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DEPARTMENT OF STATE  
AGENCY FOR INTERNATIONAL DEVELOPMENT  
Washington, D.C. 20523

CAPITAL ASSISTANCE PAPER

Proposal and Recommendations  
For the Review of the  
Development Loan Committee

TANZANIA - AGRICULTURAL SUPPORT LOAN II

621-H-017

621-22-190-122

A.I.D.  
Reference Center  
Room 1658 NEF

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AGENCY FOR INTERNATIONAL DEVELOPMENT  
WASHINGTON, D.C. 20523

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AID-DLC/P-2005

June 20, 1973

MEMORANDUM FOR THE DEVELOPMENT LOAN COMMITTEE

SUBJECT: Tanzania - Agricultural Support Loan II

Attached for your review are the recommendations for authorization of a loan in an amount not to exceed \$2,600,000 to the Government of the United Republic of Tanzania to assist in financing the foreign exchange and local currency costs of equipment, materials and related services for the following A.I.D. technical assistance projects in the agricultural sector: (1) Masai Livestock Development Project, (2) Seed Multiplication Project, (3) Agricultural Research Project, and (4) Agricultural Manpower Development Project.

Please advise us as early as possible, but in no event later than close of business on Thursday, June 28, 1973 if you have a basic policy issue arising out of this proposal.

Development Loan Committee  
Office of Development  
Program Review

Attachments:

Summary and Recommendations  
Project Analysis  
ANNEXES I - XI

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NOTE: PROPs for Masai Livestock, Seed Multiplication, Agricultural Research and Agricultural Manpower Projects are available at AID/W, REDSO/EA and Mission.

(1)

SUMMARY AND RECOMMENDATIONS

TANZANIA AGRICULTURAL PROJECTS SUPPORT LOAN II

1. Borrower: The Government of the United Republic of Tanzania (GOT)

2. Amount of Loan: \$2,600,000.00

3. Terms:

a. Maturity: Forty (40) years, including a ten (10) year grace period.

b. Interest: Two (2) percent per annum during the grace period, and three (3) percent thereafter.

c. Repayment: Interest and principle repayable in U.S. dollars.

4. Financial Plan:

First A.I.D. Loan	\$	1,000,000
Second A.I.D. Loan		2,600,000
A.I.D. TC/DG Assistance		13,000,000
IDA Credits		4,600,000
Host Country Contributions		22,000,000
TOTAL	\$	43,200,000

5. Description of the Project:

The loan is to provide equipment and materials for four technical/capital assistance projects in the agricultural sectors. The projects and the new loan amounts to be allocated each are: (a) Masai Livestock Development (\$950,000); (b) Seed Multiplication (\$865,000); (c) Agricultural Research (\$150,000); (d) Agricultural Manpower Development (\$390,000) and Contingency (\$245,000). These four projects will, respectively: (a) fully develop water resources and other infrastructure on eight ranching associations and partially on thirteen others; (b) develop three hybrid seed production farms; (c) staff and equip a main research station and five substations involved in food crops subsector and livestock subsector research; and (d) staff and equip two Ministry of Agricultural Training Institutes in the food crops and livestock subsectors.

6. Purpose of the Loan: To finance foreign exchange costs and a portion of the local costs of the four projects.

7. Background of the Loan:

The first agricultural projects support loan, in the amount of \$1,000,000, was authorized in June 1970, and covered the Masai Livestock and Seed Multiplication project commodity requirements. Additional requirements for these projects have now been determined. In addition two new projects in research and manpower development require substantial commodity/equipment inputs of such magnitude to preclude full grant financing of the proposed new tranche of project-related material.

8. Export-Import Bank Clearance: In process. Expected by June 22, 1973.

9. Country Team Views: The Country Team strongly endorses the project.

10. Statutory Criteria: Satisfied; See ANNEX I.

11. Recommendations: Authorization of a loan not to exceed \$2,600,000 to finance equipment and materials and related services for development of four agricultural projects.

CAPITAL ASSISTANCE COMMITTEE

	<u>REDSO</u>	<u>AID/W</u>
Loan Officer:	B. J. Odell	W. H. Johnson, AFR/DS
Engineer:	A. A. Karian	A. Pitcher, SER/ENGR
General Counsel:	R. B. Meighan	R. Johnson, GC/AFR
		E. Lofthouse, AFR/ESA
	<u>USAID</u>	
Food & Ag Officer:	O. Hess	H. Kugler, AFR/ESA

## I. Introduction

### A. Background

A loan for \$1.0 million was authorized and signed in 1970 to provide commodities and equipment in support of two new agricultural technical assistance projects: (a) Masai Livestock Development and (b) Seed Multiplication and Distribution. These projects grew out of a 1967 A.I.D. agricultural reconnaissance study identifying self-contained "package" activities and represented a more sharply focused technical assistance program concentrated in the agricultural sector. On-going project design and the requirement for establishing certain essential management arrangements prior to loan disbursement delayed equipment procurement until mid-1972. Awards have now been made and the first large tranches of equipment will be arriving on project in mid-1973.

In FY 1972, a technical assistance project in Agricultural Research was authorized. Its activities are to be focused in the food crops sub-sector development which along with livestock development have become the hallmark of USAID/Tanzania's program in agriculture. Similarly in a continuing effort to effectively address the A.I.D. program to the principal factors of food crops and livestock subsectors development, a technical assistance project in Agricultural Manpower Development is being proposed and presented for review in conjunction with this capital assistance paper.

With the expanded equipment requirements of the Masai Livestock and Seed Multiplication projects in conjunction with the capital requirements of the new Manpower and Research projects, the demand for a new projects support loan has become acute. In a letter received in June of 1973, the Government of Tanzania formally requested a loan for the foreign exchange and some local costs for capital investment supporting the above-cited activities.

### B. Relationship to U.S. A.I.D. and Tanzania Government Aid Strategies

The production of food is vital for the health of the people and the growth of the nation and therefore holds the highest priority for Tanzania. So stated President Nyerere in his major policy address known as the Iringa Declaration of May 15, 1972. This statement, which provided more direct policy guidance on the future direction of agricultural and rural development in Tanzania, built upon the principles of the Arusha Declaration in 1967. The Arusha approach has materialized perhaps most noticeable in the growth of the cooperative movement and the founding of Ujamaa villages. This emphasis on the importance of the rural sector, and the tiller of the land, has led as well to major government reorganization. In short, the region and not the central government is to be the pivot point for national development. The implication of this new approach is to make government more responsive to the needs and aspirations of the people throughout the countryside and not just in urban centers such as Dar es Salaam, and therefore make agriculture the attractive way of life for the bulk of Tanzania's people.

Although for the most part the present A.I.D. agriculture program in Tanzania predates the Iringa Declaration, the increasing A.I.D. concentration of efforts in the food crops and livestock subsectors dovetails well with newly-redirected Tanzanian agricultural policy. This is somewhat a matter of good fortune since until recently the A.I.D. strategy was project and not sector oriented. It is notable, however, that while the process of project selection was most often in the past based upon internal project consistency and justification, the A.I.D. program in Tanzania is nevertheless well linked (e.g., research and manpower to seed multiplication and marketing) and aimed at core problem areas in both the USAID and Tanzania Government development strategies.

The concentration of A.I.D. efforts in the food crop and livestock subsectors was fully discussed with key officials of the GOT, especially in the Treasury and the Ministry of Agriculture. Subsequent agreement has been reached with regional administrators in the case of those projects such as Masai Livestock where substantial capital inputs will demand significant contributions for recurrent costs from the regional governments. The nature and extent of the proposed loan has been fully negotiated with the GOT. In the case of the established Seed Multiplication and Masai Livestock projects, the GOT is committed to bringing these major production-oriented efforts to fruition as soon as possible to maximize their impact on the Gross National Product and to prove their replicability in other areas of Tanzania. The relatively modest capital requirements of the Manpower and Research project have never been at issue with the GOT.

## II. Borrower

The borrower will be the Government of the United Republic of Tanzania, acting through the Treasury. The principle responsible agency for administering and implementing the projects will be the Ministry of Agriculture. In the special case of the Masai Livestock project, the Arusha Region government will have direct operational and budget control reporting directly to the Prime Minister's Office.

## III. Project Analyses

### A. Masai Livestock Development

1. Description: The project's main objective remains the same as stated in the 1970 CAP: to assist the Masai Range Commission to increase livestock productivity of Masai herdsman in northeastern Tanzania. For a detailed description of the A.I.D. activity see the Revised Technical Assistance Project Paper (PROP). Briefly, the active work area has now been expanded from more or less complete development of four ranching associations to eight altogether and substantial progress toward full development in 13 other associations by 1980. The A.I.D. grant-financed technical assistance team will be increased to a total of nine technicians in the areas of (1) animal

production and health, (2) agronomy and range management, (3) ground and surface water-identification and development, (4) livestock marketing, (5) extension and rural sociology, and (6) equipment operation and maintenance. On-the-job and participant training is being provided to Africanize the activity by 1980. The overall expansion of the project reflects the recommendations of the special evaluation team of non-mission experts who visited the project in January-February 1973.

The additional capital input to be provided under the loan consists of heavy construction, veterinary and groundwater hydrology equipment. This equipment will permit formation of at least one more heavy construction unit for dam, valley tank, dip tank, road and firebreak development and will backstop the newly recruited veterinarian and hydrogeologist. This additional input, together with the expanded technical assistance, will implement the recommendations of the evaluation team. It is estimated that the proposed equipment, spare parts and related services to be procured under the loan will cost \$950,000 excluding contingency. See Annex IV for details.

2. Need for Equipment: Based upon a five-man USDA team report and recommendation prepared in the last quarter of 1968, A.I.D. authorized and commenced a TA/CA project in four ranching associations in Masailand. The first tranche of equipment which has been procured for this limited activity consisted of two 180 HP tractor crawlers, one 65 HP tractor crawler, one motor grader, one tamping foot roller, one well drilling rig, trucks, trailers, crawler attachments, soils and survey laboratory equipment and shop and service tools. The construction equipment component under this first tranche was to be sufficient to provide one minimum "spread" of equipment to carry infrastructural development in the four associations. In fact, the heavy equipment ordered under the first loan was and is insufficient to operate one properly equipped unit. This deficiency was noted by the special evaluation team and corroborated by REDSO/EA engineering staff. However, funding constraints precluded additional essential purchases under the first loan. It is the opinion of REDSO and evaluation team technical experts that the initial, or basic, heavy equipment construction unit must be comprised of:

- one 180 HP crawler tractor with hydraulic control, straight blade, and ripper;
- two 180 HP crawler tractors with hydraulics; straight blade, and cable control, in tandem with
- two drawn (non-self-propelled) twelve cubic yard scrapers;
- one 65 HP crawler tractor with hydraulics and blade;

- one tamping roller;
- two dump trucks;
- one truck-tractor and low bed trailer combination, and
- one motor grader.

With the application of this equipment, the infrastructural requirements of four ranching associations can be met and progress made in additional areas. For infrastructural development on 21 associations to be completed, however, a second complete unit, augmented by a smaller "floating" spread\* of equipment for road and brush-clearing work, and another solely for well-drilling activities, must be introduced. Put another way, the first loan tranche of \$500,000, when confronted by severe inflationary pressures in the early 1970's and the irreducible start-up equipment requirements in the non-heavy equipment aspects of the Masai Livestock project, was simply inadequate to meet the minimum heavy equipment requirements of the project as originally envisaged. Additional funds are now required not only to meet the requirements of the expanded activity but to reach the targets of the basic project. Based on the foregoing, and recognizing the specific need to focus the loan procured equipment on the specific requirements of the present project, a covenant included in the loan agreement will be made to assume that the Government of Tanzania agrees to utilize the equipment provided by this loan in support of the Masai Livestock Project and only on ranch development and related activities in the Masai District of the Arusha Region.

3. Economic Analysis: The original production goals, as stated in the 1969 PROP, were for an increase (a) in average cattle live weight from 511 pounds in 1970 to 900 pounds in 1980, (b) in an average market off-take from 3% to 18%, and (c) in total annual monetary return from \$207,108 to \$2,739,610 (see page 5, Capital Assistance Paper AID-DCC/P-923 dated June 19, 1970). These estimates represented an upward revision of 1967 USDA estimates of economic viability for the then proposed Masai Livestock project.

Based on actual experience to date for Kijungu and other new ranching associations, the 1973 special evaluation team stated that it considered USDA's original 1967 estimates to be in fact correct and recommended a return to the production goals of 12 percent and 650 pound average live weight by 1980. Based on these estimates,

\*"Floating" spread to be general equipment assigned on a piece-by-piece basis for specific needs in dam construction or brush clearing. Items include:  
1) one 250HP dump truck, 2) one tilting trailer (already procured under H-015).  
3) two self-propelled elevating scrapers and 4) one 130HP four wheel drive tractor with blade.

the economic benefits accruing from the project were recalculated for activities in eight ranching associations. The effect of development in 13 associations was not included in the analysis since the live weight and off-take goal will not be fully achieved in these areas until after project completion. Instead, capital and recurrent cost inputs to the project were assigned to the eight ranching associations and benefits (higher live weight) were stabilized at the 1980 level through the remainder of the depreciated life of the capital investments (to 1995). An internal rate of return of 18 percent was derived, which is considered to be favorable for this type of investment. See Annex V for the basis of calculations.

## B. Seed Multiplication

1. Description: As noted in detail in the revised PROP there have been three major revisions in the nature of this activity. First, the concept of relatively small foundation farm production units providing breeder seed to contract growers for large scale reproduction and sale has been dropped in favor of a large volume production orientation on four foundation farms corresponding to the four principal ecological zones of Tanzania. This revision is due to the realization that an over-cautious, go-slow program of improved seed development in Tanzania would create a bottleneck in the food crops subsector development program (the so-called "green revolution"). Second, the distributive focus of the project has been deleted since the newly formed Seed Company, created at the insistence of A.I.D. but in which A.I.D. holds no direct part, will carry out the seed sales and dissemination function. Finally, although the number of A.I.D. grant-funded technical assistants increases only by one to a total of eleven, the mix has been altered to reflect the fact that plant research activities will now be carried out under the new research project while a more productionist bias to the Seed Project technical assistance is required. In other respects, however, the activity's end targets and goals remain the same as expressed in the 1969 PROP.

Additional equipment and facilities to be provided under this loan consists, as under the first project support loan, of (a) crop production, harvesting, and processing equipment, spares and tools, (b) seed analysis laboratory equipment, and (c) general office and farm transport equipment. An entirely new machinery repair facility at the Arusha farm will also be constructed, although it will serve all A.I.D.-assisted Ministry of Agriculture activities in northern Tanzania. Initially, however, it will be mainly devoted to Seed project needs. See Section V, Implementation and Operation Plan, for further discussion of the workshop, and Annex VII for details on proposed equipment purchase. Provision for two senior staff houses at the proposed Njombe (high altitude zone) farm and one (1) pre-fabricated house for the Arusha farm has also been made. The equipment and supplies to be procured hereunder will complete proper capitalization of the Arusha (medium to high altitude) farm and capitalize the Njombe farm. (Equipment support for Tanga (low altitude) farm would follow only after evaluation of the success or failure of large scale activities at the other sites, probably in 1975

and will be also based on availability of additional funds.)

This loan will augment the A.I.D.-financed capital input presently being installed at the Msimba (medium to low) and Arusha farms (the latter on a temporary basis). It is estimated that the proposed equipment, facilities, spare parts, and related services to be procured under this loan will cost \$865,000 excluding contingency.

2. Need for Equipment and Facilities: In light of the relatively high cost of capital equipment to developing countries as contrasted by frequently abundant supplies of labor, the Project Committee carefully considered the optimum mix of the classic production factors as directed by recent A.I.D. policy. The specific problem of relative capital versus relative labor intensity was examined. Page 25 of the revised PROP states the basic conclusion that time and technological demands of the program require a high capital input, much higher in fact than even the relatively machinery-oriented farming operations in developed countries. Quality, quantity and timely availability are essential to a successful seed multiplication effort; capital intensity is virtually a prerequisite.

Special effort was also made to ensure that equipment redundancy, easily possible with very similar machinery spreads on three farms, was avoided. Account was taken in establishing specific quantities of equipment that cultivation and harvesting times varied from zone to zone and crop to crop, permitting transfer of some machinery within reasonable limits. Of course, a large quantity of equipment such as processing, laboratory and office equipment cannot easily be moved and therefore must be repeated three times.

Present evidence clearly demonstrates that sales of improved seed, including hybrids, can be brisk in Tanzania. With the recent founding of the new Seed Company, and with promulgation of the pending Seed Act setting up regulatory machinery, output of the foundation farms will be in high demand. All indications are that effective demand for improved seed varieties will be strong in all ecological zones. Accordingly, while the Project Committee recognizes the efficiency of evaluating large scale production experience on the Msimba and Arusha farms before proceeding with procurement for Njombe farm, it is proposed that this loan be authorized at a level to meet Njombe equipment and facilities requirements. A condition precedent will be included in the loan agreement requiring 1) that the GOT will provide evidence of successful production and sales experience at Msimba and Arusha, and 2) that the GOT will have provided for the implementation of the technical and enforcement provisions of a Certified Seed Production Act prior to release of Njombe procurement funds. It is anticipated, therefore, that procurement under this phase of the seed program will be in two stages.

In view of the A.I.D. Bureau for Africa decision that additional project related housing should be loan rather than grant financed, and anticipating requirements at Njombe farm, construction of two \$15,000 three-

bedroom houses is proposed. Standard plans of the GOT Ministry of Communications and Works have been evaluated and have been determined to be of suitable design and sufficient cost detail to satisfy requirements of the FAA Section 611, see Annex III for details.

3. Economic Analysis: Direct attribution of benefits from the capital and recurrent inputs to the seed project is difficult in view of the necessary complementarity of research, credit, extension, education, marketing, and pricing activities and policies in the food crops subsector. A.I.D. assistance, in fact, exists or is contemplated in virtually all these areas. Evidence is ample that a coordinated technological effort can bring dramatic increases in agricultural productivity. It is, however, very difficult to single out only one element of this overall effort and weigh its cost effectiveness, or to arrive at a reliable quantitative estimate of the long term economic benefits.

A 1969 Experience, Incorporated report on the potential of a Tanzanian seed program does, however, reflect the order of magnitude of favorable benefits which can be expected. Assuming other necessary inputs described above, impressive income returns should accrue. For example, with 30 percent of total maize acreage planted in improved seed, the nine year period from 1970 to 1979 would see about a seven-fold cumulative increase in net income of \$13.6 million. This analysis assumes constant prices; productivity at this level should in fact permit unit reduction in staple food costs to the Tanzanian consumer with all the concomitant benefits that a quantitatively and qualitatively improved diet would entail.

Depending upon the extent of initial GOT subsidy, the chart on page 9 shows that the financial costs of the program can be recovered at reasonable seed per bag cost.

Recent experience at Njombe shows that hybrid maize seed sold at T. Shgs 225 per bag had high effective demand and found a ready market. At this price, the program's cash flow break-even would come very soon; a lower price of course would delay break-even somewhat. The Seed Company and the GOT will soon be establishing prices for various improved seed varieties produced under the project, taking into account the above financial projections.

4. In recognition of the fact that Tanzania had to make basic statutory changes to ensure success of the improved seed program, a condition precedent to disbursement for the Seed Multiplication Project was included in the First Agricultural Projects Support Loan Agreement (621-H-015) requiring "evidence that the Borrower shall, within a reasonable time, establish effective seed standards by means of legislation and regulation." In fact, the GOT provided A.I.D. with a draft Seed Act, now before Parliament, which

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A.I.D. accepted as satisfying the condition precedent. The Project Committee consider that the excellent regulatory and policy provisions must now be quickly implemented, especially in view of the fact that the project is moving into a high-production phase and the Seed Company - a critical element of the program - has been formed. Accordingly, this loan agreement will have a condition precedent covering this point. June 1973 Parliamentary approval is now anticipated.

PRO FORMA INCOME STATEMENT

Seed Multiplication Project

U.S. \$1.00 = T Shs 7.00

	Cumulative Thru					
	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978/1979</u>
No. of bags produced	1,250	34,167	41,667	44,167	49,167	110,000
Non-Cumulative annual costs (Shs 000's)	-4,376	-2,981	-4,444	-5,048	-5,423	-11,249
Cumulative Costs at 150 Shs/bag	-4,376	-7,169	-6,488	-5,286	-4,084	-7,958
Sold at Shs 150	+188	5,125	6,250	6,625	7,375	16,500
Profit & Loss at 150 Shs/bag	-4,188	-2,044	-238	1,339	3,291	8,542
Cumulative Costs at Shs 170/bag	-4,376	-7,144	-5,780	-3,745	-1,660	-4,551
Sold at Shs 170	213	5,808	7,083	7,588	8,358	18,700
Profit & Loss at Shs 170	-4,163	-1,336	1,303	3,763	6,698	14,149
Cumulative Costs at Shs 190	-4,376	-7,119	-5,071	-2,202	767	-1,140
Sold at Shs 190	238	6,492	7,917	8,392	9,342	20,900
Profit & Loss at Shs 190	-4,138	-627	2,846	6,190	10,109	19,760

NOTE: Costs include all direct capital and recurrent expenses as estimated by A.I.D. and E-I.

### C. Agricultural Research

1. Description: This project, which will provide much of the technological impetus for A.I.D.'s overall program in the Tanzanian food crop subsector, is predominantly technical assistance in nature. The areas of (a) research planning and administration, (b) maize breeding agronomic research, (c) soybean breeding agronomic research and (d) food legume agronomic research will be assisted by up to six experts programmed for 8-10 years. This activity will directly complement A.I.D. assistance in the seed multiplication and anticipated agricultural marketing programs. Food crops research in Tanzania will expand the pioneering efforts elsewhere of the East Africa Agriculture and Forestry Research Organization (EAAFRO), IITA and CIMMYT, by adapting improved wheat, maize, food legume and soybean varieties to the four principal ecological zones of the country. Development of varieties suited to the coastal region, in which breakthroughs are still pending, will receive special emphasis. Another major objective will be training Tanzanian personnel on-the-job and by the participant method to establish basic indigenous self-sufficiency in research. The Agricultural Research Project Paper of March 1971 details the goals, setting, and strategy of the activity.

Equipment to be provided by A.I.D. under this project includes general farm equipment, research plot equipment, laboratory apparatus, seed processors, office supplies, vehicles and irrigation equipment and materials. Estimated C.I.F. cost excluding contingency is \$250,000. Approximately \$100,000 of equipment and commodities essential for initial operation of the project will be provided under grant-financing; the balance of \$150,000 will be covered under this loan. See Annex IX for a detailed listing of the complete equipment needs for this project and the equipment to be procured under this loan.

2. Need for Equipment: The trial selection method of scientific crop improvement necessitates extensive on-ground cultivation of many varieties. Experimentation is usually carried out on relatively small plots where sowing, cultivation, and harvesting practices can be carefully controlled to ensure statistical validity of the quantitative and qualitative results. The work is generally not capital intensive; most cultivation is usually done by hand although under strict technical guidance. Land preparation, and seed processing does, however, require a minimum of equipment, not in small part to ensure uniformity of the data base. Crop samples must then be subjected to several laboratory examinations. Finally, basic administration requires some office equipment and vehicles for the expert staff. Accordingly, the list of equipment in Annex IX is considered prudent and justified to meet overall project needs.

Approximately \$100,000 of the total equipment requirement will be met under the grant-financed IITA/CIMMYT contract. To date, the precise use of these funds has not been established; IITA/CIMMYT will order only those commodities essential for project start-up, up to the grant funding maximum. As a result, the list of proposed equipment purchases under the loan (Annex IX) is illustrative only. Total requirements and cost data are considered to be within the guidelines established under FAA Section 611.

3. Economic Analysis: In economic terms, the project's benefits cannot be isolated from the benefits of other activities in the food crops subsector. Accordingly, no detailed economic or financial analysis for this specific activity has been conducted. However, relatively small inputs in agricultural research, as in all applied research, frequently generate substantial secondary and tertiary benefits to the sector and the economy as a whole. IR-8 rice and Sonora 66 wheat bear witness to this.

#### D. Agricultural Manpower

1. Description: This project endeavors to train the necessary manpower to bring the benefits of the complementary food crops subsector and livestock projects, i.e., research, Masai livestock and seed multiplication to fruition. The A.I.D. effort will focus on two Ministry of Agriculture Training Institutes (MATI's) at Ukiriguru (food crops) and Mwapwa (livestock), with TDY planning assistance for the UDSM Faculty of Agriculture. Mwapwa and Ukiriguru will be staffed by a total of 8 experts in disciplines such as agronomy, agricultural engineering, land use and range management, husbandry and animal health. Diploma graduates from these MATI's will be assigned as field officers and certificate graduates as assistant field officers. The goal is to have two field officers and twenty assistant field officers per 10,000 farm families. For livestock the goal is two field officers (veterinary) and ten assistant field officers (veterinary) per 50,000 units of livestock. Thirty participants from the MATI's will receive further training in the United States. With the exception of an entirely new diploma-holder output at Ukiriguru, qualitative improvements with a relatively stable student body will take precedence over quantitative increases. This basic goal will be achieved by curricula improvements and improved tutorial and school administrative techniques in addition to direct instruction by A.I.D.-financed experts.

Equipment to be provided under the loan will augment that being provided under IDA credit, which also covers physical expansion of the Ukiriguru campus and new construction of the Mwapwa campus due for completion in mid-1974. A.I.D.-financed categories include (a) text and reference books, (b) general farm equipment for instructional purposes, (c) laboratory, office and workshop equipment, and (d) general teaching materials, including audio-visual equipment and films and (e) nine (9) houses for use by senior MATI teaching staff. Annex XI provides a detailed preliminary list of equipment requirements.

1/ 2. Need for Equipment and Facilities: An A.I.D.-financed study<sup>1/</sup> was conducted during June-August 1972 which corroborated earlier conclusions by IDA that agricultural manpower development in Tanzania required additional assistance. A proper input/output analysis based upon sound educational and manpower planning principles indicated that the in-process expansion of agricultural training institutes from two to ten was justified. However, the expansion had resulted in training programs which were "...very poorly staffed, only partially equipped, and unable to provide highly qualified graduates." Illustratively, Mpwapwa MATI has one farm tractor in poor and frequently broken-down condition; it needs two at a minimum and preferable three for optimum instructional purposes. There are presently twelve microscopes at Mpwapwa; twenty-four are required. In almost everyone of the categories list above requirements will exceed availabilities. It is highly doubtful that the project goals stated above could be met under present conditions.

The need for additional and replacement equipment will become more obviously acute as the new facilities at Mpwapwa and Ukiriguru approach completion in mid-1974. IDA has allocated the equivalent of \$108,000 from its grant budget for moveable equipment and materials at these MATIs. In fact, the total financial requirement as determined by the GOT Ministry of Agriculture and verified by the Project Committee is \$363,000. Accordingly it is proposed that a loan of \$255,000 excluding contingency be authorized to complement the IDA contribution. In addition, as detailed on pages 22 and 23 of Annex X, senior staff will have nine houses at an estimated cost of \$15,000 each - \$135,000 total excluding contingency are required to meet present and anticipated near-term future needs at the MATIs. In view of A.I.D. policy to phase out grant financing of Tanzanian housing construction, this item is also proposed for financing under the loan.

The Agricultural Manpower PROP and subsequent PRO-AGs will provide that the DG funded technical staff will be phased to provide initially for three (3) OPEX staff and that the availability of the other six (6) training officers to the two schools will be conditional upon the establishment by the GOT of a tenure system for professional instructors, training officers and administrators of the MATI system.

1/ Yeaman, Schweneke and Wamunza, Agricultural Manpower Development in Tanzania

IV. Financial Analysis

A. Financial Requirements: The total financial requirements, including recurrent costs through FY 1979, for the four projects financed under this loan may be summarized as follows:

(Millions of Dollars)

	<u>FX Costs</u>	<u>Local Costs</u>	<u>Total</u>
1. Masai Livestock			
a. Capital Equipment	\$ 2.822	-	2.822
b. Tech Assistance	3.219	-	3.219
c. Recurrent <sup>1/</sup>	-	10.085	10.085
TOTAL	<u>6.041</u>	<u>10.085</u>	<u>16.126</u>
2. Seed Multiplication			
a. Capital Equip/Facil. <sup>2/</sup>	1.357	.750	2.107
b. Tech Assistance	3.777	-	3.777
c. Recurrent	-	4.188	4.188
TOTAL	<u>5.134</u>	<u>4.938</u>	<u>10.072</u>
3. Research			
a. Capital Equipment	.284	-	.284
b. Tech Assistance	2.608	-	2.608
c. Recurrent	-	1.752	1.752
TOTAL	<u>2.892</u>	<u>1.752</u>	<u>4.644</u>
4. Manpower Development			
a. Capital Equip/Facil. <sup>2/</sup>	1.755	1.996	3.751
b. Tech Assistance	3.364	-	3.364
c. Recurrent	-	5.385	5.385
TOTAL	<u>5.119</u>	<u>7.381</u>	<u>12.500</u>
GRAND TOTAL	<u><u>19.186</u></u>	<u><u>24.156</u></u>	<u><u>43.342</u></u>

B. Financing Plan

Project funding includes the first A.I.D. Agricultural Projects Support Loan (1970), an IDA credit for support of the agricultural training institute, a pro rata portion of the \$8.5 million IDA credit for livestock development in Tanzania and the A.I.D. Agricultural Project Support Loan II. The recurrent category includes all direct contributions toward the project, including contributions from the GOT, beneficiaries and, possibly, other donors.

<sup>1/</sup> Through 1979

<sup>2/</sup> Assume 60% of building construction costs in local currency; 40% foreign exchange.

The financing plan (FY 73 - FY 79) for meeting the requirements indicated in Section A preceding is set forth in the following table:

(Millions of Dollars)

<u>Activity</u>	<u>FX Costs</u>	<u>Local Costs</u>	<u>Total</u>
<b>1. Masai Livestock</b>			
<u>A.I.D.</u>			
1st Development Loan	.500	-	.500
2nd Development Loan	.950	-	.950
TC/DG	<u>3.219</u>	-	<u>3.219</u>
Subtotal	<u>4.669</u>	-	<u>4.669</u>
<u>IDA</u>			
2nd Livestock Development Project (51a-TA)	1.300	-	1.300
GOT	-	6.403	6.403
MASAI STOCKMAN	-	<u>3.675</u>	<u>3.675</u>
TOTAL	<u>5.969</u>	<u>10.078</u>	<u>16.047</u>
<b>2. Seed Multiplication</b>			
<u>A.I.D.</u>			
1st Development Loan	.500	-	.500
2nd Development Loan	.796	.069	.865
TC/DG	<u>3.777</u>	-	<u>3.777</u>
Subtotal	<u>5.073</u>	.069	<u>5.142</u>
GOT	-	<u>4.865</u>	<u>4.865</u>
TOTAL	<u>5.073</u>	<u>4.934</u>	<u>10.007</u>
<b>3. Research</b>			
<u>A.I.D.</u>			
2nd Development Loan	.150	-	.150
TC/DG	<u>2.708</u>	-	<u>2.708</u>
Subtotal	<u>2,858</u>	-	<u>2.858</u>
GOT	-	<u>1.751</u>	<u>1.751</u>
TOTAL	<u>2.858</u>	<u>1.751</u>	<u>4.609</u>
<b>4. Manpower</b>			
<u>A.I.D.</u>			
2nd Development Loan	.309	.081	.390
TC/DG	<u>3.364</u>	-	<u>3.364</u>
Subtotal	<u>3.673</u>	.081	<u>3.754</u>
<u>IDA</u>			
3rd Educa. Proj. (232-TA)	1.385	1.915	3.300
GOT	-	<u>5.380</u>	<u>5.380</u>
TOTAL	<u>5.058</u>	<u>7.376</u>	<u>12.434</u>
<b>5. Contingency (only noted from A.I.D. 2nd Development Loan)</b>			
	.228	.017	.245

	<u>FX Costs</u>	<u>Local Costs</u>	<u>Total</u>
<b>6. <u>Grand Totals</u></b>			
<b>A.I.D.</b>			
1st Development Loan	1.000	-	1.000
2nd Development Loan <sup>1/</sup>	2.433	.167	2.600
TC/DG	<u>13.068</u>	-	<u>13.068</u>
Subtotal	16.501	<u>.167</u>	<u>16.668</u>
IDA Credits	2.685	1.915	4.600
GOT (all contributions)	-	<u>22.074</u>	<u>22.074</u>
Totals	<u>19.186</u>	<u>24.156</u>	<u>43.342</u>

SUMMARY OF ACTIVITIES TO BE  
FINANCED UNDER THIS LOAN  
(U.S. Dollars)

	<u>FY Costs</u>	<u>Local Costs</u>	<u>Total</u>
<b>1. <u>Masai Livestock</u></b>			
Equipment	\$ 950,000	\$	\$ 950,000
<b>2. <u>Seed Multiplication</u></b>			
Equipment	748,000		748,000
Construction	<u>48,000</u>	<u>69,000</u>	<u>117,000</u>
Sub-Total	796,000	69,000	865,000
<b>3. <u>Research</u></b>			
Equipment	133,000		133,000
Construction		<u>17,000</u>	<u>17,000</u>
Sub-Total	<u>133,000</u>	17,000	150,000
<b>4. <u>Manpower Development</u></b>			
Equipment	255,000		255,000
Construction	<u>54,000</u>	<u>81,000</u>	<u>135,000</u>
Sub-Total	<u>309,000</u>	81,000	390,000
<b>5. <u>Contingency</u> <sup>2/</sup></b>			
	<u>228,000</u>	<u>17,000</u>	<u>245,000</u>
GRAND TOTAL	\$ <u>2,416,000</u>	\$ <u>184,000</u>	\$ <u>2,600,000</u>

<sup>1/</sup> Includes contingency

<sup>2/</sup> Allocation of Contingency funds among the various projects will be subject to A.I.D. approval. Use of Contingency funds will be subject to the same requirements as those noted on Annexes VI, VII, VIII and IX (equipment lists for the several projects).

Say, the new A.I.D. Agricultural Project Support Loan is \$2,600,000.

By these figures, the host country is financing slightly over half of the costs of the four projects. Total A.I.D. assistance amounts to 37 percent, five-sixths of which is in the form of technical assistance/commodity grants.

The Project Committee recommends that the loan be authorized on the following terms: maturity of 40 years including a ten-year grace period; interest at 2 percent per annum during the grace period and 3 percent thereafter; repayment of interest and principal in U.S. dollars.

#### C. Other Donor Financing

As noted in the four project PROPs, there are interrelationships with the efforts of other donors and, in the case of the seed, manpower, and research efforts, among each one. A.I.D.'s capital and technical assistance inputs to the manpower project will be matched by IDA-financing of physical expansions to Ukiriguru and Mpwapwa MATIs as well as Mtwara MATI and new construction of four rural training centers. Norwegian and Danish assistance are contributing technical services to the MATIs and the UDSM Faculty of Agriculture, respectively. The research project in turn is complemented by the Canadian program at Moshi in wheat varietal testing and production area selection, and together both of these efforts directly relate to A.I.D.'s Seed Multiplication Project. The Masai project is coordinating closely with IDA's \$27 million program in large-scale ranch and marketing development. Of special interest are plans for IDA assistance in marketplace, stock route, and holding ground construction in Masai land itself. IDA's processing plant sub-projects will also make substantial inputs to the ultimate success of the Masai project.

#### D. Prospects for Repayment

Tanzania is receiving development aid from a large and growing number of donors. Most of this aid is provided on very favorable terms. Supplier credits have been kept to a minimum. In view of Tanzania's commitment to development and its generally favorable development performance, the aid pipeline will probably continue to grow along with actual disbursements. The external debt service burden is currently around 8 percent and should remain within manageable proportions for the foreseeable future provided foreign donors are prepared to continue lending on concessionary terms and that exports will grow at not less than 6 percent per annum. However, the slow growth of exports in recent years makes it somewhat doubtful that this rate will indeed be achieved.

Long range projections indicate that with an export growth rate of 6 percent, and a constant investment rate of about 19 percent of monetary GNI at market prices, Tanzania's net public capital inflow requirements would grow about 17 percent per annum. Disbursements as a proportion of imports would slowly increase to about 27 percent in 1980 while the debt service ratio would move up to about 11 percent in that year. It should be emphasized that these projections are based on the assumption that the average terms of Tanzania's future borrowing will continue to be very favorable. A hardening of those terms would soon be reflected in a higher debt service burden. Tanzania's capacity to service external loans on conventional terms is limited; moreover some allowance must be made for Tanzania's liability on account of the external debt of East African Community organizations all of which is on conventional terms. Hence, although Tanzania has some margin for borrowing on conventional terms, it would be desirable for as much assistance as possible to be on concessionary terms. 1/

On the basis of the above, the Project Committee concludes that there are reasonable prospects for repayment of this loan although the projected balance of payments argues for the easiest possible terms under A.I.D. governing legislation.

#### V. Implementation and Operation Plan

##### A. Project Schedule

It is anticipated that the bulk of the loan will be drawn down within a 12 to 18 month period. Several tranches of equipment, however, for the third heavy equipment "spread" on the Masai Livestock project and Seed Multiplication project's Njombe farm requirements will be delayed somewhat pending evaluation of further project experience and subsequent detailed equipment needs. The loan should be fully disbursed by the middle of 1976. Chronological progress would appear as follows:

June 15, 1973	Loan authorized
June 30, 1973	Draft Loan Agreement presented to GOT
June 30, 1973	Seed Act passed by GOT Parliament and signed by President (satisfying one C.P.)
July 15, 1973	Loan Agreement signed

1/ Source: The Economic Development and Prospects of Tanzania, March 1972.

July 15 - Sep 1, 1973	Complete Design/site survey for four (4) Ukiriguru houses, one (1) Mpwapwa house
September 15, 1973	Initial Conditions Precedent satisfied; A.I.D. approves Arusha workshop construction plans; publish construction synopsis in CBD
July - Sept. 1973	Bulk of construction and farm equipment financed under 621-H-015 loan arrives
Sept. - Dec. 1973	Masai heavy equipment specialist and Arusha workshop mechanic/manager arrive
Sept. 15, 1973	EI (Seed Contractor) and NEF (Masai Contractor) and IITA/CIMMYT (Research Contractor) prepare draft Invitation for Bids (IFB) on initial tranches Seed, Research and Masai equipment under this loan
October 1, 1973	REDSO approves Design/IFB Release for four (4) Ukiriguru, one (1) Mpwapwa houses
October 15, 1973	Release IFB for first Ukiriguru/Mpwapwa house
October 30, 1973	A.I.D. approve IFBs; publish equipment synopsis in CBD; Arusha workshop IFB issued
November 15, 1973	Equipment IFBs issued
November 15, 1973	Open first housing IFBs (4 at Ukiriguru, 1 at Mpwapwa)
November 30, 1973	Workshop bids opened and evaluated
December 30, 1973	Workshop contract awarded; Loan DRA issued
January 1, 1974	Commence construction, first 4 houses Ukiriguru, 1 at Mpwapwa
January 15, 1974	Equipment bids opened and evaluated; workshop construction commences
January 30, 1974	Detailed Ag Manpower equipment list approved by A.I.D.; procurement contract with AAPC or GSA signed
March 1-May 1, 1974	Complete Designs/site surveys for two (2) Njombe houses

March 15, 1974	Equipment contracts awarded; L/Comms issued
May , 1974	A.I.D. and GOT evaluate production results of Arusha and Msimba farms regarding approving Njombe expansion; GOT provide Njombe seed farm.
June 1, 1974	REDSO approve Designs/IFB release
June 15, 1974	Release IFB for Njombe houses
June - Aug. 1974	Research, Seed and Livestock equipment arrives
June 30, 1974	Arusha workshop completed
July 15, 1974	Open housing IFBs, Njombe houses
August 1, 1974	Award housing contracts for Njombe
September 30, 1974	First Mpwapwa house and first Ukiriguru houses finished
Late 1974	Njombe farm equipment procurement commences
Feb. 1, 1975	Njombe houses ready for occupancy
Feb. 1 - Apr. 1, 1975	Complete Designs/site surveys last two Ukiriguru and last two Mpwapwa houses
May 1, 1975	REDSO approve Designs/IFB release last houses
May 15, 1975	Release IFB for last houses
June 15, 1975	Open housing IFBs
July 1, 1975	Award housing contracts
August 1, 1975	Commence construction last houses
Mid 1975	Bulk of Masai water/land use master plans complete and construction experience evaluated; last tranche Masai equipment procured
May 1, 1976	Last Ukiriguru/Mpwapwa houses ready for occupancy
Mid 1976	Final disbursement completed; loan closed out.

## B. Procurement Plan

Wherever possible, equipment to be purchased will be standardized within and among projects. For instance, it is anticipated that general purposes farm tractors for the Seed, Manpower and Research projects will be limited to 65 horsepower range, which is considered satisfactory for each of these three activities. Advantages lie in potential unit price economies of scale and greatly simplified spare parts procurement and management. Other likely areas of standardization are in office equipment, laboratory equipment, and some heavy construction equipment items such as crawler-tractors. The Agricultural Research and initial Seed Multiplication equipment IFBs will be merged, at least in part, to solicit added interest from potential suppliers who prefer to deal with large-lot procurement.

Careful consideration was given to the possibility of proprietary procurement to further the ends of standardization. The only justification would rest in the fact that much of the same type of equipment had been procured under the first Agricultural Projects Support Loan. It was decided that \$1.0 million of procurement under Loan 621-H-015 was insufficient to control over \$2.5 million of procurement under the new loan. Proprietary procurement would have the effect of shutting out new or otherwise presently qualified suppliers in a basically fluid competitive situation. Accordingly, the principle of open competition will be followed in all cases.

In the past, standard practice has been to procure a fixed percentage of optional spare parts (say, five to fifteen percent) along with basic equipment itself. The result has been "dead" inventory not used during the project life, loss due to deterioration and theft, and the general problem of the right part not being available at the right time. Success of the dealer parts and services networks has been spotty; undertakings in suppliers' contracts to provide such facilities have often not been fulfilled, with little practical recourse for the borrower or A.I.D.

A new method which hopefully will overcome the worst of these problems will be used under this loan. The Project Committee proposes, with GOT concurrence, to carefully evaluate in the case of each procurement the minimum spare parts requirement sufficient to maintain and operate equipment for from six months to a year. It is anticipated that in no case would this exceed five percent of the basic order. Subsequently, standby letters of credit would be opened with parts suppliers for additional procurement on an as-needed, when-needed basis. These letters of credit would be established in the five-to-ten percent range, depending upon anticipated requirements for up to three years' equipment operation, and would for the loan probably amount in total to approximately \$200,000. The entire procurement procedure, including operation of the spare parts letters of credit, would become the

responsibility of a special Ministry of Agriculture control activity, headed by a competent procurement expert. The function of this center will be to set up a comprehensive and manageable parts ordering control system. The orders for parts procurement will come in to the center from the various projects' field shops and work sites and the center will check the demands against a current card inventory control system to ensure that the request is justifiable. The center will not stock parts itself, but will be responsible to assure proper distribution when the orders arrive. The control system will be capable of keeping account of all parts available in the stock rooms of the shops in the field, with field shops regularly reporting spare parts usage.

The GOT has agreed in principle to provide basic salary and counterpart support for a procurement officer position. A.I.D. has agreed in principle to provide a DG funded OPEX technician. Negotiations are going on between the GOT and A.I.D. to establish the duties and responsibilities of the position including the nature of responsibilities to assist/monitor preparation of specifications, IFBs and work with responsible GOT agencies in receipt of and analysis of bids, awards to suppliers, assistance in preparation/coordination in issuance of Letters of Credit as well as the role at the time of receipt and inspection of equipment. The loan agreement will include a C.P. to disbursements covering this position and its duties.

#### C. Operation and Maintenance Analysis

Servicing, maintenance and repairs will be performed in three equipment repair shops for the Masai Livestock, Seed Multiplication and Research projects. The type of facility and location is as follows:

1. Arusha Seed Farm: The present facility is limited to a very minor farm equipment repair capabilities. It is proposed to build a complete equipment repair shop capable of servicing heavy construction and farm equipment. This shop will be built from the loan funds under the second loan phase and will be supervised by an EI mechanical specialist. GOT will be responsible to prepare the necessary construction plans for building a complete equipment repair workshop. The necessary tools and shop equipment will be procured under the loan through procurement services contract on quotation basis.

2. Msimba Seed Farm: This shop will be similar to the one above, capable of handling both heavy construction equipment and farm equipment. There is an existing repair shop facility located at this site, used mostly for servicing farm equipment. Therefore it will be necessary to alter the building spaces to accommodate warehousing and repair of heavy construction equipment. GOT will be responsible to prepare the necessary plans and pay the construction cost of this alteration. The necessary shop tools and equipment for this location is being purchased under the A.I.D. loan 621-H-015. This shop will be supervised by an incumbent EI mechanical specialist.

3. Njombe Seed Farm: This shop will have the capability to service only agricultural equipment and will not be as elaborate as the first two above. Preliminary indications are that this shop will be in the area of Njombe adjacent to Tanzanian Wattle Company (TANWAT) operations. It is proposed to use the TANWAT servicing facilities as well as necessary supervision for servicing and repairing these units.

In addition to the above three servicing facilities, there will be a heavy construction equipment mechanic/operator assigned to the hydro-development equipment provided under the Masai project. This individual will be posted in the areas where the heavy equipment will be operating. His responsibility will consist of supervising the operation, maintenance and repair of all of the heavy equipment in the field, as well as in the shops. This heavy construction equipment, depending upon its working location, will be sent for repairs either to Arusha shop or Msimba shop. It is anticipated that Masai equipment will be routed normally to the Msimba shop in the early years of the project, gradually shifting over to Arusha shop as activities commence in northern Masailand.

It is proposed that first echelon preventive maintenance work be accomplished in the field at the construction sites. Basic maintenance equipment has been provided under the first loan. Second echelon repair work and possibly some third echelon repair work would be carried out in the three above-designated repair shops. Most third echelon repair work which requires specialized tools and equipment will be accomplished by the local representatives of the dealers. All manufacturers bidding on equipment to be procured for this project will be required to have a qualified local representative capable of servicing and stocking spare parts in Tanzania. Examples of first echelon work would be filter and oil changes and brake adjustment; second echelon - pulling engines and tracks and some interval engine work; third echelon - final drive and differential repair and track rebuild.

## VI. General Effects of the Loan

### A. Employment Aspects

Careful consideration has been given to applying the proper mix of the basic factors of production - land, labor and capital - to the four agricultural sector projects supported under this loan.

Equipment provided hereunder for the Manpower project is considered to be optimum to effectively train the GOT's agricultural extension advisors. The two MATT's to be supported by AID assistance will matriculate together 235 certificate holders and 76 diploma graduates annually. And by its very nature, the work of these extension advisors is labor-intensive.

Relative to the magnitude of the capital input, the Ag Research project can be considered to be labor-intensive as well. Plant breeding technology demands meticulous hand cultivation and harvesting in most cases so as to ensure accuracy of data and protection of physical

output (e.g., hybrid seed varieties). A core of scientists, technicians and skilled farm labor will be augmented as necessary by casual labor hired locally. However, perhaps the most important employment aspect of both the Research and Manpower projects is that the output of each, that is improved plant varieties and the trained manpower to introduce them, will indirectly contribute to an increase in average farm employment, at least over the medium term, as rigorous cultivation practices are introduced.

As noted in the Seed Multiplication revised PROP, the operation of the seed foundation farms is necessarily capital intensive due to the need for timely cultivation and harvesting and guaranty of production uniformity. Nevertheless, it is estimated that the four seed farms at Msimba, Arusha and Njombe will employ up to 75 permanent staff plus seasonal (casual) labor as required. As noted above, this project's input to food crops subsector development will, indirectly encourage medium-term increases in Tanzania on-farm employment.

While the principal goals of the Masai Livestock project are to dramatically increase marketed beef production and bring the semi-nomadic Masai into the mainstream of Tanzanian socioeconomic development, there will also be substantial employment spin-off. While the GOT will be employing a permanent cadre of approximately 100 in the range, veterinary and hydrodevelopment programs, significant numbers of local and regional manual labor will be used to build water distribution lines, settlement sites, markets and so on. Much of this labor will be donated by the Masai themselves as part of their contribution to ranching association development. Aside from the infra-structural development needs, operation of cattle dips, water points, markets and transport networks will involve large numbers in a hitherto economically stagnant area.

#### B. Impact on the U.S. Economy and Balance of Payments

Code 941 procurement from the United States and selected developing countries is requested. However, for virtually all the categories to be financed under the loan, the United States is the most likely supplier. An exception may be some building materials, in which nearby African and Asian countries are competitive. Building construction services, which are nominal in relation to the loan total, will likely be of Tanzanian origin. The overall negative effect on the U.S. balance of payments, then, should not exceed \$200,000 out of the \$2,600,000 total. As presently envisaged, none of the project outputs will compete with the U.S. economy on world export market in the foreseeable future.

#### C. Effect on Private Enterprise

All equipment and services under the loan will be provided from private firms, either directly through the IFB or quotation methods or indirectly through GSA competitive procurement. The

possibility of excess property purchase has been evaluated and found to be unlikely. All four projects will have as their goal benefit to small farmers and ranchers in Tanzania.

## VII. Conditions Precedent and Covenants

The following conditions and covenants will be discussed with the GOT during the negotiations of this loan and may be included as conditions precedent or covenants as appropriate.

### 1. Masai Livestock Project Support

A covenant will be discussed which will assure that the GOT will utilize the equipment procured in direct support of the projects operations in the Masai district of the Arusha Region.

### 2. Seed Multiplication Project Support

Three CPs will be discussed and included as follows:

a) A C.P. to provide that the GOT will enact a seed certification act satisfactory to A.I.D. prior to any disbursements in support of this project;

b) A C.P. which will assure that the GOT has developed the Arusha and Masimba farms production and sale of foundation seed to a level acceptable to A.I.D. and has also provided for implementation of the seed law (see note above). This C.P. would not prevent use of loan funds in support of the Arusha and Masimba farms or the Seed Laboratory but would need to be satisfied prior to disbursement of funds for the Njombe Seed Farm (not including construction of two (2) houses); and,

c) A C.P. related to the disbursement of funds for the construction of the Arusha shop (\$75,000). This discussion, and the appropriate C.P., will note the need for USAID/Tanzania to review the design/specifications and the requirement for REDSO/EA approval.

### 3. Agricultural Manpower Support

While not intended to be a C.P. or a covenant, the agreement of the GOT to establish a tenure system for the personnel attached to the MATIs will be discussed with the GOT and related to the relevant conditions described in the Agricultural Manpower PROP and the allied PRO-AG.

### 4. Commodity Procurement

A.I.D. has agreed to provide a DG funded procurement officer to support and assist the GOT in commodity procurement and establishment of a spare parts management system. The details of the duties and responsibilities allied with this OPEX position and the type of GOT support, i.e., counterparts, secretarial services, office facilities, etc., will be negotiated and made a C.P. to the procurement of commodities funded under this loan.

CHECKLIST OF STATUTORY CRITERIA  
DEVELOPMENT LOAN FUND

Many of the questions require only yes or no answers. Others, however, must be answered more fully. In those cases, a specific reference to explicit discussion of the matter in the loan paper will suffice. But where the loan paper does not deal explicitly with a matter that clearly requires more than a yes or no response, sufficient response must be made to indicate that the matter has been appropriately considered.

The following abbreviations are used in the checklist:

FAA - Foreign Assistance Act of 1961, as amended, incorporating amendments effected by the Foreign Assistance Act of 1969.

App. - Foreign Assistance and Related Agencies Appropriations Act, 1971.

MMA - Merchant Marine Act of 1936, as amended.  
Space for answers is provided in the margin to the right of each question. This form must be made a part of the Capital Assistance Paper.

I. COUNTRY PERFORMANCE

A. Progress Towards Country Goals

1. FAA §§201(b)(5), 201(b)(7),  
201(b)(8), 208. Discuss the extent  
to which the country is:

(a) Making appropriate  
efforts to increase food  
production and improve  
means for food storage and  
distribution.

Tanzania is making appropriate  
efforts in this direction.  
Loan and related TA projects  
directly relate to this effort.

(b) Creating a favorable  
climate for foreign and  
domestic private enterprise  
and investment.

A generally favorable climate is  
considered to exist for foreign  
and domestic private enterprise  
in Tanzania. The GOT has signed  
an Investment Guaranty Agreement.

(c) Increasing the people's  
role in the developmental  
process.

Satisfied. The Arusha  
Declaration placed prime  
emphasis on development as  
a responsibility of "rural  
peoples."

*(d) Allocating expenditures to development rather than to unnecessary military purposes or intervention in other free countries' affairs.*

Satisfied. Major budget allocations are to be development and major non-defense budgets. See Item D.2 below.

*(e) Willing to contribute funds to the project or program.*

Tanzania will contribute approximately 50% of the costs of the four projects complemented by the loan.

*(f) Making economic, social, and political reforms such as tax collection improvements and changes in land tenure arrangement; and making progress toward respect for the rule of law, freedom of expression and of the press, and recognizing the importance of individual freedom, initiative, and private enterprise.*

Tanzania's record in these respects is satisfactory, and even more progress can be anticipated.

*(g) Responding to the vital economic, political, and social concerns of its people, and demonstrating a clear determination to take effective self-help measures.*

Satisfied. The Arusha Declaration and the Doctrine of Self Reliance satisfy this requirement.

B. Relations with the United States

1. FMA §620(c). Is the government indebted to any U.S. citizen for goods or services furnished or ordered where: (a) such citizen has exhausted available legal remedies, including arbitration, or (b) the debt is not denied or contested by the government, or (c) the indebtedness arises under such government's, or a predecessor's unconditional guarantee?

We are not aware of any such case.

2. FMA §620(d). If the loan is intended for construction or operation of any productive enterprise that will compete with U.S. enterprise, has the country agreed that it will establish appropriate procedures to prevent export to the U.S. of more than 20% of its enterprise's annual production during the life of the loan?

The loan is not so intended. Masai livestock production will, for the foreseeable future, be allocated to domestic consumption.

3. FAA §620(a)(1). Has the country's government, or any agency or subdivision thereof, (a) nationalized or expropriated property owned by U.S. citizens or by any business entity not less than 50% beneficially owned by U.S. citizens, (b) taken steps to repudiate or nullify existing contracts or agreements with such citizens or entity, or (c) imposes or enforced discriminatory taxes or other exactions, or restrictive maintenance or operation conditions? If so, and more than six months has elapsed since such occurrence, identify the document indicating that the government, or appropriate agency or subdivision thereof, has taken appropriate steps to discharge its obligations under international law toward such citizen or entity? If less than six months has elapsed, what steps if any has it taken to discharge its obligations?

Satisfied. On only one occasion has the GOT nationalized property owned by U.S. citizens. In 1968 a plantation belonging to Mr. and Mrs. William Kneib was expropriated. Appropriate steps were taken by the GOT to discharge its obligations and settlement of the claim was reached in 1968. Ref: State 187268.

4. FAA §620(j). Has the country permitted, or failed to take adequate measures to prevent, the damage or destruction by mob action of U.S. property, and failed to take appropriate measures to prevent a recurrence and to provide adequate compensation for such damage or destruction?

Tanzania's actions in this regard are satisfactory.

5. FAA §620(l). Has the government instituted an investment guaranty program under FAA 0221(h)(1) for the specific risks of inconvertibility and expropriation or confiscation?

Yes

6. FAA §620(o); Fishermen's Protective Act of 1954, as amended, Section 5. Has the country seized, or imposed any penalty or sanction against, any U.S. fishing vessel on account of its fishing activities in international waters? If, as a result of a seizure, the U.S.G. has made reimbursement under the provisions of the Fishermen's Protective Act and such amount has not been paid in full by the seizing country, identify the documentation which describes how the withholding of assistance under the FAA has been or will be accomplished.

No

7. FAA §620(a). Has the country been in default, during a period in excess of six months, in payment to the U.S. on any FAA loan?

No

8. FAA §620(t). Have diplomatic relations between the country and the U.S. been severed? If so, have they been renewed?

No

C. Relations with Other Nations and the U.N.

No

1. FAA 8620(i). Has the country been officially represented at any international conference when that representation included planning activities involving insurrection or subversion directed against the U.S. or countries receiving U.S. assistance?

2. FAA 88625(a), 620(n); *has the country sold, furnished, or permitted ships or aircraft under its registry to carry to Cuba or North Viet-Nam items of economic, military, or other assistance?*

We are not aware of any such case.

3. FAA 8620(u); App. 102. What is the status of the country's U.N. dues, assessments, or other obligations? Does the loan agreement bar any use of funds to pay U.N. assessments, dues, or arrearages?

The status of Tanzania toward the U.N. in these respects is satisfactory.

D. Military Situation

1. FAA 8620(i). Has the country engaged in or prepared for aggressive military efforts directed against the U.S. or countries receiving U.S. assistance?

No

2. FAA §620(a). What is (a) the percentage of the country's budget devoted to military purposes, and (b) the amount of the country's foreign exchange resources used to acquire military equipment? Is the country diverting U.S. development assistance or P.L. 480 sales to military expenditures? Is the country diverting its own resources to unnecessary military expenditures? Has the country spent money for sophisticated weapons systems?

Tanzania is not considered to use an excessive amount of its budget and foreign exchange for military purposes and equipment. It is not diverting U.S. assistance to military expenditures. The GOT has in recent years devoted approximately 6% to 7% of its budget to military purposes and uses approximately 0.5% of its foreign exchange resources to acquire military equipment. Tanzania is not diverting any U.S. assistance to military expenditures nor is it diverting its own resources to unnecessary military expenditures.

## II. CONDITION OF THE LOAN

### A. General Soundness

#### -- Interest and Repayment

1. FAA §§201(c), 201(b)(2). Is the rate of interest excessive or unreasonable for the borrower? Are there reasonable prospects for repayment? What is the grace period interest rate; the following period interest rate? Is the rate of interest higher than the country's applicable legal rate of interest?

The proposed terms of the loan are considered reasonable for Tanzania, and there are reasonable prospects of repayment. The rate of interest is not higher than Tanzania's legal rate of interest.

#### -- Financing

1. FAA §201(b)(1). To what extent can financing on reasonable terms be obtained from other free-world sources, including private sources within the U.S.?

We are not aware that other free-world sources are prepared to make the particular loan on reasonable terms at this time.

#### -- Economic and Technical Soundness

1. FAA §§201(b)(2), 201(c). The activity's economic and technical soundness to undertake loan; does the loan application, together with information and assurances, indicate that funds will be used in an economically and technically sound manner?

Yes.

2. FAA §611(a)(1). Have engineering, financial, and other plans necessary to carry out assistance, and a reasonably firm estimate of the cost of assistance to the U.S., been completed?

Yes.

3. FAA §611(b); App. §101. If the loan or grant is for a water or related land-resource construction project or program, do plans include a cost-benefit computation? Does the project or program meet the relevant U.S. construction standards and criteria used in determining feasibility?

Satisfied. See Annex V relative to Masai livestock project.

4. FAA §611(e). If this is a Capital Assistance Project with U.S. financing in excess of \$1 million, has the principal A.I.D. officer in the country certified as to the country's capability effectively to maintain and utilize the project?

Yes. See Annex II.

B. Relation to Achievement of Country and Regional Goals

-- Country Goals

1. FAA §§207, 281(a). Describe this loan's relation to:

a. Institutions needed for a democratic society and to assure maximum participation on the part of the people in the task of economic development

All four projects complemented by this loan will serve to transform Tanzania's rural sector. The Masai livestock project directly will involve the indigenous people in the development effort.

- b. *Enabling the country to meet its food needs, both from its own resources and through development, with U.S. help, of infrastructure to support increased agricultural productivity.*
- Satisfied. The loan directly relates to increasing agricultural productivity.
- c. *Meeting increasing need for trained manpower.*
- Satisfied re manpower project. Not applicable to other projects.
- d. *Developing programs to meet public health needs.*
- No direct effect.
- e. *Assisting other important economic, political, and social development activities, including industrial development; growth of free labor unions; cooperatives and voluntary agencies; improvement of transportation and communication systems; capabilities for planning and public administration; urban development; and modernization of existing laws.*
- Satisfied. The related four projects will have a direct positive influence on the development of cooperatives, construction of rural access roads, and increased GOT agricultural program administration, respectively.
2. FAR §201(b)(4). *Describe the activity's consistency with and relationship to other development activities, and its contribution to realizable long-range objectives.*
- Satisfied. See Sections I.A. and I.B.

3. FAA §201(b)(9). How will the activity to be financed contribute to the achievement of self-sustaining growth?
- Satisfied. Projects supported will mutually increase agricultural productivity towards self-sufficiency level.
4. FAA §201(f). If this is a project loan, describe how such project will promote the country's economic development, taking into account the country's human and material resource requirements and the relationship between ultimate objectives of the project and overall economic development.
- Satisfied. See Sections I and II of this paper.
5. FAA §201(h)(3). In what ways does the activity give reasonable promise of contributing to development of economic resources, or to increase of productive capacities?
- Satisfied. See Sections I and II of this paper.
6. FAA §221(b). How does the program under which assistance is provided recognize the particular needs, desires, and capacities of the country's people; utilize the country's intellectual resources to encourage institutional development; and support civic education and training in skills required for effective participation in political processes.
- Satisfied. The A.I.D. program in Tanzania has been developed and pursued with all these criteria in mind.

7. FMA 0501(a). How will this loan encourage the country's efforts to: (a) increase the flow of international trade; (b) foster private initiative and competition; (c) encourage development and use of cooperatives, credit unions, and savings and loan associations; (d) discourage monopolistic practices; (e) improve technical efficiency of industry, agriculture, and commerce; and (f) strengthen free labor unions?

- (a) Not applicable;
- (b) agricultural private enterprise will directly benefit;
- (c) Masai livestock project assists cooperative development directly;
- (d) increased agricultural production discourages monopolies;
- (e) see Section II;
- (f) not applicable.

8. FMA 0202(a). Indicate the amount of money under the loan which is: going directly to private enterprise; going to intermediate credit institutions or other borrowers for use by private enterprise; being used to finance imports from private sources; or otherwise being used to finance procurements from private sources.

Satisfied. All or almost all of the entire loan amount will finance goods and services from private sources.

9. FMA 0511(a)(2). What legislative action is required within the recipient country? What is the basis for a reasonable anticipation that such action will be completed in time to permit orderly accomplishment of purposes of loan?

Satisfied. Promulgation of the Seed Act will be a condition precedent to disbursement of the Seed Multiplication portion of the loan. The Seed Act is now before Parliament and passage is anticipated o/a 6/30/73.

-- *Regional Goals*

1. FAA 8619. *If this loan is* Satisfied. *The GOT is* using multiple foreign sources of finance for the food crops and livestock subsector program. See Section V. *assisting a newly independent country, to what extent do the circumstances permit such assistance to be furnished through multilateral organizations or plans?*

2. FAA 8709. *If this loan is* Not applicable. *directed at a problem or an opportunity that is regional in nature, how does assistance under this loan encourage a regional development program? What multilateral assistance is presently being furnished to the country?*

C. Relation to U.S. Economy

-- *Employment, Balance of Payments, Private Enterprise*

1. FAA 68201(b)(6); 102, Fifth. *What are the possible effects of this loan on U.S. economy, with special reference to areas of substantial labor surplus? Describe the extent to which assistance is constituted of U.S. commodities and services, furnished in a manner consistent with improving the U.S. balance of payments position.*

Satisfied. See Section V. Regarding the second question, approximately \$2.5 million of the loan will be for commodity/equipment importation and \$250,000 for local construction of housing and repair facilities.

2. FAA 63612(h), 639(h). What steps have been taken to assure that, to the maximum extent possible, foreign currencies earned by the U.S. and local currencies contributed by the country are utilized to meet the cost of contractual and other services, and that U.S. foreign-owned currencies are utilized in lieu of dollars?

Satisfied. The GOT contribution is the maximum contribution permissible given the country's financial situation. The U.S. has no Tanzanian currency that could be used in lieu of dollars for its local cost contribution.

3. FAA 6601(d), App. 109. If this loan is for a capital project, to what extent has the Agency encouraged utilization of engineering and professional services of U.S. firms and their affiliates? If the loan is to be used to finance direct costs for construction, will any of the contractors be persons other than qualified nationals of the country or qualified citizens of the U.S.? If so, has the required waiver been obtained?

First question - not applicable. Second question - it is anticipated that all physical construction (housing, etc.) will be carried out by local Tanzanian contractor. Request for the appropriate waiver is going forward as part of this CAP.

4. FAA 6608(a). Provide information on measures to be taken to utilize U.S. Government excess personal property in lieu of the procurement of new items.

Normal A.I.D. measures will be taken.

5. FAA 6602. What efforts have been made to assist U.S. small business to participate equitably in the furnishing of commodities and services financed by this loan?

Normal A.I.D. procedures will be followed.

6. FAA §621. If the loan provides technical assistance, how is private enterprise on a contract basis utilized? If the facilities of other Federal agencies will be utilized, in what ways are they particularly suitable; are they competitive with private enterprise (if so, explain); and how can they be made available without undue interference with domestic programs?

Satisfied. The loan will not provide technical assistance.

7. FAA §611(c). If this loan involves a contract for construction that obligates in excess of \$100,000, will it be on a competitive basis? If not, are there factors which make it impracticable?

Satisfied. Contracts will be awarded on a competitive basis.

#### Procurement

1. FAA §602(a). Will commodity procurement be restricted to U.S. except as otherwise determined by the President?

Restricted to Code 941 (U.S. and developing) countries, except as allowed in accompanying waiver.

2. FAA §604(b). Will any part of this loan be used for bulk commodity procurement at adjusted prices higher than the market price prevailing in the U.S. at time of purchase?

No

3. FAA §602(a). Will any part of this loan be used for procurement of any agricultural commodity or product thereof outside the U.S. when the domestic price of such commodity is less than parity?

No

D. Other Requirements

Yes

1. FAA §601(b). Is the country among the 29 countries in which development loan funds may be used to make loans in this fiscal year?

2. App. 106. Does the loan agreement provide, with respect to capital projects, for U.S. approval of contract terms and firms?

Satisfied. Loan Agreement will provide for U.S. approval of contract terms.

3. FAA §620(k). If the loan is for construction of a productive enterprise, with respect to which the aggregate value of assistances to be furnished will exceed \$100 million, what preparation has been made to obtain the express approval of the Congress?

Not applicable.

4. PAA §620(b), §20(f); App. §109(b). Has the President determined that the country is not dominated or controlled by the international Communist movement? If the country is a Communist country (including, but not limited to, the countries listed in PAA §620(f)) and the loan is intended for economic assistance, have the findings required by PAA §620(f) and App. §109(b) been made and reported to the Congress?

Satisfied. Such determination has been made.

6. PAA §620(h). What steps have been taken to insure that the loan will not be used in a manner which, contrary to the best interest of the United States, promotes or assists the foreign aid projects of the Communist-bloc countries?

Satisfied. Loan Agreement will restrict use of funds to AID project purposes.

7. App. §110. Will any funds be used to finance procurement of iron and steel products for use in Vietnam other than as contemplated by §110?

No

8. PAA §636(i). Will any part of this loan be used in financing non-U.S.-manufactured motor vehicles? If so, has the required waiver been obtained?

No.

9. FAA §620(a)(1) and (2), 620(p);  
App. §117. Will any assistance  
 be furnished or funds made avail-  
 able to the government of Cuba or  
 the United Arab Republic? No
10. FAA §620(a). Will any part  
 of this loan be used to compensate  
 owners for expropriated or nationalized  
 property? If any assistance has  
 been used for such purpose in the  
 past, has appropriate reimbursement  
 been made to the U.S. for sums diverted? No
11. FAA §201(f). If this is a  
 project loan, what provisions have  
 been made for appropriate partici-  
 pation by the recipient country's  
 private enterprise? Satisfied. Local construction  
 firms will construct staff  
 housing financed under the  
 loan.
12. App. §104. Does the loan  
 agreement bar any use of funds to  
 pay pensions, etc., for persons  
 who are serving or who have served  
 in the recipient country's armed  
 forces? Yes.

13. MAA Sec. 901.6. Does the loan agreement provide, for compliance with U.S. shipping requirements, that at least 50% of the gross tonnage of all commodities financed with funds made available under this loan (computed separately by geographic area for dry bulk carriers, dry cargo liners, and tankers) be transported on privately owned U.S.-flag commercial vessels to the extent such vessels are available at fair and reasonable rates for U.S. flag vessels. Does the loan agreement also provide, for compliance with U.S. shipping requirements, that at least 50% of the gross freight revenues of goods shipped under this loan must be earned by privately owned U.S.-flag commercial vessels to the extent such vessels are available at fair and reasonable rates for U.S.-flag vessels.
14. FAA. Section 481. Has the country failed to take adequate steps to prevent narcotic drugs from entering the U.S. unlawfully?
15. FAA. Section 604(e). Has there been compliance with restriction against procuring with AID funds agricultural commodities outside the U.S. when the domestic price of such commodity is less than parity.

Yes.

No.

Yes.



OFFICIAL USE  
UNITED STATES OF AMERICA  
AGENCY FOR INTERNATIONAL DEVELOPMENT

LOAN 621-H (Agr. Proj. Support  
Loan II)

P. O. Box 9130,  
Dar es Salaam, Tanzania

AID-DLC/P-2005  
ANNEX II

AGRICULTURE PROJECTS SUPPORT LOAN  
CERTIFICATION PURSUANT TO FAA SECTION 611E

I, William D. Green, the Principal Officer of the Agency for International Development in Tanzania, having taken into account, among other things, the maintenance and utilization of projects in Tanzania previously financed or assisted by the United States, the fact that manpower assistance being provided under technical assistance projects by the United States, building facilities for training agricultural personnel and assistance toward livestock ranch associations are being provided by I.B.R.D. and incipient development towards efficient agriculture programs in Tanzania, and the interest of the TanGov, A.I.D., the I.B.R.D., and possibly other donors, in providing the technical and financial means necessary to implement this program, do hereby certify that in my judgment Tanzania has shown both the financial capability and human resource capability to effectively maintain and utilize the capital assistance provided under the Agricultural Projects Support Loan.

SIGNED:

William D. Green  
Director  
USAID/Tanzania

DATE:

3/19/73

ENVIRONMENTAL ASPECTS

AID-DIC/P-2005

Of the four projects supported through this loan, only one, Masai Development, holds significant potential for environmental impact. In the case of the Research, Seed, and Manpower projects, technical and capital activities are taking place on previously developed sites. The research station and substations have been operating for some time, the manpower institutes at Ukirigiru and Mpwapwa to be assisted by A.I.D. are well established, and the seed farms (with the exception of some acreage at Msimba) will occupy previously cleared agricultural production land.

In Masailand, however, the A.I.D.-assisted project will make an impact over a vast area which represents a delicate balance of wildlife, livestock, and human populations. On the whole, these population densities are quite low and in the case of livestock and human population, at least, reflect relatively recent occupation historically. As already noted, this development project will result over the course of time in extensive water supply development, access road construction and construction of numerous marketing/distribution centers. The potential for ecological disruption is obvious. The December OST Report to the President 1/ notes the need for comprehensive land and water resource inventories, including maps yielding basic quantitative and qualitative information. Insofar as animal resources are concerned, the Report calls for "better utilization of natural range and grasslands" and consideration of management systems coordinating domestic livestock and wildlife development. Precisely these steps are now being undertaken by the GOT and will be an integral part of the Masai Livestock Development project. Units will be mapped from available aerial photograph mosaics recording range site and condition, existing and planned physical development and season of use (wet and dry) for the ranch subdivisions. The ability of the land to maintain optimum domestic livestock/wildlife populations will be carefully controlled so as to prevent overcrowding and resultant ecological deterioration. The Ngorongoro Conservation Area, a subdivision within Masailand, presently exists as a management system integrating preservation of wildlife (with concomitant tourism benefits) and livestock development (with concomitant food supply benefits). Others will follow within the project limits.

Like most developing countries, Tanzania is undergoing rapid population increase. It is reasonable to assume from recent experience in and around Masailand that unplanned subsistence agricultural development would encroach upon the project area in the absence of Tanzania's Range Act and overall GOT control and supervision. The result would be accelerated destruction of wildlife and the loss of new protein supplies so vital to Tanzania's nutritional requirements. Rather than doing nothing, the GOT is committed to an orderly readjustment of Masailand's ecology including as necessary some reduction in wildlife population and opening up of heretofore underutilized "virgin" lands. The Project Committee considers that the GOT's plans as embodied in this project are environmentally sound and should be supported.

1/ **Protecting the World Environment in the Light of Population Increase.**

HOUSING PROVIDED UNDER THE LOAN

AID-DLC/P-2005

I. Housing Provided in Support of Seed Multiplication

- (a) One house at Arusha, pre-fabricated construction, 3 bedroom available through MOA Forest Products Laboratory. Estimated cost, including foundations, assembly and standard GOT furnishings, \$10,000.
- (b) Two houses at Njombe. For details see Section III below.

II. Housing Provided in Support of Agricultural Manpower Development

Nine (9) houses will be provided at the following locations:

Six (6) houses at the Ukiriguru Ministry of Agriculture Training Institute. Three (3) houses at the Mpwapwa Ministry of Agriculture Training Institute.

III. General Specifications

Houses referenced in I (b) above and in Section II, a total of eleven (11) houses will meet the following general specifications:

NOTE: All houses to be Standard GOT Type A Senior Staff one story single units.

(a) Type of Construction

Nine inch thick cement block load bearing masonry walls. Asbestos sheet roofing on wooden rafters and main beams. False ceiling of either cellotex or fiber board. Floors as follows: Kitchen; cement; tile; dining and living rooms, terrazzo or PVC; bath, corridors and bedrooms, granolithic paving. Screened, Louvered and burglar-protected windows, flush wooden doors.

(b) Area and Cost Estimates

<u>Location</u>	<u>Square Footage</u>	<u>\$ per sq. ft.</u>
Bedrooms	572	\$9.15
Dining/Living	392	8.90
Kitchen/Storeroom	168	10.20
Bath	100	11.40
Passageways	176	7.00
Verandah	175	5.70

(c) Furnishings

Standard hard (basic) furnishings per GOT standards for Type A housing.

(d) Cost Estimate

GOT current estimates are at \$15,000 per unit.

Economic AnalysisMasai Livestock ProjectA. Introduction

In view of the fact that, as a result of the January/February 1973 A.I.D. evaluation, output targets for cattle liveweight increase and market offtake were lowered from the original (1969) PROP assumptions, a new analysis of costs and benefits was conducted. The conclusion was that based on certain assumptions the project had an internal rate of return of better than 18 percent, which is considered to be above the opportunity cost of capital for Tanzania. The following is a synopsis of that analysis.

B. Benefits

A single direct economic benefit was chosen for the analysis - net monetary returns from the sale of slaughter steers from eight ranch associations. From baseline data, a 1970 herd size of 386,000 cattle weighed an average 511 pounds apiece. At 3 percent per annum offtake and at U.S. \$.10/pound liveweight, the return from sales for that year was \$414,216. Beginning in 1971 (the first full project year), herd size increases slowly to an assumed optimum of 420,000 head for eight associations in 1975 and then stabilizes. Similarly, association-by-association as project activities reach them, offtake and liveweight increase to the 1980 targets of 650 pounds liveweight and 12 percent offtake for the entire herd. Since beef quality is expected to improve during the project, the price per pound is assumed to rise from U.S. \$.10 to U.S. \$.1215 in 1975 and stabilize thereafter. The following year-by-year financial projection of returns is therefore derived by multiplying portions of total herd size by the appropriate offtake percentages and liveweights for that component of the herd to yield total beef production in pounds, and then multiplying that total by the assumed price per pound.

Calculation of Net Returns  
from Sale of Slaughter Steers

No. of cattle X offtake % X average liveweight = total pounds sold  
X price per pound = Gross Return

1971

340,000 X .03	= 10,200 X 511	= 5,212,200 X .10	= \$521,220
46,000 X .05	= 2,300 X 550	= 1,265,000 X .10	= 126,500
		Gross Return GR	\$647,720
		1970 Baseline Return	-414,216
		Net Return-NR	\$233,504

1972

351,750 X .03 = 10,552 X 511 = 5,392,328 X .10 =	\$539,232
50,250 X .05 = 2,513 X 550 = 1,381,875 X .10 =	138,188
	<u>\$677,419</u>
	-414,216
NR	<u>\$263,203</u>

1973

308,000 X .03 = 9,240 X 511 = 4,721,640 X .10 =	\$472,164
51,000 X .05 = 2,550 X 550 = 1,402,500 X .10 =	140,250
51,000 X .07 = 3,570 X 575 = 2,052,750 X .10 =	205,275
	<u>\$817,689</u>
	-414,216
NR	<u>\$403,473</u>

1974

262,500 X .03 = 7,875 X 511 = 4,024,125 X .10 =	\$402,412
52,500 X .05 = 2,625 X 550 = 1,443,750 X .10 =	144,375
52,500 X .07 = 3,675 X 575 = 2,113,125 X .10 =	211,312
52,500 X .09 = 4,725 X 625 = 2,953,125 X .10 =	295,313
	<u>\$1,053,412</u>
	-414,216
NR	<u>\$ 639,196</u>

1975

157,500 X .03 = 4,725 X 511 = 2,414,475 X .1215 =	\$293,358
105,000 X .05 = 5,250 X 550 = 2,887,500 X .1215 =	350,831
105,000 X .07 = 7,350 X 575 = 4,226,250 X .1215 =	513,489
52,500 X .09 = 4,725 X 625 = 2,953,125 X .1215 =	358,804
	<u>\$1,516,482</u>
	-414,216
NR	<u>\$1,102,266</u>

1976

52,500 X .03 = 1,575 X 511 = 804,825 X .1215 =	\$97,786
157,500 X .05 = 7,875 X 550 = 4,331,250 X .1215 =	526,246
157,500 X .07 = 11,025 X 575 = 6,339,375 X .1215 =	770,234
52,500 X .09 = 4,725 X 625 = 2,953,125 X .1215 =	358,804
	<u>\$1,753,070</u>
	-414,216
NR	<u>\$1,338,854</u>

1977

105,000 X .05 = 5,250 X 550 = 2,887,500 X .1215 =	\$ 350,831
210,000 X .07 = 14,700 X 575 = 8,452,500 X .1215 =	1,026,978
105,000 X .09 = 9,450 X 625 = 5,906,250 X .1215 =	717,610
(GR) Gross Returns	\$2,095,419
	-414,216
(NR) Net Returns	\$1,681,203

1978

210,000 X .07 = 14,700 X 575 = 8,452,500 X .1215 =	\$1,026,978
105,000 X .09 = 9,450 X 625 = 5,906,250 X .1215 =	717,610
105,000 X .12 = 12,600 X 650 = 8,190,000 X .1215 =	995,085
	\$2,739,673
	-414,216
NR	\$2,325,457

1979

210,000 X .09 = 18,900 X 625 = 11,812,500 X .1215 =	\$1,435,218
210,000 X .12 = 25,200 X 650 = 16,380,000 X .1215 =	1,990,170
	3,425,388
	-414,216
NR	\$3,011,172

1980

420,000 X .12 = 50,400 X 650 = 32,760,000 X .1215 =	\$3,980,340
	-414,216
NR	\$3,566,123

After 1980, benefits are assumed to remain constant through the average life of the installed capital improvements, i.e., 1995, since any further offtake or liveweight progress could presumably be based on additional capitalization.

C. Costs

Capital development costs for the project have been allocated entirely against the development of eight associations. This is probably too conservative since some capital development will be instituted in thirteen other associations by the end of the project in 1980. These capital costs include: (1) A.I.D. loan and grant inputs, (2) IDA inputs for marketing development at 15 percent of the total \$8.5 million credit, and (3) GOT agricultural credit contributions to the association. Recurrent costs, such as OPEX base salaries, GOT salaries and machinery/equipment operating expenses for

the Water Development and Range Management sub-project activities, and the Masai association expenses, more nearly approximate the cost of eight associations only. After 1980, a stable recurrent cost of \$1,525,000 per annum is derived on the basis of (a) innoculating 25,200 slaughter steers for foot/mouth disease and 18,375 weaners for CBPP and Rinderpest at \$.40 and \$.23 delivered cost per inoculation, respectively; (b) tick dipping 420,000 head at \$.60 per head; and providing a minimum nutritional supplement of salt and bone meal to 420,000 head at \$3.00 per head. These annual costs can be expressed graphically as follows:

Project Costs by Year  
(\$ 000's)

Year	Loan Input		AID GRANT	GOT Range Program	GOT Water Program	Credit	Assocs.	Total
	AJD	IDA						
1970	-	-	208	25	45	-	5	283
1971	-	-	207	100	70	-	10	387
1972	-	-	277	200	95	-	10	582
1973	500	-	346	288	193	-	10	1,337
1974	600	-	306	330	382	-	115	1,633
1975	400	500	418	380	377	-	275	2,350
1976	-	500	430	436	387	50	500	2,303
1977	-	300	347	500	370	75	750	2,342
1978	-	-	300	500	355	125	1,000	2,280
1979	-	-	300	500	320	150	1,250	2,520
1980	-	-	-	250	-	-	1,525	1,775
1981	-	-	-	-	-	-	1,525	1,525
1995	-	-	-	-	-	-	1,525	1,525

These cost projections assume that the Masi will directly bear a higher burden of the capital development costs in the latter years of the project through borrowing from GOT agricultural credit facilities and from sales proceeds. Their monetary contribution is minimal initially.

D. Internal Rate of Return Analysis

<u>Year</u>	<u>Net Benefits</u>	<u>Net Costs</u>	<u>(+ or -) Difference</u>	<u>20% Dis-count Factor</u>	<u>Dis-counted Difference</u>	<u>12% Dis-count Factor</u>	<u>Dis-counted Difference</u>
1970	-0-	283,000	-283,000	-0-	-0-	-0-	-283,000
1971	233,504	387,000	-153,496	.833	-127,862	.893	-137,072
1972	263,203	582,000	-318,787	.694	-221,238	.797	-254,073
1973	403,473	1,337,000	-933,527	.579	-540,512	.712	-664,671
1974	639,196	1,633,000	-993,804	.482	-479,013	.636	-632,059
1975	1,102,266	2,350,000	-1,247,734	.402	-501,589	.567	-707,465
1976	1,338,854	2,303,000	-964,146	.335	-322,989	.507	-488,822
1977	1,681,203	2,342,000	-660,797	.279	-184,362	.452	-298,680
1978	2,325,457	2,280,000	45,457	.233	10,591	.404	18,364
1979	3,011,172	2,520,000	491,172	.194	95,287	.361	177,313
1980	3,566,123	1,775,000	1,791,123	.162	290,162	.322	576,741
1981	3,566,123	1,525,000	2,041,123	.135	275,552	.287	585,802
1982				.112	228,606	.257	524,569
1983				.093	189,824	.229	467,417
1984				.078	159,208	.205	418,430
1985				.065	132,673	.183	373,525
1986				.054	110,220	.163	332,703
1987				.045	91,850	.146	298,004
1988				.038	77,563	.130	265,346
1989				.031	63,275	.116	236,770
1990				.026	53,069	.104	212,276
1991				.022	44,905	.093	189,824
1992				.018	36,740	.083	169,413
1993				.015	30,617	.074	151,043
1994				.013	26,535	.066	134,714
1995	3,566,123	1,525,000	2,041,123	.010	<u>20,411</u>	.059	<u>120,426</u>
				(-)	440,477		+ 1,786,838
							<u>440,477</u>

Net Spread At Eight Percentage Points: \$2,227,315

The net spread of \$2,227,315 divided by 8 (the number of percentage points between 12% and 20%) yields \$278,414 per point. By interpolation, then, costs will equal benefits at an internal rate of return of 18.4 percent (\$1,786,838 ÷ 278,414 = 6.4% + 12% = 18.4%).

PRELIMINARY MASAI LIVESTOCK  
EQUIPMENT LIST (IN \$)

ANNEX VI  
Page 1 of 3  
AID-DLC/P-2005

NOTE: The following list of equipment and facilities, to be provided by this loan, will be reviewed by USAID/Tanzania and approved by REDSO/EA prior to procurement. Detailed specifications will be prepared by the responsible GOT agency assisted by project staff and by TDY services from REDSO/EA and/or AID/W as required.

A. Heavy Construction Equipment

<u>Description</u>	<u>Quantity</u>	<u>Unit Price</u>	<u>Total</u>
180 HP Crawler Tractor with hydraulic control, straight blade, and cable control	1	\$ 63,000	\$ 63,000
180 HP Crawler Tractor with hydraulic control, angle blade, and cable control	1	63,000	63,000
180 HP Crawler Tractor with hydraulic control, straight blade, and ripper	1	65,000	65,000
180 HP Crawler Tractor with hydraulic control and straight blade	1	60,000	60,000
65 HP Crawler Tractor with hydraulic control and straight blade	1	25,000	25,000
Non-self-propelled (towed) 12 Cubic Yard scrapers	2	25,000	50,000
Self-propelled elevating scrapers	2	48,000	96,000
130 HP Four-wheel drive tractor with blade	1	22,000	22,000
125 HP Motor Grader	1	36,000	36,000
Tamping Roller	1	10,000	10,000
Trailer-mounted auger and/or cable tool rig	1	30,000	30,000
250 HP Flat bed trucks	3	16,000	48,000
250 HP Dump trucks	2	14,000	28,000
290 HP Truck tractor	1	38,000	38,000
40-Ton capacity Low Bed Trailer	1	12,000	12,000
Drilling Bits and Supplies	Lot		25,000
Sub-Total			<u>\$671,000</u>

B. Veterinary Equipment

<u>Description</u>	<u>Quantity</u>	<u>Unit Price</u>	<u>Total</u>
Refrigerators, 4 Cu.Ft., Kerosene	10	\$ 250	\$ 2,500
Refrigerators, 2 Cu.Ft	2	200	400
Refrigerator, 15 Cu.Ft	1	700	700
Binocular Microscope	1	2,500	2,500
Binocular Stereoscope	1	500	500
Generator, 2 KW	1	700	700
Generator, 2 KW	1	500	500
Batery Chargers	12	42	500
Radio Telephones	10	500	5,000
Calculating Machines, Mech. Operated	4	300	1,200
Bacteriological Staining Kits	3	67	200
Small adding machines	6	83	500
Glassware for Dip Testing	6	50	300
Galvanometers for dip testing	6	8	50
Hand tally counters	6	8	50
Portable Cattle Cnutes	6	500	3,000
Burdizzo for cattle and goats	50	2	100
Veterinary Syringes (20 cc)	100	12	1,000
Veterinary Needles, one dozen	240	5	1,200
Auto. Vac. Syringes, 30 cc & spares	30	33	1,000
One full complement of camping, including large lab. tent, living tent, chairs, tables, gas lamps, stove, etc.	1	1,000	1,000
Resealable plastic bags	Lot	100	100
Analytical scale	1	150	150
Micro. Slides, Stainless steel buckets, stoves, spirit burner, centrifuges, and nucl. equipment	Lot	1,000	1,000
Sub-Total			\$24,150

C. Support Equipment for Hydrologist

<u>Description</u>	<u>Total Price</u>
Test Pump	15,000
Elect. log	15,000
Portable Generator	1,800
Map Reproducer	2,500
Photo Copy Machine	1,000
Soil Sampling and Test Kit	600
Water Test Kit	275
Stereoscope	50
Survey Altimeter	450
Chemical Quality Lab. Equipment	20,000
Water Level Measuring Equipment	5,000
Water Level and Storage Equipment	20,000
Precipatation Station	16,000
Sub-Total	\$97,675

D. <u>Auxiliary Tools</u> (Joiner, Bench Saw, Planer, etc.)		\$ 12,000
E. <u>Audio Visual Equipment</u>		\$ 27,400
F. Initial Spare Parts (5%)	\$ 41,611	
Spare Parts Under Letter of Credit	<u>75,000</u>	<u>\$116,611</u>
	GRAND TOTAL	\$948,836
	ROUNDED TO	\$950,000

NOTE: CIF prices based on recent bidding experiences

PRELIMINARY EQUIPMENT AND FACILITIES  
FOR  
SEED MULTIPLICATION PROJECT

AID-DLC/P-2005

NOTE: The following list of equipment and facilities, to be provided by this loan, will be reviewed by USAID/Tanzania and approved by REDSO/EA prior to procurement. Detailed specifications will be prepared by the responsible GOT agency assisted by project staff and by TDY services from REDSO/EA and/or AID/W as required. These lists will also be developed to separate the items intended for use on the Nojombe Farm from other items.

A. Farm Equipment

<u>Description</u>	<u>Quantity</u>	<u>Unit Price</u>	<u>Total</u>
Wheel type tractor, 65 H.P.	15	\$ 9,500.00	\$142,500.00
Cultivator, six row	7	2,100.00	14,700.00
Loader	3	2,000.00	6,000.00
Harrow and Drawbar	4	2,250.00	9,000.00
Disc Plows (5 discs)	11	2,150.00	23,650.00
Fertilizer Distributors	4	800.00	3,200.00
Two-row Corn Pickers	4	5,300.00	21,200.00
Elevators	2	3,000.00	6,000.00
Grain Drill Press	3	2,300.00	6,900.00
Rotary Hoe	2	1,300.00	2,600.00
Chisel Plow	2	2,650.00	5,300.00
Combines Pickup Reel	3	20,000.00	60,000.00
Planters, six-row	3	5,600.00	16,800.00
Large trucks, 130 HP 22,000 GVW	3	14,200.00	42,600.00
Farm Trailers	7	1,400.00	9,800.00
Pick-up Truck, 6 X 4	2	6,000.00	12,000.00
Fork Lift Trucks	1	9,500.00	9,500.00
Trail Mowers, 7 ft cutter	3	950.00	2,850.00
High Clearance Sprayers	4	6,500.00	26,000.00
Grain Dryer, Portable	2	20,000.00	40,000.00
Stationary Maize Dryer (corn on cob)	1	21,500.00	21,500.00
Corn Sheller	1	8,900.00	8,900.00
Heavy Duty Disc Harrow 15 to 20 ft.	5	5,800.00	29,000.00
			<hr/>
	Sub-Total		\$520,000.00

B. Shop Equipment

Equipment for Arusha Shop and balance  
of equipment for Maimba Shop \$ 31,000.00

Detailed list will include shop/maintenance equipment such as: welders, lathe, grinders, jacks, hand tools, and wrenches, air compressor, drill press, electric drills, chain hoist, and others.

C. <u>Seed Processing Equipment</u>	
Large screen machine; graders; seed heater; gravity cleaner/separator	\$50,500.00
D. <u>Hydraulic Tools</u>	3,000.00
E. <u>Seed Lab Equipment</u>	
Equipment for three auxiliary seed labs such as: bags, sample pans, grain probes, scales, purity work boards, germinators, dockage sieves, moisture meters, others.	10,500.00
F. <u>Office Equipment</u>	
Desks, file cabinets, typewriters, etc.	7,000.00
G. <u>Tag Printer</u>	6,000.00
H. <u>Letter of Credit for Spare Parts</u>	
I. <u>Arusha Shop Construction</u>	75,000.00
NOTE: A specific design is not yet complete. The Loan Agreement will contain a C.P. (See CAP) to assure an acceptable design is available prior to disbursement for this item.	
J. <u>Construction of Two Houses In Njombe</u>	30,000.00
<u>Construction of one house (pre-fab) at Arusha</u>	10,000.00
GRAND TOTAL	\$863,000.00
ROUNDED TO	\$865,000.00

NOTE: CIF prices based on recent bidding experiences in  
Ethiopia, Swaziland and Tanzania, adjusted for late  
1973/early 1974 purchase.

PRELIMINARY AG RESEARCH EQUIPMENT  
AND FACILITIES LIST

NOTE: The following list of equipment and facilities, to be provided by this loan, will be reviewed by USAID/Tanzania and approved by REDSO/EA prior to procurement. Detailed specifications will be prepared by the responsible GOT agency assisted by project staff and by TDY services from REDSO/EA and/or AID/W as required.

These requirements are listed in the following sections, I(A) through I(F) in total amount for project support. Section II of the following list will identify those components to be procured under this loan (\$150,000). The balance of the commodity/facility list will be provided from DG funds or other donors.

I. A. Farm Equipment

<u>Description</u>	<u>Quantity</u>	<u>Unit Price</u>	<u>Total</u>
Vegetable Hand Seeders	14	\$ 100.00	\$ 1,400.00
Hand Bell Seeder	1	500.00	500.00
Seed Cleaner	2	450.00	900.00
Gasoline Threshers (pullman)	4	375.00	1,500.00
Knapsack Sprayers	32	65.00	2,080.00
Hand tools, one lot	Lot	2,000.00	2,000.00
Milk Scales	14	65.00	910.00
Small Seeders	12	65.00	780.00
Small Maize Shellers	12	25.00	300.00
Large Shellers	6	125.00	750.00
Hand Planters	50	6.00	300.00
Clipper Cleaner	7	260.00	1,820.00
Pick-up Trucks, 6 X 4	8	6,000.00	48,000.00
65 H.P. Tractors	7	9,500.00	66,500.00
Reversible Plows	6	1,250.00	7,500.00
Land Plane	1	6,250.00	6,250.00
Cultivators	7	1,250.00	8,750.00
Spike Tooth Harrow	6	500.00	3,000.00
Disc Harrow	7	1,250.00	8,750.00
Farm Wagons	6	750.00	4,500.00
Crop Drier	1	1,900.00	1,900.00
Crop Sprayer	1	750.00	750.00
Rotary Hoe	6	500.00	3,000.00
Middle Buster	6	375.00	2,250.00
Back Fill Blades	2	375.00	750.00
			<hr/>
	Sub-Total		\$174,960.00

B. Lab Equipment

<u>Description</u>	<u>Quantity</u>	<u>Unit Price</u>	<u>Total</u>
Toledo Balances	10	700.00	\$ 7,000.00
Dial-O-Gram Balance	11	95.00	1,045.00
Laboratory Oven Forced Draft	1	1,900.00	1,900.00
Air Conditioners	3	750.00	2,250.00
Dehumidifiers	2	375.00	750.00
Deep Freeze, 20 Cu. Ft.	1	600.00	600.00
Moisture Meter	8	625.00	5,000.00
Drying Oven	1	600.00	600.00
			<hr/>
	Sub-Total		\$ 19,145.00

C. Office Equipment

<u>Description</u>	<u>Quantity</u>	<u>Unit Price</u>	<u>Total</u>
Electric Calculator	2	\$ 1,900.00	\$ 3,800.00
Typewriters	4	250.00	1,000.00
Copies (Small)	1	200.00	200.00
			<hr/>
	Sub-Total		\$ 5,000.00

D. Irrigation

<u>Description</u>	<u>Quantity</u>	<u>Unit Price</u>	<u>Total</u>
Irrigation Equipment	Lot	\$12,500.00	\$ 12,500.00
Irrigation Construction	Lump-Sum	9,000.00	9,000.00
			<hr/>
	Sub-Total		\$ 21,500.00

NOTE: Sprinkler system with aluminum pipes, and an overhead pump system to be moveable. Construction necessary for installation of irrigation heads.

E. Building Alterations

8,000.00

NOTE: To be accomplished by GOT force account, will include double decking stock room, relocation of partitions, overhead crane addition, repair the doors, locks, windows and walls, update lighting and plumbing, painting, etc.

F. Spare Parts Letter of Credit

20,500.00

GRAND TOTAL \$249,105.00

ROUND TO \$250,000.00

NOTES: CIF prices based on recent bidding experience in Ethiopia, Swaziland and Tanzania, adjusted for late 1973/early 1974 purchase.

II. Commodities to be Provided Under this Loan

A. Farm Equipment

	<u>QUANTITY</u>	<u>UNIT PRICE</u>	<u>TOTAL</u>
Pick-up Trucks, 6 X 4	8	\$6,000.00	\$48,000.00
65 HP Tractors	7	9,500.00	66,500.00
Reversible plows	6	1,250.00	7,500.00
Cultivators	7	1,250.00	8,750.00
Backfill Blades	2	375.00	<u>750.00</u>
SUBTOTAL			\$131,500.00

B. Spare parts for farm equipment

18,500.00

GRAND TOTAL

\$150,000.00

NOTE: CIF prices based on recent bidding experience in Ethiopia, Swaziland and Tanzania, adjusted for late 1973/early 1974 purchase.

PRELIMINARY AGRICULTURAL MANPOWER LIST

AID-DLC/P-2005

NOTE: The following list of equipment and facilities, to be provided by this loan, will be reviewed by USAID/Tanzania and approved by REDSO/EA prior to procurement. Detailed specifications will be prepared by the responsible GOT agency assisted by project staff and by TDY services from REDSO/EA and/or AID/W as required.

<u>Description</u>	<u>Qty</u>	<u>Unit Cost</u>	<u>Total Cost</u>	<u>IDA</u>	<u>AID</u>
<u>Library</u>					
Titles	2000	\$ 12.00	\$ 24,000	\$ 3,600	\$ 20,400
<u>Ox Tools</u>					
	various	Lot	2,280	2,280	-
<u>Motor Vehicles</u>					
10-seater vehicles	4	4,700.00	18,800	18,800	-
50-seater bus	4	12,000.00	48,000	48,000	-
4-wheel drive vehicle	4	4,300.00	17,200	17,200	-
			Sub-Total	\$ 84,000	
<u>Office Equipment</u>					
18" Manual typewriter	4	540.00	21,600	2,160	-
Duplicator	4	280.00	1,120	1,120	-
Adding Machine	2	115.00	230	230	-
Calculator	2	120.00	240	240	-
Bicycle	4	45.00	180	180	-
Stencil Maker	2	1,320.00	2,640	2,640	-
Filing Cabinet	6	160.00	960	960	-
			Sub-Total	\$ 7,530	
<u>Teaching Equipment</u>					
16 mm Movie Projector	4	500.00	2,000	-	2,000
35 mm Filmstrip Slide Projector	6	120.00	720	-	720
Over-head Projector	6	300.00	1,800	-	1,800
Micro Projector	4	150.00	600	-	600
8 mm Loop Cartridge Projector	4	200.00	800	-	800
Misc. Visual Aid materials	Lot	800.00	800	-	800
Blackboard Projector	12	5.00	60	-	60
Blackboard Set Squares, 45°	12	5.00	60	-	60
Blackboard Set Squares, 60°	12	5.00	60	-	60
Blackboard Compass Chalk	12	5.00	60	-	60
Movie Projector Screens	4	200.00	800	-	800
Overhead Projection Transparents	Lot	100.00	100	-	100
35 mm Film Strips	Lot	300.00	300	-	300
8 mm Loop Cartridges	Lot	300.00	300	-	300
Varied prints of wall charts	Lot	300.00	300	-	300
Survey Equipment	Lot	6,000.00	6,000	-	6,000
			Sub-Total		\$14,760

Farm Equipment

65 HP Farm Tractor	4	\$ 9,500	\$38,000	-	\$ 38,000
6 Ton Tipping Trailor	4	2,100	8,400	-	8,400
3 Ton Tipping Trailor	4	1,200	4,800	-	4,800
4-Row Planters	4	3,200	12,800	-	12,800
66" Rotary Cutter	4	1,030	4,120	-	4,120
Multipurpose blade terracer	4	520	2,080	-	2,080
Cordwood Saw	2	440	880	-	880
Spinner Broadcaster	2	520	1,040	-	1,040
Post-hole Digger	2	520	1,040	-	1,040
3 disc plough	4	1,380	5,520	-	5,520
Disc Harrow	4	680	2,720	-	2,720
Maize Sheller	2	360	720	-	720
Hand Tools	60 sets	90	5,400	-	5,400
Scales of Balance	L.S.	840	840	-	840
			Sub-Total		\$ 88,360

\* Work Shop Equipment

9,650

Anvils, carpenter's vises, mechanic's vises, carpenter's tools, blacksmith tools, mechanic's tools for tractor and repair, welding equipment, and similar equipment for farm shop work.

\* Veterinary Equipment

12,300

Instrument sterilizer, operation table and lamp, vaginasopes, haemoeytometer, anaesthetic apparatus, syringes and needles, tuberculin syringe, caponizing outfit, worm egg counting chamber, galvano cautery outfit, endotracheal tubes, surgical silk, catgut, gauze bandages, adhesive plaster, suture outfit uterus dilator, etc. No drugs, medications, or vaccines included. Veterinary equipment for Mpwawa only.

\* Laboratory Equipment

75,000

Electric hot plate, Markham semi-micro distillation unit, colorimeter, muffle furnace, PH meter, bacteriological incubator, rubber stoppers, cover glasses, microscope slides, filter papers, rubber tubing, mortar and pestles, watch glasses, wire gauzes, clinical thermometers, test tubes, quickfit laboratory set, micro Kjeldahl digestion unit electrothermal, students microscopes, microscope outfits, (Mpwawa only--microscope outfit, Beck 47B (52) and similar items

\* Films \$12,000

\* Livestock Equipment

Portable livestock scales, animal clippers, hoof,  
foot rot shears, shoulder length gloves, veterinary  
stethoscopes, trocar and canulas, Budizzo castrators,  
Sunbeam steward clipmaster animal clipper, milking  
and teat tubes, mouth speculums, dehorner, etc. 10,350

GRAND TOTAL \$242,820  
Spare Parts, 5% 12,140  
\$254,960

ROUND TO \$255,000

9 Technicians Houses @ \$15,000 135,000  
U.S. Total \$390,000

IDA INPUT

GRAND TOTAL \$ 97,410  
10% Cont 9,740  
\$ 107,150

ROUNDED TO \$ 108,000

\* Detailed lists of items to be procured within each category will be prepared by GOT assisted by Project staff, reviewed by USAID/Tanzania and approved by REDSO/EA.

Waiver Justification

I. Identification of Waivers Required

The following requirements for waivers are noted below:

(A) A procurement source and origin waiver from Geographic Code (000) U.S. to Geographic Code (935) Special Free World.

- i) For equipment and specialized services related to the construction of 1) housing for U.S. technical staff; 2) construction of shops and 3) miscellaneous construction rehabilitation of existing research and teaching facilities.

The waivers will involve only a minimum of code (935) procurement since Tanzania and other code (941) countries are capable of supplying the major components required. Commodities for (935) procurement will be limited to specialized electrical fittings/supplies; plumbing supplies and fittings and miscellaneous hardware up to a maximum value of 10% of the costs. Following is an analysis of such costs:

Item(s)	(\$) (941)	Procurement (\$) (935)	(\$) Total
a. II Type A Staff Houses	\$148,500	\$16,500	\$165,000
I Pre-Fabricated house	9,000	1,000	10,000
b. Arusha Shop	67,500	7,500	75,000
c. Miscellaneous/Contingency (Research and Irrigation supplies and construction. Installation of shop equip- ment and set-up, contingency)	32,400	3,600	36,000
Total	<u>\$257,400</u>	<u>\$28,600</u>	<u>\$286,000</u>

Accordingly a code (935) waiver in the amount of \$30,000 is required.

(B) A waiver of AID Regulation No. 7 thus removing restrictions on the employment of third-country nationals on construction financed by AID.

(C) A waiver of a portion of AID Regulation No. 1 to permit approval of normal, established Government of Tanzania procedures for the competitive selection of construction firms for building the facilities financed by AID subject to approval of REDSO/EA.

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## II. Summary Waiver Information Information

- (a) Cooperating Country: Tanzania
- (b) Authorizing Document: CAP attached
- (c) Project: Tanzania Agricultural Support Loan II
- (d) Nature of Funding: Loan
- (e) Description of Goods and Services: see above
- (f) Approximate total value: \$30,000
- (g) Probable Source: offshelf/Tanzania
- (h) Previous Funding: Agricultural Support Loan I \$1,000,000

## III. Discussion

Housing and other facilities provided for by this loan are in direct support of the DG funded U.S. technical staff (OPEX) assigned to the several projects.

Construction will be TanGov Comworks or a private Tanzanian construction firm in accordance with standard plans for Class A houses, modified as appropriate for U.S. occupancy. The construction site and modified plans and specifications have been approved by a REDSO/EA engineer.

The principal basis for the above listed waivers is 1) the urgent need for houses to accommodate personnel. The success of the projects will be seriously jeopardized if housing is not provided for technicians expected to be on board during CY 73 and 74, and 2) It is anticipated that, in order to successfully complete construction, GOT Comworks will have to subcontract elements of construction, such as carpentry and plumbing, to Tanzanian individuals or firms and possibly to third country national artisans resident in Tanzania or let bids for construction by a private Tanzanian construction firm. There are no U.S. building construction firms operating in East Africa. U.S. goods are not readily available to Comworks since there are no representatives of U.S. firms selling electrical, plumbing or other materials used in houses. Therefore, if the housing is to proceed expeditiously and at reasonable expense a waiver is required for (1) services of other than a U.S., beneficially owned non U.S., or U.S. controlled local construction firm, (2) goods of other than U.S. origin, (3) employment of third country nationals by Comworks or a private contractor, and (4) non-advertisement of the tender to firms in the U.S.

Primary Justification: The goods and services are essential to this approved A.I.D. project and are not available from the authorized source within the time required to meet project needs, and non-A.I.D. foreign exchange is not available for the purpose.

-3-

For the above reasons it is concluded that exclusion from procurement from the sources requested in this waiver would seriously impede attainment of U.S. foreign policy objectives and the objectives of the Foreign Assistance program, and that waiver of the order of preference for selecting a construction firm and the provisions of Regulation 7 is important to and will best serve the interests of the United States.

Clearances:

SER/COM/PO: A. Block (phone)  
SER/CM/SD: J. Sewell (draft)  
SER/ENGR: A. Pitcher (draft)  
GG/AFR: R. Johnson (draft)  
AFR/DP: E. Donoghue (draft)  
AFR/ESA: D. Conroy (draft)  
AFR/DS: W. Johnson (draft)

AGENCY FOR INTERNATIONAL DEVELOPMENT  
CERTIFICATION AND RECORD OF WAIVER<sup>1/</sup>

Waiver Control No.

AFR-W-73-021

Symbol or Code-Fiscal Yr.-Seq.No.

(This certification does not convey any waiver authority beyond that provided in applicable directives)

<b>PART A</b>		PROJECT, LOAN, GRANT, OR CONTRACT NO.	
DOCUMENT TITLE (Subject of Waiver Request) Source Origin Procurement/Service Contracting			
WAIVER EFFECTIVE DATE July 1, 1973	WAIVER TERMINATION DATE Dec. 31, 1976	COUNTRY Tanzania	DOLLAR AMT OF WAIVER \$30,000
		ORGN. CODE 621	

CHECK BOX	PROCUREMENT WAIVERS <sup>1/</sup>	MONITORING OFFICE <sup>2/</sup>	CHECK BOX	PROCUREMENT & OTHER WAIVERS <sup>1/</sup>	MONITORING OFFICE <sup>2/</sup>
	<b>GENERAL</b>				
<input checked="" type="checkbox"/>	Commodity Source Origin	PROC IRD	<input type="checkbox"/>	Payment and Reimbursement (AID Reg. 1)	C FRD
<input type="checkbox"/>	Componentry Rules	PROC IRD	<input type="checkbox"/>	Price Provisions (AID Reg. 1)	C FRD
<input type="checkbox"/>	Service Contracting Source	PROC IRD	<input type="checkbox"/>	Rights and Responsibilities of Banks (AID Reg. 1)	C FRD
<input type="checkbox"/>	Monthly Summary of Minimum Value Transactions	PROC IRD	<input type="checkbox"/>	Waiver Determination and Finding (FPR & AIDPR)	PROC CSD
<input type="checkbox"/>	Proprietary Procurement	PROC IRD	<input type="checkbox"/>	Deviation (FPR and AIDPR)	PROC CSD
<input type="checkbox"/>	Standard Commodity Financing Procedure	PROC IRD	<input type="checkbox"/>	Foreign Asst Act, Sec. 636(b)	GC
<input type="checkbox"/>	Special Provision of Commodity Procurement Instructions	PROC IRD	<input type="checkbox"/>	Other FAA Sections (specify)	GC
<input type="checkbox"/>	Barter transactions	PROC IRD	<input type="checkbox"/>	Executive Orders and AID Directives on Security	AG SEC
<input type="checkbox"/>	Special Development Activity Authority	PROC SB	<input type="checkbox"/>	Employees <input type="checkbox"/> Contractors	
<input type="checkbox"/>	Marking Requirements (AID Reg. 1)	PROC SB	<input type="checkbox"/>	PASAs	
<input type="checkbox"/>	Special supplier-importer Relationship (AID Reg. 1)	PROC SB	<input checked="" type="checkbox"/>	Other Directives M.O. 1414.1.2	GC
<input type="checkbox"/>	Emergency Procurement (AID Reg. 1)	PROC SB	<input type="checkbox"/>	Multiple Provisions	Each office responsible for each provision cited
<input checked="" type="checkbox"/>	Special Situations (AID Reg. 1) (Host Country Contracting Procedures)	PROC SB			

**PART C** The Provisions of (specify the directive): \_\_\_\_\_ Section: \_\_\_\_\_ Para: \_\_\_\_\_  
are being waived as follows: M.O. 1412.1; M.O. 1412.1.2 and M.O. 1414.1  
To permit the Government of Tanzania to construct/furnish by local contracts, or force accounts, a) Twelve (12) technicians house; b) shop facilities and c) miscellaneous construction/repairs to seed farms, training schools or research facilities; and to permit, in such transactions, the procurement of goods and services not of local origin from Geographic Code (935) countries up to a value of U.S. \$30,000 in support of the purposes listed above.

References:

(Continue on Reverse if necessary)

<b>PART D</b>		
I certify that the waiver described above is approved by me pursuant to the cited provisions of the directive indicated above, and that I am authorized to take the action described above and in the attached documents by virtue of authority delegated to me by (specify the directive containing your delegation of authority) <u>M.O. 1414.1.1</u>		
and I am distributing this certification as follows: Signed original to the following official file (indicate by office symbol) <u>AFR/ESA</u> , and signed copy to the Monitoring office indicated above.		
NAME AND TITLE Samuel C. Adams, Jr., AA/AFR	SIGNATURE	DATE

<sup>1/</sup> The term "waiver" as used throughout this form shall be interpreted to include exceptions to AID Directives System.  
<sup>2/</sup> The monitoring office is sometimes but not always a clearing or concurring office. All clearances, concurrences, and approvals of waivers are to be in accordance with the directive authorizing the waivers.

DRAFT

CAPITAL ASSISTANCE LOAN AUTHORIZATION

Provided from: Development Loan Funds  
Tanzania: Agricultural Projects Support Loan II

Pursuant to the authority vested in the Assistant Administrator for Africa of the Agency for International Development (A.I.D.) by the Foreign Assistance Act of 1961, as amended, and the delegations of authority issued thereunder, I hereby authorize the establishment of a loan pursuant to Part I, Chapter 2, Title I, the Development Loan Fund, to the Government of the United Republic of Tanzania ("Borrower") of not to exceed Two Million Six Hundred Thousand United States Dollars (\$2,600,000) to assist in financing the foreign exchange and local currency costs of equipment, materials and related services for the following A.I.D. technical assistance projects in the agricultural sector: (1) Masai Livestock Development Project, (2) Seed Multiplication Project, (3) Agricultural Research Project, and (4) Agricultural Manpower Development Project. This loan shall be subject to the following terms and conditions:

Interest Rate and Terms of Repayment

Borrower shall repay the loan in forty (40) years, including a grace period of not to exceed to (10) years. Borrower shall pay interest on the unrepaid principal and any interest accrued thereon at a rate of two percent (2%) per annum during the grace period and 3 percent (3%) per annum thereafter.

2. Currency of Repayment

Repayment of the loan and payment of interest shall be made in United States dollars.

3. Other Terms and Conditions

a. Procurement

Equipment, materials and services financed under the loan shall be procured from Tanzania and from countries included in Code 941 of the A.I.D. Geographic Code Book, except that electrical fittings, plumbing supplies and miscellaneous hardware in an amount not to exceed \$30,000 may be procured from countries included in Code 935 of the A.I.D. Geographic Code Book.

b. Other Terms and Conditions

The loan shall be subject to other terms and conditions as A.I.D. may deem advisable.

\_\_\_\_\_  
Assistant Administrator for Africa

\_\_\_\_\_  
Date