Cattle Raising  | - Fishing                                     |
| - Banana Growing  | - Better Living (Home Economics<br>for women) |

These primers will be used in various parts of the country where such economic activities take place. Each topic will have two primers, Levels I and II and a teachers' guide.

#### Special Centres for Skills:

Alongside with literacy, in 1971 each district got special centres for rural skills such as:

- agriculture for both women and men
- homecraft (for women)
- crafts e.g. masonry, carpentry, carving, etc.
- health (for both men and women)

In 1973 these centres were extended to each division. There are about 400 divisions in the country. The 1974/75 budget year allocated some funds to these centres which were extended to each ward. There are about 2,000 wards. The allocation of funds to these centres was as follows:

- |               |         |                     |
|---------------|---------|---------------------|
| - agriculture | 2,000/- | Tanzanian shillings |
| - crafts      | 2,000/- | Tanzanian shillings |
| - health      | 500/-   | Tanzanian shillings |
| - homecraft   | 4,000/- | Tanzanian shillings |

The homecraft centres got more funds because the teaching materials are many and expensive.

It is difficult to list all the agencies which cater to the welfare of rural women in the country. Apart from the public institutions, there are volunteer agencies which are seriously engaged in the social and economic development of rural women. These include:

- homescraft centres run by Missions, especially, Christian Missions
- Rehabilitation centres
- The Lushoto Integrated Development Project (Lidep) and a good many other volunteer groups. The Missions, especially, Christian Missions have been a nucleus for development wherever they exist in rural and urban areas. Here women are taught, apart from religion, literacy, various handicrafts, child care and health in general. The sisters have played a big role in this.

The mass media in general has played a big role in education of the rural women. Special programs for women are given out on Radio Tanzania every day apart from the general adult education programs. Subjects like nutrition, better farming, health, child care and home management are taught to women through the radio.

#### Rural Women in Ujamaa Villages:

An Ujamaa village is a rural economic and social community where people live together and work together for the good of all. The principles of Ujamaa (familyhood) are: equality and respect for each other, the sharing of property, work by all and exploitation by none.

An Ujamaa village may be composed of 100 or more family units. Each village chooses its own chairman, secretary and treasurer, and each village has its own constitution. Apart from the communal farms owned by the whole village, each household has its own plot on which to grow subsistence crops. Traditionally, it was women who did all the farming but in an Ujamaa village things are quite different. Agricultural work is for all, both men and women, and participation is registered. When the harvest is sold, women get equal shares with men!

The day to day activities of a woman living in an Ujamaa village include:

- waking up in the morning about six a.m. (6 a.m.)
- making breakfast for the family if any
- cultivating on the communal farm or family plot up to mid-day
- fetching firewood and water
- fetching grass for cattle (sometimes)
- feeding the children
- pounding and grinding grain
- cooking lunch for the family
- washing clothes and cleaning the house
- attending adult education classes in the afternoon
- cooking and other household drudgery
- gardening
- caring for the children
- finally resting (usually after 10 p.m.)

- 12 -

Although women in Ujamaa villages are enjoying the benefits of staying and working together for the benefit of all, they still do quite a lot of work, and they hardly have time to rest. However, women do participate fully in educational programs including agriculture, health, cooperative, education, and others. Ministry of Agriculture trains young adults who will work in the Ujamaa villages. Ten-month courses are offered to young men and women in national service camps. Mobile clinic services are offered to rural women and the rural medical aids train these women in child care, health, nutrition and sometimes family planning, as they attend these clinics. Each village has a community centre where women can meet regularly to discuss matters concerning their social welfare. Again each village has a day care centre to enable women to participate in development projects. The radio study groups, which attract both men and women together, have encouraged women to talk freely before men and express themselves with confidence. Women are also seriously engaged in small scale industries to uplift their income level.

Tanzania is now gaining momentum in its effort to make people live together in development villages where it is easy for the people to get facilities like: schools, hospitals, water, building materials, roads, social welfare facilities and the rest. This is a movement which touches the whole family but more so the woman, for a home has more sense to the woman than to the man. It has been resolved that by 1976 all rural Tanzanians live in planned villages to facilitate the social services as earlier mentioned.

The success of the whole national revolution depends on the understanding participation of the Tanzanian women as a revolutionary of the 20th century. The social and economic promotion of the rural women in Tanzania cannot depend on external agencies alone but on her own effort and initiative, through the development of her talents which for quite long have laid dormant.

The revolution has started in Tanzania through socialism and it is an uphill task. There is still much to be done towards the achievement of equality, development and peace, the objectives of 1975, an International Women's Year.

GUIDELINES FOR SELECTION OF PARTICIPANTS FOR GENERAL  
SUPPORT TRAINING AND TYPES OF TRAINING PROPOSED

General Selection Guidelines

1. Regular employee of TanGov or parastatal organization.
2. Must hold a position directly related to a production oriented program in either food crops or livestock.
3. Must be in or expected to occupy upon completion of training a supervisory position.
4. Preference will be given to administrative rather than technical agricultural training.

Types of Training Proposed

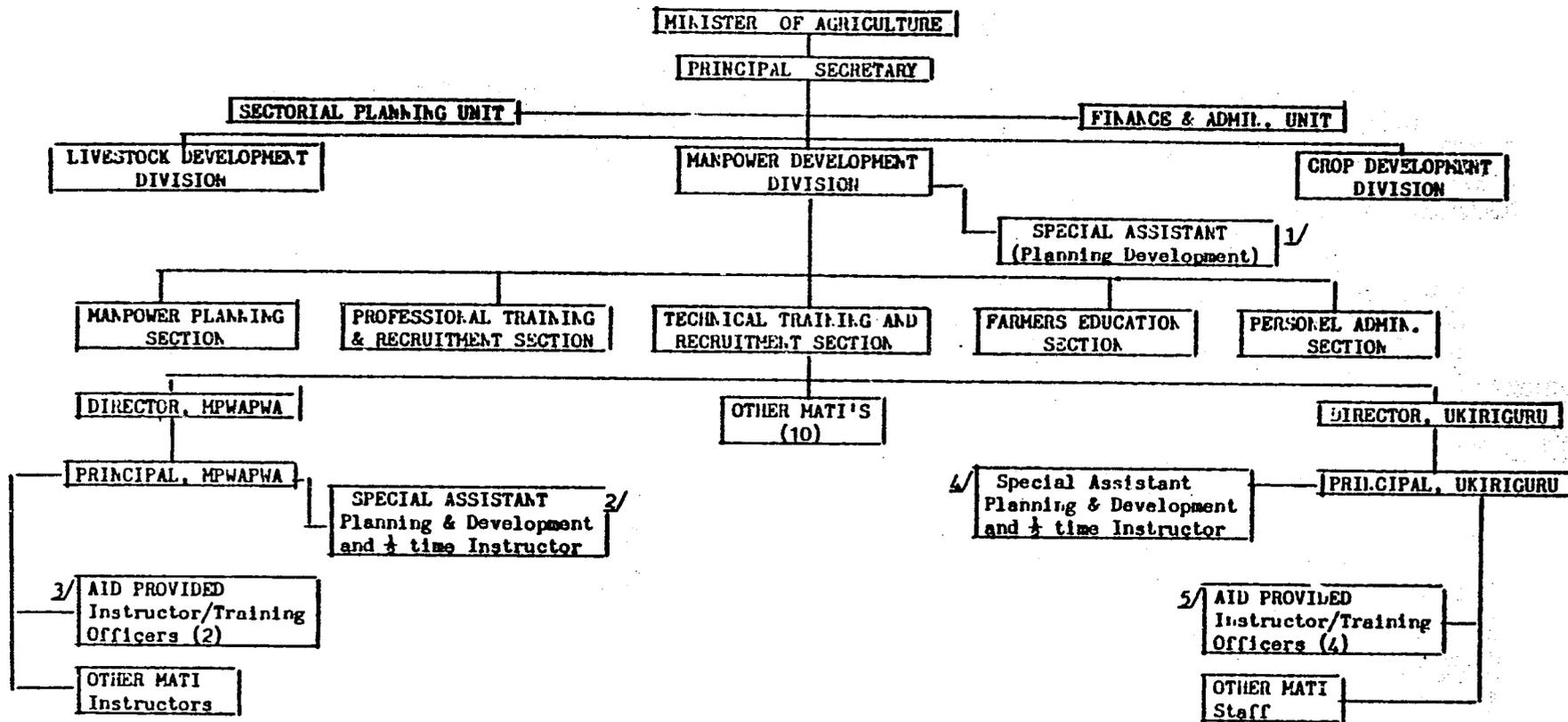
1. It is expected that all training will be long term degree training.
2. Administrative/management training will be included in any technical training program.

Illustrative Positions Expected to be Filled by Returned Participants

1. Senior Administrative/Technical Staff of MinAg and parastatals.
2. Senior Regional Agricultural/Livestock Officers.
3. TanGov Estate or Farm Managers.
4. National or Regional Planning and Program Development Officers for Food Crops/Livestock (MinAg or other TanGov organizations).

ADDITIONAL PROJECT DETAILS

I. Organization of the Ministry of Agriculture Government of Tanzania (Details shown of Manpower Development, MATI System)

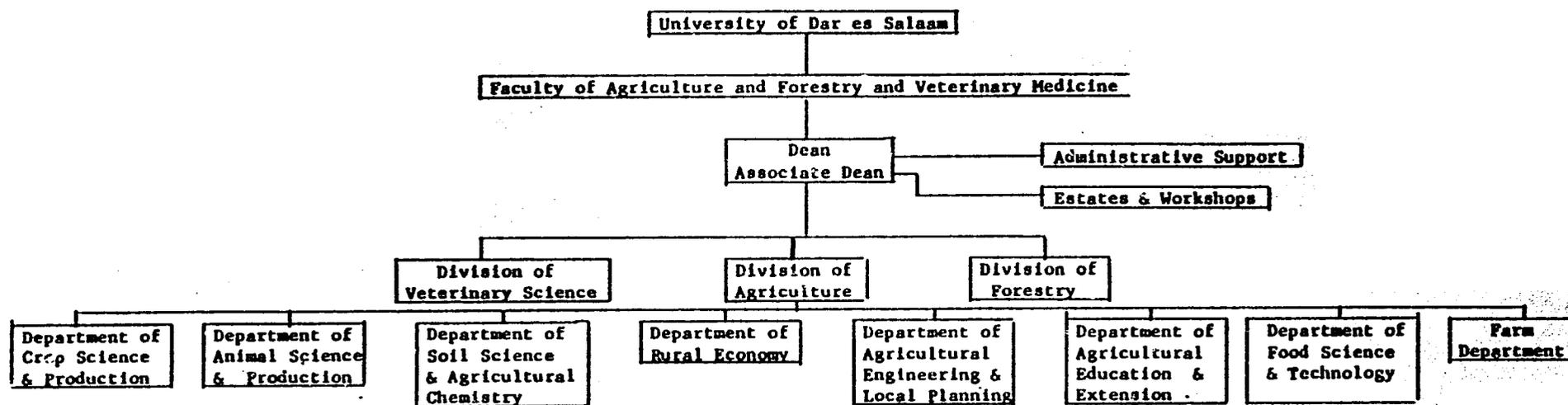


- NOTES: 1/ Provided Senior position by AID. Will act as Chief of Party for Contract in regular TanGov position.  
 2/ & 3/ A total of three (3) AID provided positions. Technical skills projected to be covered by the AID inputs are: 1) Veterinary 2) Range Management and 3) Animal Husbandry.  
 4/ & 5/ A total of five (5) AID provided positions. Technical skills projected to be covered by the AID inputs are: 1) Production Economics and Management 2) Rural Economics and Extension 3) Agronomy 4) Agricultural Engineering and 5) Land utilization.

151

11. ORGANIZATION CHART OF THE UNIVERSITY OF DAR ES SALAAM - FACULTY OF AGRICULTURE AND FORESTRY AND VETERINARY MEDICINE 1/

ANNEX J



be

1/ Veterinary Medicine remains to/implemented at the Faculty. Throughout the paper Faculty of Agriculture and Forestry is used to refer to the Faculty as a whole.

152

III.

ESTIMATE OF TANZANIA FINANCIAL CONTRIBUTIONRelated to FAF Assistance

	1978	1979	1980	1981	1982	1983	Total
A. Recurrent Budget of Department of Agricultural Education and Extension - FAF <u>1/</u>	71	82	90	99	-	-	342
B. Participant Support - FAF <u>2/</u> (Travel and Salaries)	20	27	24	9	-	-	80
C. Value of Centralized Services FAF <u>3/</u>	38	42	70	77	28	31	286
D. Recurrent Budget of Center for Continuing Education in Agriculture - FAF <u>4/</u>	-	-	40	40	40	40	160
E. Land, Equipment and Facilities - FAF <u>4/</u>	30	-	10	-	-	-	40
F. Training Fees Paid to Center - Miscellaneous Organizations <u>5/</u>	-	-	42	46	51	56	195
G. TanGov Contribution to Trust Fund for AID-provided Contract Technicians (18 staff years) <u>6/</u>	6	9	10	9	6	5	45
<b>FAF TOTAL</b>	<b>165</b>	<b>160</b>	<b>286</b>	<b>280</b>	<b>125</b>	<b>132</b>	<b>1,148</b>

1/ Based on estimated growth in 1976/77 budget (\$62,000) of 15% for 1978/79 and 10% for 1980/81.

2/ Calculated at \$4,000 per participant based on \$1,000 for travel and \$3,000 for salary.

3/ For 1978/79 calculated at 10% of 1976/77 budget amount (\$351,000) which is assumed to be increasing 10% each year. For 1980/81 the value is calculated at 15% to reflect the growth of the Department of Agriculture Education & Extension and the operation of the Center for Continuing Education. For 1982/83 the rate used is 5% as assistance to the DAEE will no longer be provided.

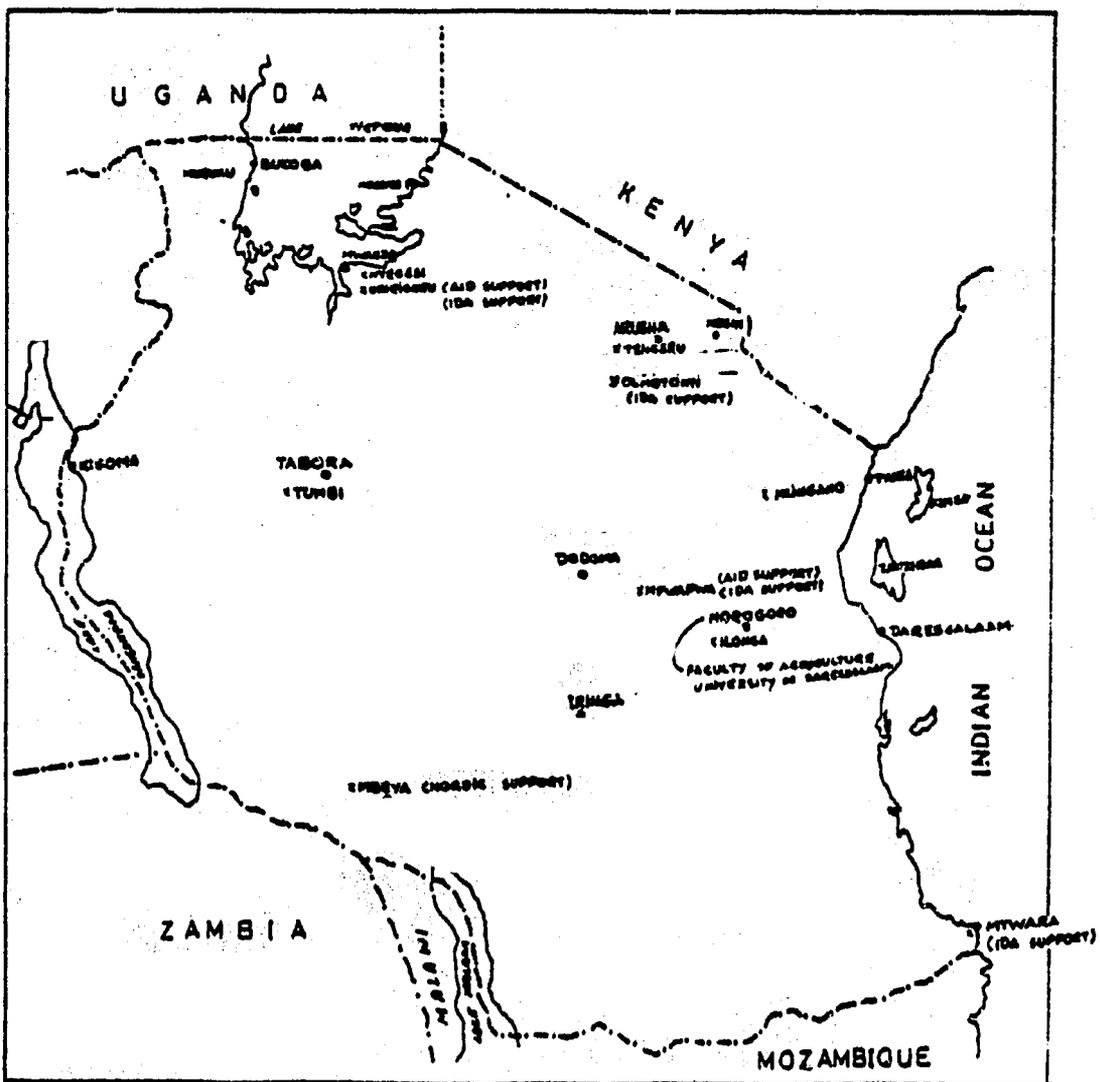
4/ Estimated

5/ Assumes 8,400 man days of training provided in year (12 days each for 700 participants) at a cost of \$5.00 per man day. Increased by 10% each year.

6/ @ Shs. 21,600 (\$2,571) per man year

153

IV. MAP OF TANZANIA SHOWING LOCATIONS  
OF MINISTRY OF AGRICULTURE TRAINING INSTITUTES  
(For Certificate /or Diploma Training)



X AGRICULTURE TRAINING INSTITUTIONS (MATI)  
• PRINCIPAL TOWNS

V. Detailed Description of Inputs

A. Contract Assistance in MinAg/MATI Manpower Development

1) Assistance to the MinAg, Manpower Development Division<sup>1/</sup>  
(92 staff months)

Assistance will be given in the planning and development of agricultural training by supplying to the Ministry of Agriculture a Special Assistant (Planning and Development) to the Director, Manpower Development Division to serve in a staff (non-administrative) capacity. In collaboration with Ministry of Agriculture training officers and with the principals and staffs of the MATI's and under the general supervision and direction of the Director, Manpower Development Division, who will be available for advice and consultation and who will make policy determinations, the Special Assistant (Planning and Development), as directed and assigned by the Director, Manpower Development Division, will assist in the planning and development of the MATI system. In coordination with Division staff, consultants and other appropriate personnel the Special Assistant will develop long term manpower development plans based on estimates of future manpower needs.

For coordination purposes, he will serve as Chief of the Contract Party which will implement this project as supported by AID. He will also serve as the liaison officer responsible for contact with USAID/Dar es Salaam. Any reports to USAID will be made through the MinAg Director of the Manpower Development Division. In his position he will also assist in coordination with MinAg and USAID on the selection, processing and back-stopping of the participants trained by the project, both the MATI group (40) and the twenty general food crops/livestock related trainees from the MinAg or parastatals.

2) Assistance to the Ukiriguru MATI (248 staff months)

AID technical assistance programmed for the Ukiriguru MATI includes five instructors in agronomy and related fields. It is expected that initial assignments by special fields may be as follows:

- a) Agronomy Instructor and Head of Crop Science and Production Department
- b) Agricultural Engineering Instructor and Head of Agricultural Engineering Department.
- c) Instructor in Rural Economy and Extension and Head of Rural Economy and Extension Department.

<sup>1/</sup> Does not include 65 staff months for an American Administrative Assistant. 155

- d) Land Use Instructor and Head of Land Use Department.
- e) Production Economics and Farm Management Instructor.

It is considered essential by the MinAg and reinforced by the Yeaman et al study, that the above five positions be filled by B.S. or higher degree holders and that this project send the incumbents to the United States for training. One of these instructors will be assigned approximately one-half time as Special Assistant (Planning and Development) to the principal of Ukiriguru. Some changes in assignments and in the qualifications of AID-supplied personnel may be made as Tanzanian instructors return from training in the United States.

The Special Assistant (Planning and Development) to the Principal will serve in a staff (non-administrative) capacity. In collaboration with other Ukiriguru MATI staff members and appropriate officers of the Ministry of Agriculture and under the general supervision and direction the Principal, who will be available for advice and consultation and who will make policy determinations, the Special Assistant (Planning and Development), as directed and assigned by the Principal, will assist in the planning and development of Ukiriguru MATI.

The Special Assistant (Planning and Development) arrived in May, 1976, along with all the other instructors except for the Production Economics and Farm Management Specialist who will arrive in August, 1976 or September, 1976. One of the first tasks of the Special Assistant is revision of the certificate curriculum and preparation of the diploma curriculum.

The AID assistance provided will increase the number of qualified instructors at Ukiriguru, improve the quality of training, and provide assistance with the planning and development of the institution and its curriculum. By June 1980 sufficient Tanzanian personnel should have been trained in Tanzania and in the United States to staff and operate the institution. Technical assistance for Ukiriguru will end in June 1980.

Funds have been provided in the second AID Agricultural Projects Support Loan to supplement the IDA credit for construction of facilities and provision of equipment at Ukiriguru. The loan is being utilized primarily for equipping the Ukiriguru MATI with farming and training equipment and construction of staff houses.

3) Assistance to the Mpwapwa MATI (154 staff months)

AID technical assistance programmed for the Mpwapwa MATI includes three instructors in the general fields of animal production and animal health. Initial assignments by special fields will be one instructor in animal production, one instructor in animal health, and one instructor in range management. One of these instructors will be assigned approximately one-half time as Special Assistant (Planning and Development) to the Principal of Mpwapwa.

The Special Assistant (Planning and Development) to the Principal, will serve in a staff (non-administrative) capacity. In collaboration with other Mpwapwa staff members and appropriate officers of the Ministry of Agriculture and under the general supervision and direction of the Principal, who will be available for advice and consultation and who will make policy determinations, the Special Assistant (Planning and Development), as directed and assigned by the Principal, will assist in the planning and development of the Mpwapwa MATI.

The Special Assistant (Planning and Development) may be called upon to assist the Principal in almost any phase of the Mpwapwa MATI operations. Consequently, in addition to technical qualifications in the field in which he is to give instruction, he must be competent in the general operation of agricultural education institutions including, particularly, curriculum development and preparation of financial estimates and budgets. The Special Assistant (Planning and Development) arrived in May 1976 with the instructor in animal production having arrived in November, 1975. The instructor in animal health is scheduled to arrive in July/August 1976.

The AID supplied technical assistance will provide an immediate improvement in the rather tight teaching staff situation at Mpwapwa while Tanzanian replacements are being trained, and help in the continuous job of curricula improvement. Technical assistance at Mpwapwa is scheduled to end in June 1980 by which time sufficient Tanzanian personnel should have been trained in the United States and in Tanzania to staff and operate the institution.

Funds are provided in the Second AID Agricultural Projects Support Loan to supplement the IDA credit for construction of facilities and provision of equipment at Mpwapwa. The loan is being utilized primarily for non-recurrent costs of equipping the Mpwapwa MATI with requirements not provided for under the IDA loan including construction of staff houses for the three U.S. supplied technicians.

4) Contract Assistance in a Study of the University of Dar es Salaam, Faculty of Agriculture and Forestry (4 staff months)

Assistance has been provided in the form of a four-man TDY team (contract) to conduct a study of the Faculty, jointly with two officers provided by the Tanzanian Government to determine the needs and recommend courses of action.

5) Contract Assistance to the Faculty of Agriculture and Forestry, University of Dar es Salaam (217 staff months)

Assistance will be provided through four contract staff members in the areas of agricultural education, agricultural extension and rural sociology, teaching materials/audio-visual aids and extension education.

The first three staff members will assist the Faculty of Agriculture and Forestry to develop and implement a Department of Agricultural Education and Extension. The Agricultural Education Specialist will assist with undergraduate instruction; advise and assist in the development and improvement of the proposed agricultural education and extension syllabus; organize and supervise the practice teaching of students in the secondary schools and MATIs; provide in-service workshops in teaching methodology; and supervise graduate students. The Agricultural Extension and Rural Sociology Specialist will teach undergraduate extension and rural sociology courses; plan and supervise field laboratory work for students; revise agricultural extension courses; and supervise graduate students. These two staff members will depart in August, 1981. The Teaching Material Visual-Aids Specialist will teach the preparation of visual aids to degree students; provide in-service training for staff members; develop bulletins, pamphlets and other agricultural information for use by secondary schools, MATIs, farmers, rural training centers and other groups in need of basic agricultural technology. This staff member will depart in May, 1983. These three specialists will also assist in the teaching of refresher courses at the Center for Continuing Education.

The fourth contract specialist will assist the Faculty of Agriculture and Forestry to establish and implement a Center for Continuing Education in Agriculture. He will act as Director of the Center and organize refresher courses for agriculture teachers in secondary schools, MATI staff, personnel in rural training centers and agricultural extension personnel. The Director will also organize training courses in agriculture for government and parastatal personnel and private citizens outside of the agriculture profession and do research in connection with continuing education.

These AID-financed staff will provide the basic expertise necessary for the Faculty of Agriculture and Forestry to add important elements to its program. By July, 1983 sufficient Tanzanian personnel will have received academic and on-the-job training to effectively operate the Department and Center, enabling the assistance to be terminated.

B. Participant Training

1) For the MATI System (960 man months)

The project provides for a total of 40 participants who are to be assigned to the MATI system upon completion of training with priority given to participants from Ukiriguru and Mpwawa and additional priority to train replacements in disciplines represented by the AID-financed instructors.

There is no shortage of available staff for training since in the MATI system the Ukiriguru MATI alone has a need in the long run for some 14 teaching staff members to be upgraded to the B.S. level. Their training is expected to include specialization in agricultural education and in agronomy or a related field. This specialized training is not presently offered in Tanzania. Similarly at Mpwawa a long run need exists for about 12 instructors to be upgraded to the B.S. level with specialized training in agricultural education, animal husbandry, veterinary and range management.

However, in the short run (5-7 years) it is realistic to expect that between one half to two thirds of present non-degree holding staff will be upgraded through participant training to the B.S. level. Any larger schedule of training would reduce the teaching staff at the two institutes below the levels required to maintain school operations even though this project will provide six full time and two part time instructors.

2) For the Agricultural Sector (480 man months)

This project provides a total of 20 participants to be trained for essential positions in the livestock and food crop sub-sectors, or for essential positions, supportive of these sub-sectors, and whose training is not programmed under other specific projects. They will be selected in accordance with the criteria given in Annex I.

The programming of 20 participants for essential positions in the food crop and livestock sub-sectors, or for essential positions supportive of these sub-sectors, will give the TanGov/USAID a limited response capability to provide essential

training not available in Tanzania and not programmed under other specific projects. The total of 20 participants represents five participants a year for four years and will assist Tanzania in meeting its essential manpower requirements in the food crop and livestock sub-sectors. This group of participants will come from the Ministry of Agriculture, agricultural parastatals, and possibly some from regional offices or other TanGov agencies directly relating to food crop and livestock production.

3) For the Faculty of Agriculture and Forestry (480 man months)

The project provides for a total of 20 participants to be trained in areas directly within or related to agricultural education and extension. The majority, if not all, of this training will be at the advanced degree level for individuals already in or expected to occupy staff positions on the Faculty. Through the training in fields such as rural sociology, agricultural administration and audio-visual technology, a cadre of staff will be developed with the capability of operating the Department of Agricultural Education and Extension, the Center for Continuing Education in Agriculture, and assuming extension specialist responsibilities in each of the Faculty Departments.

C. Commodities, Other Costs and Evaluation

A small component of U.S. provided commodities and other costs is included in this project to provide the contractor with a limited response capability for teaching supplies, equipment, teaching aids, funds for local costs, especially labor which may be required for special preparation of work plans or assistance in construction of training aids, or for assistance in providing for administrative services to the contract. Annual work plans prepared by the MinAg Special Assistant (Planning and Development) will schedule these costs which will be used to supplement funds provided by the TanGov which has primary responsibility for recurrent expenditures. Included in the commodity category will be the provision (and replacement of) 13 4-wheel drive type vehicles (9-MATI/MinAg and 4-FAF) and one bus (FAF).

A special evaluation will be conducted of the MATI/MinAg project components in FY 1977. Another special evaluation will be made in FY 1980 covering both the MATI components which will be phasing out and the FAF activities which will be well underway.

Finally, the project will provide funding for the construction of 4 senior staff houses (3 bedroom) utilizing normal Faculty of Agriculture and Forestry designs, a hostel with capacity for 50 trainees and a facility to house the Department of Agricultural and Extension and the Center for Continuing Education in Agriculture (800 sq. m.). The facility will also contain the proposed audio-visual laboratory and preparation room.

160

D. Additional Other Costs

For purposes of expediting project implementation, a small amount of local currency, Tanzanian shillings, may also be made available to the project from the USAID Trust Fund to supplement funds provided by the Tanzanian Government which has primary responsibility for recurrent expenditures. Illustrative examples of items apt to be funded from this source are as follows:

1. Special local reference books.
2. Commercial secretarial help.
3. Photographic supplies.
4. Commodities for construction of teaching aids.
5. Emergency office supplies.
6. Other items needed.

E. Loan Assistance (Agricultural Support Loan II)

In order to assist in the development of the Ukiriguru and Mpwapwa MATIs, \$445,000 has been provided for these institutes in the Second AID Agricultural Projects Support Loan (621-H-017) for purchase of non-recurrent items and for construction. These funds supplement funds from the IDA credit available under the IERD Third Education Project in Tanzania. Items purchased include farm machinery and equipment, teaching equipment, laboratory, office and workshop equipment and library text and reference books. Also included are funds for the construction of nine staff houses at the two institutes to provide for staff needs.

F. TanGov (MinAg/MATI's)

1) Manpower

MinAg manpower will be allied with AID provided inputs in all phases of the project. At MinAg, Manpower Development Division, the contract chief of party will be in close professional contact with and supported by the regular MinAg technical and administrative services. At the Ukiriguru and Mpwapwa MATIs the special assistants (Planning and Development) will also be close professional contact with and supported by the regular MATI technical and administrative services.

The TanGov, MinAg, parastatals and the MATIs will provide qualified manpower for academic participant training. In addition, these groups will provide staff for participation in in-service training in both administration/management and in technical disciplines related to food crop/livestock production.

TanGov, MinAg assists in a review, evaluation and in formulating recommendations on improvement of terms of service for Manpower Development staff (career service).

2) Physical Support

Regular operational support for housing, medical, in-country travel, etc.

Provision of office space and facilities (furniture, supplies, secretarial service, reproduction, etc.).

Provision of normal means of communication for official business (telephone, telegraph).

Provision of operating costs and maintenance for AID provided commodities (vehicles and other equipment).

3) Estimate of Financial Contribution

<u>Category</u>	<u>Level</u>	<u>Funding</u>	
		<u>T. Shs.</u> <u>(000)</u>	<u>US \$</u> <u>(000)</u>
Student support at MATIs (Ukiriguru and Mpwapwa)	About 500 per year (FY 1976-81) @Sh.10,000	30,000	3,614
TanGov contribution to Trust Fund for AID provided contract Technicians <sup>1/</sup>	41 man years @Sh.21,600	885	107
Participant Support (60, 2-years)	Fare and salary (Sh.18,500 per student)	<u>1,100</u>	<u>133</u>
	Total MinAg/MATI	31,985	3,854

<sup>1/</sup>Assumes TanGov will not provide contribution for the Administrative Assistant.

In addition, the MinAg provides finding for in-service training and the recurrent operational costs for facilities and equipment.

G. TanGov (Faculty of Agriculture and Forestry)

1) Numerous staff from the FAF will be closely involved with all components of U.S. provided assistance. Since one of the AID-funded staff members will serve as Department Head until a

162

counterpart is ready to assume this responsibility close contact with the Dean, Assistant Dean and other Department Heads of the FAF will be maintained. Within the Department of Agriculture Education and Extension each AID funded staff member will work with one or more counterparts. These staff will also work with other FAF staff in developing suitable extension and agricultural education techniques. Constant contact is expected between the Audio-Visual Aids Specialist and other FAF staff. The AID-provided head of the Center for Continuing Education in Agriculture will need to work closely with the Dean, Associate Dean and Department Heads in developing the center and preparing the required training activities. All of these staff will be supported by normal MinAg Administrative activities.

The FAF will also provide qualified manpower for academic participant training and for training in visual aids preparation and use.

## 2) Physical Support

Support at FAF standards in the area of housing, medical, in-country travel, etc.

Provision of normal University support such as furniture, supplies, secretarial services, reproduction, etc.

Provision of operating costs and maintenance for AID provided commodities and facilities.

THE UNIVERSITY OF DAR ES SALAAM

FACULTY OF AGRICULTURE AND FORESTRY, MOROGORO

**A. Background**

The Faculty of Agriculture was established in July, 1969 as a Faculty of the University College, Dar es Salaam which was then a constituent college of the University of East Africa. Three year degree and diploma courses were offered. With the creation of the University of Dar es Salaam in July, 1970 the Faculty continued to accept students for both degree and diploma courses in agriculture. However, it was agreed between the University and the Ministry of Agriculture that the program for the diploma courses be phased out. Consequently, the fresh intake of diploma students was stopped after the 1970/71 academic year. While the diploma course was being phased out there was a gradual increase in the intake of students for the degree course. The last diploma class graduated in May, 1973. At the beginning of the 1973/74 Academic Year the Division of Forestry was established with the help of the Norwegian Government (NORAD).

**B. Students and Staff**

The table below indicates the trend in the enrollment of students since the Faculty was established.

	<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>
Diploma (Agric)	69	64	-	-	-	-	-
B.Sc. (Agric)	18	42	55	70	72	76	62
B.Sc. (Forestry)	-	-	-	-	16	30*	16

\*10 transferred from Makerere University

The present (1975/76) enrollment at the Faculty is as follows:

	<u>Male</u>	<u>Female</u>	
1st Year B.Sc. (Forestry)	16	-	16
2nd Year B.Sc. (Forestry)	19	1	20
3rd Year B.Sc. (Forestry)	15	-	15
1st Year B.Sc. (Agric)	58	4	62
2nd Year B.Sc. (Agric)	53	16	69
3rd Year B.Sc. (Agric)	53	16	69

- 2 -

	<u>Male</u>	<u>Female</u>	
M.Sc. (Agric. Economics)	9	-	9
M.Sc. (Agric)	6	-	6
M.Sc. (Animal Science)	1	-	1
<b>Total</b>	<b>230</b>	<b>37</b>	<b>267</b>

The output of graduates from the Faculty has been as follows:

<u>Year</u>	<u>Degree</u>	<u>Diploma</u>
1967	-	57
1968	-	46
1969	-	48
1970	-	55
1971	-	49
1972	16	66
1973	38	63
1974	52	-
1975	60	-

As a young faculty, the Faculty of Agriculture and Forestry has had problems in recruiting all the needed staff. However, in the past five years there has been a considerable improvement in the staff disposition. Whereas in 1970 there were 21 members of the academic staff, the number has increased to 62 as of June 1976. In addition, there are 50 Tutorial Assistants undergoing training abroad and locally.

Staff Numbers for the Period 1969 - 1976

	<u>69/70</u>	<u>70/71</u>	<u>71/72</u>	<u>72/73</u>	<u>73/74</u>	<u>74/75</u>	<u>75/76</u>	<u>June '76</u>
Professors	1	1	2	3	4	6	4	4
Assoc. Prof.	-	-	-	1	2	5	10	11
Sen. Lecturers	2	5	7	10	12	15	12	12
Lecturers	4	8	9	17	18	12	10	12
Asst. Lecturers	4	7	9	8	8	9	20	23
<b>TOTAL</b>	<b>11</b>	<b>21</b>	<b>27</b>	<b>39</b>	<b>44</b>	<b>47</b>	<b>56</b>	<b>62</b>
Tutorial Assist.	5	3	6	11	12	26	25	50

165

### C. Student and Staff Projections

To meet the growing need for trained agricultural manpower an expansion in current student intake levels is projected as shown in the following tables:

#### FUTURE STUDENT NUMBERS

YEAR OF STUDY	1975/76	1976/77	1977/78	1978/79	1979/80
(1) B.Sc. (Agric) Year 1	62	70	90	110	120
Year 2	69	60	68	88	108
Year 3	69	67	58	66	86
(2) B.Sc. (For) Year 1	16	20	30	35	40
Year 2	20	15	19	28	33
Year 3	15	19	14	18	27
(3) Vet. Med. Year 1	-	15	20	30	40
Year 2	-	-	14	19	28
Year 3	-	-	-	13	18
Year 4	-	-	-	-	12
<b>Total</b>	<b>251</b>	<b>266</b>	<b>313</b>	<b>407</b>	<b>512</b>

#### NUMBER OF POST-GRADUATE STUDENTS

Agriculture	15	18	20	25	30
Forestry	1	4	5	8	10
Veterinary	-	1	5	10	15
<b>Total</b>	<b>16</b>	<b>23</b>	<b>30</b>	<b>43</b>	<b>55</b>

#### ESTIMATED FUTURE STAFF NUMBERS

Agriculture	55	60	65	70
Forestry	6	8	9	10
Veterinary	3	10	15	25
<b>Total</b>	<b>62</b>	<b>78</b>	<b>89</b>	<b>105</b>

### D. Facilities

The Facilities the Faculty inherited from the former Agricultural College have been gradually expanded. At present the Faculty has two large and two small lecture theaters, three seminar/class rooms, eleven

laboratories, roughly ninety-two offices, a library, seven hostels for 358 students and a cafeteria capable of catering for 350 students. In addition the Faculty has sixty-seven senior staff houses and flats and forty junior staff units. The University Farm consists of 3,300 hectares of which a little over 1,200 are cleared. The farm is used for research, teaching and production purposes. Estimated value of the scientific equipment and implements of the Faculty is over Shs. 4,000,000.

#### E. Teaching Program

Initially the Faculty provided only a general three year B.Sc. degree in agriculture with a B.Sc. in Forestry added in 1973/74. In 1974/75 a more specialized agricultural B.Sc. was introduced via a system of agricultural options in the third year. Options are now available in the areas of Crop Science, Animal Science, Soil Science, Agricultural Engineering and Rural Economy. Options in Food Science and Agricultural Education and Extension will be offered in 1977/78. At the graduate level M.Sc. degree training in the fields of crop science, animal science, agriculture engineering, soil science and rural economy are available. Ph.D. training is also available.

Undergraduate students normally have about 700 hours of instruction per year, comprising both lecture and practical training. In addition the students participate in field training at various Ujamaa Villages and/or State Farms. This involves the students working alongside the farmers or employees of a State Farm under close supervision of a member of staff from the Faculty.

#### Activities for the B.Sc. (Agric) Course During the Academic Year

Year	Term 1	Term 2	Term 3	Term 4
B.Sc. (Agric) I	In session Morogoro	In session Morogoro	Field Practical	Examination term All students in session Morogoro.
B.Sc. (Agric) II	In session Morogoro	In session Morogoro	Field Practical	
B.Sc. (Agric) III	In session Morogoro	Field Practical during 2nd half of term	In session Morogoro	

F. Financial Situation

The recent recurrent budgets of the Faculty of Agriculture are shown below: (in Tanzanian Shillings)

	<u>Actual 1974/75</u>	<u>Revised Estimates 1975/76</u>	<u>Approved Estimates 1976/77</u>
Faculty Office and Centralized Services	2,516,293	2,059,465	2,952,516
Dept. of Crop Science and Production	978,091	1,270,316	1,484,007
Dept. of Animal Science and Production	881,987	687,350	1,045,077
Dept. of Soil Science and Ag. Chemistry	650,562	811,991	1,278,567
Dept. of Rural Economy	607,133	566,964	773,479
Dept. of Agricultural Engineering and Land Planning	484,910	677,180	730,066
Dept. of Ag. Education and Extension	-	-	523,409
Dept. of Food Science and Technology	-	-	593,282
Division of Forestry	243,722	531,921	671,896
Division of Vet. Science	-	-	682,023
Farm Department	2,615,749	2,067,604	-
Estates and Workshop	2,057,295	1,648,727	1,960,836
Faculty Library	368,701	550,762	883,522
<b>Total: T.Shs.</b>	<b>11,404,443</b>	<b>10,817,288</b>	<b>13,578,680</b>

These totals include "Special Expenditures" of T. Shs. 2,534,479 in 1974/75, T. Shs. 892,400 in 1975/76 and T. Shs. 1,357,000 in 1976/77 for capital items such as vehicles, teaching equipment, office equipment, research equipment etc.

In recent years nearly all major expenditures have been funded by donor assistance - particularly through DANIDA and NORAD. From domestic resources the new library, several offices and certain roads have been provided.

For the future the 1975-1980 Five Year Plan of the Faculty of Agriculture and Forestry called for a development program totaling T. Shs. 35 million. Included were additional lecture rooms, laboratories, offices, hostels, houses, equipment, etc. Of particular interest are the inclusion of an Agricultural Education and Extension Building comprising of a lecture hall, three seminar rooms, one large audio-visual laboratory, ten offices and three storage rooms at an estimated cost of T. Shs. 1,180,000 (\$132,000); and a refresher course center including a lecture hall, seminar rooms, store rooms and office at an estimated cost of T. Shs. 768,000 (\$ 91,500). Sources of funding for the capital items were not identified.

#### G. External Assistance

The Faculty of Agriculture and Forestry is currently receiving external assistance from eight sources. The largest single donor is DANIDA which has funded certain facilities and is currently providing five teaching staff - two in Agricultural Engineering and one each in animal science, soil science and crop science. NORAD is providing staff (up to 9), laboratories and participant training to the Division of Forestry. The F.A.O/UNDP are funding one staff member in agricultural economics and one in crop production while the Ford Foundation is funding one professor in rural economy and providing some participant training. The Dutch Government is providing two staff members in horticulture. The salaries of five British Nationals in the areas of animal production (2), biochemistry (1), agricultural engineering (1) and rural economy (1) are being supplemented by the British government. The Canadian International Development Research Center funds one staff member working exclusively on maize research. Finally the Rockefeller Foundation through Utah State University is funding one position in the Department of Agricultural Education and Extension.

In addition to the above the Dutch have offered to supplement the salaries of two individuals for the Department of Agricultural Education and Extension and support is actively being sought for the Division of Veterinary Medicine, the Food Science and Technology Department and the Department of Agricultural Chemistry and Soil Science.

H. Summary and Conclusions

The Faculty of Agriculture and Forestry is satisfactorily equipped to handle the current number of students. Any expansion or additions in terms of new departments, new programs or a greater number of students will require additional facilities. Such expansions are planned and underway.

The staff is growing in size but requires substantial external assistance to provide training in certain areas. In the future this situation will continue as new specializations and courses are added to the faculty offerings.

As might be expected the Faculty faces financial constraints. Limited growth in the recurrent budget seems probable but capital development funds are not likely to be forthcoming from domestic resources. External sources of funding have not been located although active attempts are underway.

Given the good progress of instruction which is underway and planned, the pool of well qualified staff and the need for additional degree graduates, assistance to the Faculty appears to offer a high promise of good return.

AN ANALYSIS OF THE MATI SYSTEM AND JUSTIFICATION FOR  
AID CONCENTRATION AT UKIRIGURU AND MFWAFWAAssistance for Food Crops Training

Selecting the institute for AID assistance in food crops training is somewhat more complex than for livestock training because a number of MATIs offer some training in food crops production and utilization. The institutions giving training in food crops include:

- (a) The Ukiriguru MATI at Mwanza offers certificate training in general agriculture. Diploma training is to be added after expansion of the facilities by use of the IDA credit. A branch institute at Tumbi offers certificate training with emphasis on tobacco. Ukiriguru is considered the research center for north-western Tanzania and conducts research on cotton, maize and edible legumes.
- (b) The Lyamungu MATI at West Kilimanjaro offers diploma training in horticulture. Research is also conducted on coffee, horticulture and wheat.
- (c) The Mlingano MATI at Tanga offers diploma training in farm management. Research is also conducted on sisal, maize, edible legumes and horticulture.
- (d) The Mbeya MATI offers diploma training in animal health, animal husbandry and crop husbandry and certificate training in veterinary science, agriculture and home economics. This is a NORDIC assisted project scheduled to start in 1975. (See discussion above under "Assistance in Livestock Training")
- (e) The Mtwara MATI will offer certificate and diploma training in general agriculture. The training facilities are being built with an IDA credit and training is expected to begin in 1975. Mtwara is also the research center for southern Tanzania. Research is conducted on cashew, maize groundnuts and soybeans.
- (f) The Ilonga MATI offers certificate training in food science and nutrition and conducts research on maize, edible legumes, food science and entomology.
- (g) The Nyegezi MATI at Mwanza offers certificate training in general agriculture. No research is done at this institute. A branch at Maruku offers certificate training with emphasis on tea and conducts research on coffee, tea and bananas.

Selection of which institute to assist in the food crops subsector involved two main considerations: (1) the need to focus and concentrate AID assistance for maximum effectiveness in the food crops subsector, (2) and the desire to realize maximum collaboration with other donor assistance. The Mbeya Training Institute was eliminated from AID assistance at the outset. It is being competently assisted by the NORDIC group precluding the need for AID assistance.

Mlingano (farm management) and Ilonga (food science and nutrition) were also eliminated from AID assistance because the training at these institutes is less production oriented than at other institutes.

The specialized diploma training in horticulture offered at Lyamungu fills a need for training in this field, but AID assistance at this time is being directed to the more basic food crops, cereal grains and edible legumes, and general agriculture training for farming systems in which cereal grains and edible legumes play a major role.

Nyegezi, Ukiriguru, and a new institute at Mtwara are the remaining institutions offering training in general agriculture most applicable to food crops. Nyegezi and Ukiriguru are each sited near Mwanza and offer the same general type of training. However, Ukiriguru has research facilities and is included in the IDA project. Mtwara would offer AID a rather unique opportunity to assist in establishing a new training facility, sited at a research center intended to serve southern Tanzania. Training facilities are to be constructed at Mtwara with an IDA credit. However, because of its remote location and ~~poor~~ communications AID assistance is not recommended at this time.

The Ministry and USAID have selected the Ukiriguru MATI to be assisted by AID. Factors in this decision include the presence of research facilities at Ukiriguru and IDA assistance to Ukiriguru.

The Ukiriguru MATI at present offers a certificate course in general agriculture. Present enrollment is 184 and the expected output in 1973 is 102 certificate holders. After completion of the additional new IDA-financed facilities annual enrollment is planned for 260 certificate students and 40 diploma students, with an annual output of 125 certificate holders and 40 diplomates. The present teaching staff numbers 25 of whom four are graduates. The proposed teaching staff after expansion of the physical plant and reorganization of the curricula is estimated at 18, a reduction of seven. This will require 14 more staff members be trained to the B.S. level.

The first year of the present certificate course for Assistant Field Officers includes: Agriculture--agricultural science, farm practices, horticulture, fruit crops, spices and essential oils, and agro-mechanics; Animal Husbandry--dairy, beef, sheep, goat, pig, and poultry; Soil Science

and Land Use; Forestry, Bee Technology, Fisheries and Game. The second year curriculum includes Food Science and Nutrition; General Animal Husbandry; Pasture Crop Agronomy; Land Use, Soil Science, Water Management, Extension and Economics.

The certificate curriculum is to be revised. Recommendations by Yeaman, Schwencke and Wamunza include increasing the total weeks of instruction from 48 to 76.

The diploma curriculum has not been formulated and assistance is required for this.

The physical plant at Ukiriguru is more adequate relative to enrollment than at most other institutes. The IDA-financed construction will provide the additional space needed. The IDA construction includes four staff houses and 15,700 square feet of new physical plant construction. This is considered sufficient to permit increasing the total enrollment to 300 compared with 184 in 1972-1973. It is expected that the new construction will be completed in the July-December 1974 period.

#### Assistance for Livestock Training

Two MATIs, Mwapwa and Tengeru, now offer training in livestock and a new MATI at Mbeya, being developed with NORDIC assistance, will offer general livestock training beginning in 1975.

The Tengeru MATI provides training in dairying and upon completion grants a certificate in dairy husbandry. At present it is one of the small institutes with a training staff of six to seven, and enrollment of 55-60, and a projected annual output of about 26. The full course consists of 66 weeks of instruction. The syllabus is concentrated on dairy production and husbandry with supplemental basic agricultural courses.

The MATI being established at Mbeya with NORDIC assistance has the general overall purpose of establishing a research and training complex to serve the highlands area of south-western Tanzania. Mbeya, when in full operation, will have a teaching staff of twenty and offer three diploma courses. The animal health diploma course will provide training in animal health, animal husbandry, food industry, and veterinary extension. The animal husbandry diploma course will provide training in animal nutrition, fodder crops, animal breeding, livestock economics, food processing, and agricultural extension. The diploma course in crop husbandry will provide training in soils, food, cash and fodder crops production, farm economics, agro-mechanics, food processing, and agricultural extension. The total annual output from these three one-year diploma courses, beginning in 1975, will be eighty diplomates.

The Mbeya MATI will also provide three, two-year certificate courses beginning in 1975. Total output of certificate holders is expected to be 184 in 1976 and 193 annually thereafter. The certificate course in veterinary science includes training in biology, agronomy, draft animals, animal production, animal health, food industry, farm management and agricultural extension. The agriculture certificate course includes biology, land use, agronomy, horticulture, natural resources, agro-mechanics, animal production, food industry, farm management and agricultural extension. The agriculture/home economics certificate course will include subjects in biology, agronomy, horticulture, agro-economics, animal production, animal health, food industry, home economics and agricultural extension.

The Mpwapwa MATI is at present, March 1973, the only training institute offering training in veterinary science and animal husbandry and will have in the 1972-73 school year an estimated output of 119 certificate holders and 36 diplomates. Training is now divided between two sites, Mpwapwa and Morogoro, but will be concentrated at Mpwapwa when new facilities financed by an IDA credit are completed (see below) and the long-run output will be 36 diplomates and 110 certificate holders. The present teaching staff number 17 full time instructors of whom seven have a B.S. degree. The project requirement is 19, an increase of two. The short range qualification goal is seven B.S. graduates, six diplomates and six certificate holders. The long-range goal is for all staff members to have B.S. degrees. It is planned to add a range management instructor and an animal health instructor to the present staff and to upgrade staff members to a B.S.

A diploma course in animal health is planned. The proposed course will require 52 weeks including field practicals and examinations, and offer animal anatomy and physiology, pathology, parasitology, pharmacology and therapeutics, surgery, obstetrics and infertility diseases (including artificial insemination), and veterinary extension.

An animal husbandry diploma course of 20 weeks duration has been implemented to upgrade workers in animal husbandry. The course started in March 1972 and offered 13 weeks of resident course work at Mpwapwa plus seven weeks of field practicals, ujamaa work, and examination. Subjects taught include breeds, and breeding, animal nutrition, reproduction and artificial insemination, general husbandry, and building and construction.

A diploma course in range management is planned but assistance is required to develop the syllabus.

The present facilities at Mpwapwa/Morogoro are inadequate. The staff quarters are crowded and the office space is poorly laid out and scattered. The library's physical facilities at Mpwapwa are adequate, but there is a dire shortage of periodicals and books. Student textbooks are also in very short supply. There is no laboratory at Mpwapwa, and only a poorly equipped 30 student laboratory at Morogoro. Electricity and water supply at both Mpwapwa and Morogoro are good. Recommendations for improvement at Mpwapwa after the Morogoro program is transferred to Mpwapwa include: (a) increase the first year certificate course from 20 weeks to 40 weeks instruction; (b) increase the length of diploma courses to one full year; (c) improve staff quality through teacher training instruction and B.S. degrees for all staff; and (d) discontinue use of research workers as part-time teachers.

The facilities at Mpwapwa will be substantially improved by the International Development Association (IDA) Third Education Project in Tanzania. The IDA project provides 14 man-years of technician assistance and a credit of \$3,300,000 to construct one new agricultural training institute (Mtwara), expand three existing agricultural training institutes (Olmotony, Mpwapwa, and Ukiriguru), construct four new rural training centers, and expand five existing rural training centers. Technical assistance in the IDA project includes: (a) agricultural education, four man-years; (b) agricultural extension, two man-years; (c) teaching materials, two man-years; (d) project architect, four man-years, and (e) home economics, two man-years.

The IDA funded technicians will be posted in the Ministry in Dar es-Salaam. They will visit and work with all institutes on revision of curricula. However, professional/technical input will be required from the AID-funded technicians in developing appropriate curricula in food crops (soils, agronomy, crop production, etc.) and in livestock (animal production, health and nutrition and range management). Therefore, most of the responsibility for the technical input for developing the above curricula will fall on the AID-funded personnel.

The IBRD team will also develop teaching guides, texts, and visual aids; train Tanzanian staff in preparing and utilizing such aids; and train Tanzanians in interpreting research results and preparing teaching and extension materials from research findings.

The activities of the AID and IDA-funded technicians therefore will be complementary to each other and allow for greater progress in attaining the project purpose.

IDA-financed construction scheduled for the Mpwapwa MATI includes sixteen senior staff hours, ten junior staff houses, and 44,900 square feet of new institute physical plant construction. All plans and specifications for the IDA financed construction have been completed (November 1972). Bids will be advertised in April 1973 and contracts for construction

awarded in June 1973. Construction is expected to be completed in twelve to eighteen months. The new facilities at the Mpwapwa MATI will permit increasing the enrollment by 185 new students to a total annual enrollment of 235 certificate students and 36 diploma students.

In reviewing the three possible institutes for AID assistance in livestock training Mpwapwa MATI stands out as the logical institute to assist. The Mbeya MATI is being competently assisted by the NORDIC group. A good case could be made for assistance to Tengera in dairy husbandry training because of the importance Tanzania attaches to the expansion of dairying, but such assistance is not being considered by USAID. The Ministry and USAID have jointly agreed that USAID training assistance in the livestock subsector should be concentrated at the Mpwapwa MATI. Tanzania's livestock subsector trained manpower demands will fully absorb the output of both the Mbeya and Mpwapwa MATIs.

The Mpwapwa MATI at present is the only institute offering certificate and diploma training in animal husbandry and veterinary science to provide personnel to assist farmers in general livestock production will emphasis on range livestock. Improvement of this type of training will benefit more farmers in the livestock subsector than assistance in specialized livestock areas such as dairying, swine or poultry. The more important factors for AID in selecting the Mpwapwa MATI for assistance are: it offers training in livestock/veterinary and plans to add training in range management; it is located in a typical range production environment and will provide direct support to USAID's ongoing and proposed activities in the livestock subsector; AID assistance will supplement and complement IDA assistance both at the Mpwapwa MATI and IDA's proposed Phase II Livestock Development Project; and it is essential for realizing development of Tanzania's comparatively large livestock resources.

Waivers and Approvals

I. Waivers and Approvals Required

A. Procurement source and origin waiver from AID Geographic Code 000 (U.S. only) to Code 935 for procurement of construction materials.

B. Waiver of the provisions of FAA Section 636(i) to allow the financing of procurement of one project vehicle of AID Geographic Code 935 (Free World) manufacture.

C. Approval to deviate from the policy expressed in AIDTO Circular A-466 of June 27, 1975, to permit project completion over a period in excess of five years.

II. Justification for Source Waiver for Construction Materials

Construction materials will be used in building (1) an 800 square meter facility housing the Department of Agricultural Education and Extension and the Center for Continuing Education in Agriculture; (2) a dormitory with a capacity of 50 students; and (3) four senior level staff houses. The cost of construction materials is estimated at \$522,000 i.e. 60% of the total cost of construction. Since most of the materials will be procured within Tanzania a waiver is requested for only 40% of the estimated value of construction materials or \$208,800.

First, materials such as window frames, plumbing fixtures, electrical fittings, etc., are normally imported from European manufacturers. For the most part, these are manufactured to standards (size, threads, units of measure, etc.) different from and incompatible with U.S. specifications. It is essential that facilities be constructed using fixtures and materials for which replacement parts and service facilities are readily available in Tanzania.

Second, it would not be practical to purchase U.S. items in the small quantities needed when dealers in Tanzania are equipped only to service and repair equipment made in Europe or Japan. Moreover, considering shipping costs and the small quantities involved, U.S. delivered prices would substantially exceed prices for comparable items procured in Tanzania. The long lead time required to procure from the U.S. could also delay project implementation of the construction of housing for AID financed technicians and the construction of the Center for Continuing Education in Agriculture. The severe shortage of housing in Tanzania and the normal length of time required for any construction makes it imperative that construction begin at the earliest possible date.

- 2 -

### III. Justification for Waiver of Source and Origin Requirements for Vehicle Procurement

The waiver is requested to allow the purchase of one 30-40 passenger bus of Code 935 manufacture for the use of the Faculty of Agriculture and Forestry, primarily the Center for Continuing Education in Agriculture, in transporting students and short course trainees on field trips and site visits.

The need for this waiver is based on: a) the lack of spare parts in Tanzania for U.S. manufactured vehicles with resultant long down-times as parts are obtained; b) the lack of mechanics with an understanding or experience in maintaining U.S. manufactured vehicles which result in improper and inadequate repair; and c) the safety hazard presented by left-hand drive vehicles on narrow roads and as other vehicles are met or passed.

Virtually the only vehicles of U.S. manufacture in Tanzania are those which AID has provided. This bus, if procured from the U.S., would probably be the only one of its kind in the country. There is virtually no possibility that spare parts for a U.S. manufactured bus would be available locally or that they could be procured without lengthy delays. The probable result would be a vehicle deadlined an inordinate portion of its useful life.

The problem of spare parts is compounded by a lack of mechanics who understand the componentry of U.S. vehicles. Consequently, even if spare parts were available, they would often be improperly utilized resulting in a prompt need for additional repairs and additional down-time. The lack of service and spare parts for a U.S. manufactured vehicle also present a risk to the health and lives of the persons required to operate or ride in the vehicle.

Additionally, the left-hand drive of a U.S. manufactured bus is a genuine hazard accentuated by the large and clumsy configuration of a vehicle designed for wide and well-maintained roads. In Tanzania the narrow roads, sharp curves and steep grades demands visibility not possible with a left-hand drive vehicle. Passing other vehicles is particularly hazardous.

In this situation of a single left-hand drive U.S. bus not capable of being rapidly and reliably repaired when a breakdown occurs and constituting a safety risk when on the road, it is suggested that a right-hand drive vehicle manufactured in the United Kingdom or Japan is an appropriate substitute. For this vehicle, of a type already in

- 3 -

extensive use in Tanzania, spare parts would be readily available and local mechanics would be familiar with the vehicle and able to properly carry out repairs.

Therefore a waiver permitting the procurement of a single bus from a Code 935 is considered justified and necessary.

#### IV. Justification For Deviation From Five Year Life-of-Project Policy

AIDTO Circular A-466 dated June 27, 1975, prescribes a maximum period of five years for the life of a project from date of signature of the Project Agreement to the date on which all goods and/or services have been delivered or performed. However, "in exceptional cases it may not be possible to design a project that can be completed within five years" and, rather than arbitrarily compress the project, a justification should be prepared explaining the reasons for and necessity of a more lengthy commitment.

In this case there are several reasons why a project exceeding 5 years in length is proposed. First the project as originally designed in 1973, or prior to the introduction of a 5-year limitation, called for a project of nearly 7 years to allow training, technical assistance overlap with returned participants and sufficient implementation experience by the TanGov. These reasons for a longer project are still valid and since the project was actually started more than a year behind schedule due to delays in contract signing and the recruitment of staff it would need to run for eight years to provide the same periods of technical assistance. However, the in-depth evaluation scheduled for FY 1977 will determine the actual length of time needed to achieve the necessary level of MATI development taking into account that the training is ahead of schedule.

Second, a new component, assistance to the Faculty of Agriculture and Forestry, is being added to the project, the last element of which will not begin until FY 1978. Consequently, allowing a construction period of one year and given the expert judgement that a minimum of four and one-half years will be required to establish a viable Center for Continuing Education in Agriculture, it becomes necessary that the project extend until June, 1983 (FY 1983). In current judgement any shorter period will jeopardize the successful establishment of the needed institution. A check on this judgement will be provided by the in-depth evaluation scheduled for FY 1979. Based on this evaluation a final determination will be made of required project length.

179

PRELIMINARY JOB DESCRIPTIONS FOR SENIOR STAFF

I. Special Assistant (Planning and Development) to Chief Training Officer, Ministry of Agriculture (MinAg)

A. Supervision and Duties:

and

Assistance will be given in the planning/development of agricultural training by supplying to the Ministry of Agriculture a Special Assistant (Planning and Development) to the Chief Training Officer to serve in a staff (non-administrative) capacity. In collaboration with Ministry of Agriculture training officers and with the principals and staffs of the MATIs and under the general supervision and direction of the Chief Training Officer, who will be available for advice and consultation and who will make policy determinations, the Special Assistant (Planning and Development), as directed and assigned by the Chief Training Officer, will assist in the planning and development of the MATI system.

As assigned and directed by the Chief Training Officer, duties of the Special Assistant (Planning and Development) will include:

1. Planning curricula and courses of study for MATIs.
2. Planning in-service training programs for MATI instructors and for other Ministry of Agriculture veterinary and agriculture field staff.
3. Preparation of budgets and financial estimates.
4. Preparation of personnel policies and regulations for recommendation to appropriate authority, including those for a permanent career MATI administrative and teaching staff.
5. Review and preparation of regular, in-service and special training programs including foreign training for personnel of the MinAg and agricultural parastatals.
6. Preparation of briefs for the Ministry's requests to foreign donors and lenders.
7. Coordination of training programs with agricultural production and marketing programs.
8. Preparation of agricultural manpower estimates and requirements.

A. Supervision and Duties:

The Special Assistant (Planning and Development) to the Principal of the Ukiriguru (Mpwapwa) MATI will serve in a staff (non-administrative) capacity. In collaboration with other Ukiriguru (Mpwapwa) MATI staff members and appropriate officers of the Ministry of Agriculture and under the general supervision and direction of the Principal, who will be available for advice and consultation and who will make policy determinations, the Special Assistant (Planning and Development), as directed and assigned by the Principal of Ukiriguru (Mpwapwa) MATI will assist in the planning and development of the Ukiriguru (Mpwapwa) MATI.

As assigned and directed by the Principal of Ukiriguru (Mpwapwa) MATI, duties of the Special Assistant (Planning and Development) will include:

1. Planning curricula and courses of study for Ukiriguru (Mpwapwa) MATI.
2. Planning of in-service training programs for Ukiriguru (Mpwapwa) staff and for Ministry of Agriculture staff assigned to Ukiriguru (Mpwapwa) for training.
3. Preparation of budgets and financial estimates for Ukiriguru (Mpwapwa) MATI
4. Preparation of Ukiriguru (Mpwapwa) MATI personnel policies and regulations for recommendation to appropriate authority.
5. Review of regular, in-service and special training programs at Ukiriguru (Mpwapwa) MATI.
6. Preparation of specifications for training equipment and supplies and for textbooks and teaching materials for Ukiriguru (Mpwapwa) MATI.
7. Related duties as assigned.

All work of the Special Assistant (Planning and Development) to the Principal will be reviewed by the Principal for compliance with policy. All reports to USAID will be made through the Principal of Ukiriguru (Mpwapwa) MATI.

The Special Assistant (Planning and Development) may be called upon to assist the Principal in almost any phase of the Ukiriguru (Mpwapwa) MATI operations. Consequently, in addition to technical

101

**B. Qualifications:**

**1. Education**

An M.S. degree in agriculture in the specialized field to which the officer is being assigned is required for staff assigned to Department Head positions. An M.S. degree in the relevant specialized field is preferred for other instructors but a B.S. degree in the specialized field may be acceptable. All officers should have had graduate or undergraduate training (taken course work) in agricultural education.

**2. Experience**

Two years of full time teaching experience in which applicants have successfully demonstrated (a) technical knowledge in a specialized field, and (b) teaching ability as measured by skills in lecture, laboratory and field work and relating the use of such expertise in demonstrations to farmers.

**3. Examples of Qualifying Experience**

(a) A university instructor or professor who has been in responsible charge of teaching lecture, laboratory and field work for undergraduate students.

(b) A high school vocational agriculture instructor, and with classroom, laboratory and field teaching experience.

(c) An instructor in an agricultural junior college or institute who has been in responsible charge of teaching lecture, laboratory and field work for students.

**NOTE:** In each example, allied contacts or experience with agricultural extension programs would be highly desirable. Previous overseas experience is desirable. It will be necessary to have ability and be willing to engage in frequent field travel.

**C. Duty Station**

(4) Ukiriguru MATI

(2) Mpwapwa MATI

#### IV. Agricultural Education and Agricultural Extension/Rural Sociology Specialists

##### A. Supervision and Duties

Both positions will be in the Department of Agricultural Education and Extension of the Faculty of Agriculture. One of the specialists may serve as Head of the Department under the direct supervision of the Dean of the Faculty. One, or both, specialist(s) will be under the general supervision of the Department Head. The Department Head will be responsible for the general development of the Agricultural Education and Extension course option with specific additional duties in his particular area of expertise. The staff member(s) will develop appropriate courses and work with the staff of other FAF Departments in introducing and upgrading agricultural education and extension ability.

##### Specific Duties will include:

1. Planning curricula and courses of study.
2. Preparation of Department plans and budgets.
3. Developing courses and course material.
4. Teaching under-graduate, graduate and in-service courses.
5. Planning in-service training programs.
6. Other duties as assigned.

##### B. Qualifications

A PHD in Agricultural Education or Agricultural Extension/Rural Sociology is required. Five to ten years experience in agricultural education activities with at least three years classroom teaching experience is necessary. Experience in management/administration of agricultural education programs at the University level is preferred for anyone expected to serve as Department Head. Experience in developing countries is desirable. Must be willing to travel within Tanzania.

##### C. Duty Station

Faculty of Agriculture, Morogoro

#### V. Agricultural Extension/Education Specialist

##### A. Supervision and Duties

As Director of the Center for Continuing Education in Agriculture (CCEA) the incumbent will be under the direct

- 8 -

supervision of the Dean of the Faculty of Agriculture and Forestry. In general he will be responsible for the development of the CCEA. This will require the development of close working links with all other FAF departments as well as links with numerous and varied outside organizations. In developing the CCEA the incumbent will:

1. Prepare plans for the development of the CCEA.
2. Prepare budgets and financial estimates for the CCEA.
3. Plan and organize courses to be given at the CCEA.
4. Seek to publicize the activities of the CCEA.
5. Teach courses as required.
6. Other duties as assigned.

**B. Qualifications**

A PHD in Agricultural Education is required. In addition at least 10 years experience at the University level including classroom teaching and administrative responsibility is necessary. An ability to work with individuals of varying academic and professional background is required as is a willingness to travel extensively in Tanzania. Previous experience in an administrative position in a developing country would be useful.

**C. Duty Stations**

Faculty of Agriculture and Forestry, Morogoro.

**VI. Audio Visual and Training Aids Specialist**

**A. Supervision and Duties**

The Audio Visual and Teaching Aids Specialist (AVTAS) will serve under the joint supervision of the Head of the Department of Agricultural Education and Extension and the Director of the Center for Continuing Education in Agriculture. In collaboration with other FAF staff members the AVTAS will assist in the development of an audio visual and teaching aids preparation capability at the FAF. Included in the above will be the teaching, to both FAF staff and students, of audio visuals preparation and use.

Specific duties will include:

1. The day-to-day organization and management of the audio

visuals facility at the FAF.

2. Preparation of necessary plans, including budgets, to allow the development of the audio visual facility.
3. Preparation of audio visual and other teaching aides for use of FAF and Center staff.
4. Teaching the preparation and use of audio visual and teaching aides to FAF staff and students.
5. Teaching aides-visual use to participants at Center training courses.

**B. Qualifications**

An M.S. degree in Agriculture is required. A degree in Agricultural Education is desirable. A minimum of 5 years experience in the development and use of audio visual aids and teaching materials is required. Classroom teaching and administrative experience are also required. An ability and willingness to travel is necessary. Previous overseas experience is desirable but not required.

**C. Duty Station**

Faculty of Agriculture and Forestry, Morogoro, Tanzania.



- 2 -

<u>Continued</u>	Lecture Hours	Seminar	Practical Hours	Total
<u>Institute of Development Studies</u>				
Development Studies I	70	--	--	70
<u>Agricultural Education and Extension</u>				
Introduction to the Principles of Extension Education	30	--	--	30
Field Practice				
Production Agriculture			8 Weeks	
<b>TOTALS</b>	<b>405</b>	<b>8</b>	<b>278</b>	<b>691</b>

\*Contract hours within the parenthesis have been counted in those hours for the Department of Animal Science.

- 3 -

Suggested Syllabus  
Second Year

Subjects by Departments	Lecture Hours	Seminar	Practical Hours	Total
<u>Crop Science and Production</u>				
Principles of Crop Production	20		15	
Principles of Agronomy and Crop Physiology	20		15	
Crop Pests	15		20	
Plant Pathology	15		10	
Plant Breeding	20		10	
Pasture Agronomy	10		5	
	<u>100</u>		<u>75</u>	175
<u>Animal Science</u>				
Animal Nutrition and Biochemistry	20		10	
Animal Health and Hygiene	15		10	
Introduction to Animal Breeding and Production	15		10	
Introduction to Animal Production and Management	30		10	
	<u>80</u>		<u>40</u>	120
<u>Soil Science</u>				
Soil Physics	10		24	
Soil Chemistry and Pedology	20		24	
Soil Biology	10		12	
Plant Nutrition and Soil Fertility	10		—	
	<u>50</u>		<u>60</u>	110
<u>Agricultural Engineering</u>				
Surveying	8		18	
Soil Conservation and Water Management	11		15	
Agricultural Processing and Electrical Power	9		12	
Farm Structures	9		9	
	<u>37</u>		<u>54</u>	91

- 4 -

Continued

Subjects by Departments	Lecture Hours	Seminar	Practical Hours	Total
<u>Rural Economy</u>				
Production Economics	20	6		
Marketing and Agricultural Products	25	6		
Farm Management and Farm Planning	32	18	12	
Adaptation of Statistics to Economic Analysis	10			
	<u>87</u>	<u>30</u>	<u>12</u>	129
<u>Institute of Development Studies</u>				
Development Studies II	70			70
Field Practice				
Extension Education			8 Weeks	
<b>TOTALS</b>	<b>424</b>	<b>30</b>	<b>241</b>	<b>695</b>

189

**Suggested Syllabus  
Agricultural Education and Extension Course Option  
Third Year**

Subjects by Department	Lecture Hours	Seminar	Practical Hours	Total
<b><u>Agricultural Education and Extension</u></b>				
Introduction to Principles of Agricultural Education	30	--	30	60
Educational Psychology Theory and Practicals of Teaching	70	--	70	140
Preparation and Use of Audio- visual Aids in Agricultural Education and Extension	20	--	30	50
Administration and Supervision of Programs in Agricultural Education and Extension*	50	--	--	50
Agricultural Extension**	27	15	22	64
Rural Sociology	28	12	6	46
Field Teaching Practical in Agricultural Education			10 Weeks	
 Special Project - The Project will be in the fields of Rural Sociology, Agricultural Extension, Agricultural Education				
<b>TOTALS</b>	<b>225</b>	<b>27</b>	<b>158</b>	<b>410</b>

\* New Course

\*\*Course common to all options

TEACHING MATERIAL/VISUAL AIDS EQUIPMENT RECOMMENDED 1/

Projector, slide, Kodak ektagraphic model E-2 with 3-inch f/3.5 Ektanar lens (Student)

Projector, slide, Kodak, ektagraphic model AF-2 with 4 to 6-inch f/3.5 Ektanar zoom lens, automatic focusing, automatic slide change, remote focusing, high and low brightness, accessory outlet (extension or classroom)

Projector, slide, Kodak carousel 850-K takes a 500 watt, 120 volt lamp DAK (200 hour life)

Filmstrip, adaptor, Kodak ektagraphic (student, extension or classroom)

Stack loader, Kodak carousel

Carrying case, Kodak, AV compartment case for projector, slide tray and accessories (extension or classroom)

Remote extension cord, Kodak, 25-foot for Kodak carousel projector (extension or classroom)

Slide trays, Kodak carousel 140 slide tray

Slide tray, Kodak carousel universal slide tray (80 slides)

Lamp, 300 watt, 120 volt, ENH for E2 & AF-2 projector (175-hour life)

Projector, 16mm film, movie, Bell & Howell sound model 1592H, 117 volt, 50 or 50Hz AC

Lamp 50hr/250 watt, code EMM for above

Projector, 16mm film, movie, Kodak Pagent sound model AV-256-TR-R, 115-230 volt, 50-60Hz current

Lamp DKK 750 watt or DKT 1000-watt for Kodak projector at 230V

Projector, overhead, Beseler model 15710-LC class

Projector, overhead, travel with case, Beseler model 15700 extension

Lamp, 600 watt model DYS for overhead projector

Lectern desk for overhead projector: 30" high x 24" x 48", lectern part goes from 30" to 42" high (classroom)

Easel, optivox model 1000-200 45" wide, legs fold (extension)

Easel, optivox model 1000-100 29" wide, legs fold (extension)

1/ By WVU/NCATSU Study Team

Screen, projection, wall mounted 6' x 8' mat white nongloss surface,  
Da-Lite model Vidio C (classroom)

Slide illuminator for sorting slides (AV Centre)

Table, projection, folding, slide viewing area (extension)

Cabinet, 16mm film, neumade model MM-119

Belt cleaner for 3M copier per container

Transparency, standard weight

Transparency, medium weight

Camera Minolta (interchangeable with present equipment)

Standard 50mm f 1.4 Minolta lens wide angle with telephoto lens

Screen, projection 8½" x 11", nongloss mat white surface with pressure  
sensitive backing that peels off for mounting in sturdy carrel.  
Use in homemade carrel, Da-Lite Mini-View screen.

Copy stand, Miranda copy stand with 2 lights

Duplicator, Stencil, electric, Heyer model 76

Duplicator, Stencil, hand, Heyer model 70

Cabinet for duplicator, Heyer model 58

Mimeograph stencils

Fluid wicks

Rubber feed rollers for duplicating

Stencils for stencil cutting machine are different than for mimeograph  
machine

Storage cabinet for stencils

Typewriters for "printing"

Multilith Offset 1250 (machine can be serviced in DSM)

NuArc Plate Maker

Headline machine

Long stapling machine

Projector, Opaque, Buhl mark IV 200 volts 50Hz if specified on order,  
1000 watt lamp, about

Cabinet, slide, group storage, 4800 slide cap. Pix mobile model SC-104

Cabinet, filmstrip, 256 filmstrips cap. Pix mobile model SC-104F

Carrel, Student 4' wide x 2.5' deep with rear projection unit, Howe  
model T/E

Cassette Stereo Player, Wollensak model, 2561 AV (student)

Cassette, Stereo recorder/player, Wollensak model 2551 AV, same as  
model 2561 AV except it can record program and synch signal  
(AV centre)

Loudspeaker system - can use Wollensak model 2551 or 2561 cassette  
machine

Recorder, reel-to-reel stereo, Wollensak model 6250 AV. Record master  
program and synch and transfer to cassette tapes (AV Center)

Portable Slide-tape system, Wollensak model 2548 AV. A suitcase  
containing a Kodak Carousel slide projector, Wollensak model  
2551 AV cassette tape machine, a speaker, screen 50-foot cord  
(extension work)

Cordless microphone system, Wollensak model AV 71/72. Use with  
cassette machine 2551 AV (extension or classroom)

Headsets, califone model 2971 (student)

Lectern with stereo sound speaker system, portable Lecternette model  
L40-20a with tele legs

Cabinets, storage, Tennsco 36" x 24" x 78" with door lock

Cable, phone plug to connect cassette machine to play or  
record. 2 cables between 2 machines

Cable adaptors

Extension cord, 50-foot

Cart, projection Pix Mobile AV - 449 - A for opaque projector (classroom)

Cart, projection, Pix Mobile AV - 443 for slide projector (classroom)

Cart, projection, Pix Mobile model AV - 432 for overhead projector  
(classroom)

Screen, projection, tripod, portable; mat white surface (extension)  
Da-Lite model Vidio A 70" x 70"