

AGENCY FOR  
INTERNATIONAL  
DEVELOPMENT



# DEVELOPMENT ASSISTANCE PROGRAM

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TANZANIA

BEST AVAILABLE

DEPARTMENT  
OF  
STATE

JANUARY 1975



A DEVELOPMENT ASSISTANCE PROGRAM  
FOR TANZANIA

While other countries aim to reach the Moon,  
we must aim to reach the Village.

JULIUS K. NYERERE

DECEMBER, 1974



EMBASSY OF THE  
UNITED STATES OF AMERICA

AMBASSADOR'S FOREWORD

A great deal of brute work and thoughtful analysis has been put into this Development Assistance Paper by USAID/Tanzania. Embassy staff and REDSO/EA officers have also rendered assistance whenever called upon. The pronounced poverty that exists in countries like Tanzania, and the attendant complexities, suggest both an urgent need for development on the one hand and the difficulties of doing so on the other. Besides the base problem of a per capita income of less than \$100 per year, Tanzania's troubles have been exacerbated by the simultaneous crippling rise in oil prices and a drought-led food shortage. The latter has required massive imports of foodgrain. Both of these unexpected events have depleted the country's foreign exchange. Thus Tanzania has the dubious distinction of qualifying as a Relatively Least Developed Country (RLDC), and a Most Serious Affected Country (MSA). Its need for assistance therefore leaves no doubt.

While Tanzania has development problems that are common to other LDCs, it also has its distinct development approaches. Its definite commitment to rural development (and small farmers) and its intent to eliminate the extremes of wealth and poverty are more clearly and forcefully stated in Tanzania than perhaps in any other African LDC. The dedication to equity among its citizens and current emphasis on food production bring Tanzania in close alignment with our own Foreign Assistance Act. Moreover, the direction and style used by Tanzania in pursuit of its development goals (including its concept of ujamaa villages), while undoubtedly controversial, are nonetheless clearly stated and widely understood. With a stable government and a dynamic leader in Julius Nyerere, we take the view that while time will more fully test the correctness of Tanzania's approach to development, it, in the meantime, merits our full support.

I say this being fully aware, and often deeply concerned, about slow and uncertain development and excesses that members of the ruling party have shown in implementing its ideology. We find some of these excesses disruptive, inexcusable, and completely at variance with President Nyerere's stated preference for voluntary action and persuasion to set the pace and temper of economic change and development.

On balance, however, I believe Tanzania is a worthy claimant to AID's assistance and we should respond to the fullest extent that our resources will permit. The AID programs are themselves concentrated on the priorities set out in the Foreign Assistance Act, which by and large are also Tanzania's priorities. Our expertise in agriculture and particularly in food production is known throughout the world and can have significant impact on Tanzania's development. The stated strategy in the DAP of using resources and institutions which we have helped to create as a means of getting more involved with small farmers and village production is, in my opinion, a sound one.

I therefore endorse this paper and believe the program outlined will be of genuine assistance to Tanzanian development; and should be of value to those engaged in the task of economic development and the promotion of U.S. interests in this challenging work.

  
W. Beverly Carter, Jr.  
American Ambassador

DEVELOPMENT ASSISTANCE PROGRAM

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## DEVELOPMENT ASSISTANCE PAPER FOR TANZANIA

### I. Development Overview

#### A. Setting

Tanzania, <sup>1/</sup> consisting of the union of Tanganyika and Zanzibar is one of Africa's larger countries - 363,000 sq. miles (equal to Texas and New Mexico combined). It has a population of 14,400,000, the growth rate which is a rather modest (for LDCs) 2.7 percent per annum. Because of topography, ecology and patterns of past settlement, population tends to cluster in particular areas causing pressure in one location while another is relatively empty. Agriculture dominates Tanzania's economy and provides a livelihood for over 90 percent of the population, produces about 40 percent of the Gross Domestic Produce (GDP) and accounts for over 60 percent of total exports. The major export crops are sisal and tea, which are produced primarily on estates, and coffee, cotton, cashew nuts and tobacco, which are produced primarily by smallholders. The principal food crops are maize, rice, sorghum and pulses; wheat also is grown mainly for urban consumers. Tanzania is one of the 25 least developed countries with a per capita GDP of about \$ 100, yet it has one of the most diverse agricultural sectors in Africa.

The country lies a few degrees south of the equator and abuts the Indian Ocean on its eastern border. It is bordered on the northeast by Kenya, on the north by Lake Victoria and Uganda, on the northwest by Rwanda and Burundi. In the southwest and south one finds Zambia, Malawi and Mozambique respectively. Finger-like Lake Tanganyika also lies along the western border jutting into Zaire and offering water transport of copper from that country. The landscape is extremely varied ranging from coastal low lands and tropical rain forests through savanna and arid plateau to 19,000 foot Mount Kilimanjaro. The country still has an abundance

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<sup>1/</sup> Although this DAP is submitted for Tanzania (often called Government of the United Republic of Tanzania), the analysis and AID programs apply only to the mainland (Tanganyika). The island of Zanzibar is autonomous in its internal affairs and has a rather distinct political/social system. It requests and manages its own foreign assistance projects. For example, our Maternal and Child Health project which was supposed to be nationwide excludes Zanzibar, because "they never asked for it".

of wild animals and impressive landscapes which, when combined with its mild climate in the uplands, serve as a tourist attraction. Tanzania's people are primarily of Bantu stock, and as is typical of Black Africa its largest social unit historically was the tribe.<sup>2/</sup> As we shall note below, while there are significant differences between tribes, there also are similarities which become relevant to development and nation building. These similarities include respect for authority, certain social codes of conduct, particular rights and duties, and customary approaches to land tenure.

During the early movement of people over what is now mainland Tanzania, there was more land than people to occupy it.<sup>3/</sup> People simply migrated into an empty area, placed the surrounding land under trust whereby elders and ruling chiefs became the guardians of the land. The migrating group may have been a small tribe, clan or units of an extended family. In any case farm work, and indeed practically all activities designed to earn a living or provide security, were conducted by the social group rather than by individuals. Finding no obstacles in the new settlement area, the practice of the group was to establish a temporary village compound whereupon farming or cattle herding could begin. As President Nyerere of Tanzania speaks of traditional African societies, "We took care of the community and the community took care of us ....."

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<sup>2/</sup> Fortunately Tanzania has no large distinguishable tribe that feels strong enough to challenge the nation as has been true in Nigeria, and to a lesser extent in Uganda and Kenya. Tanzania's largest tribe, the Sukuma, is less than 15 percent of the population.

<sup>3/</sup> Much land in sub-Saharan Africa still appears to be empty and there are, in fact, huge tracts of empty tsetse fly ridden land, swamps, near deserts and unpopulated grazing lands. But the emptiness is partially an economic illusion because farmland in fallow returns to bush (shifting cultivation) and until the next round of farming is hardly distinguishable from wild forests. The very small farms (due to limited technology) mean that too much land remains uncultivated. Obviously this will have to change if rural development is to occur.

"In Africa land was always recognized as belonging to the community ... the right to land was simply African's right to use it; he had no other right to it nor did it occur to him to try and claim one."<sup>4/</sup> Within the social group codes of conduct, work assignments and rights and duties were well understood and adhered to. Cohesion of the group rested on mutual dependence (and opportunity). This concept of complete mutuality and "family-hood" when moved forward in time to present day Tanzania has become the heart of the country's development policy, i.e., the Ujamaa concept.

### 1. The Colonial Era

A meaningful background statement on Tanzania has to acknowledge that one of the greatest influences on today's development is its colonial past. The formal colonial period was relatively short- German occupation from the 1880's to the first world war and the British Mandate until 1961 - the impact was nonetheless profound.<sup>5/</sup> This was a period when much of the infrastructure was laid on. A rudimentary transportation system (port development, trunk roads, railway and later East African Airways), communications (telephones, posts and telegraph), British style law and order and other administrative institutions and practices including the shape that government was to take became a reality.<sup>6/</sup> There was the beginning of a formal education system through university level in East Africa and indeed the relevance (perhaps more precisely nonrelevance) of formal education to development took shape. And as is a recurring theme in all of President Nyerere's writings this was a time when most Tanzanians' attitudes toward economic development were formed (Nyerere argues that they were deformed).

For our purposes perhaps the three most relevant background factors of the colonial era were first the budding and shaping of a national consciousness, second the restructuring of Tanzania's economy and third, the undermining through the above two factors of traditional society - political, social and economic. It was the fight against

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<sup>4/</sup> Julius K. Nyerere, Ujamaa, Essays on Socialism, Oxford University Press, Nairobi, London, New York, 1968 p.7.

<sup>5/</sup> Even before the colonial period, coastal Tanzania was influenced by Arab traders and Kiswahili, the widespread language that emerged.

<sup>6/</sup> Notwithstanding these developments Tanzania and Uganda, both trust territories, refer bitterly to Britain's favored treatment of Kenya (The Colony) over them.

foreign rule that transformed Tanzania from a land of loose tribal areas to a country with a growing national consciousness. As seen by its leaders the most critical task at the time of independence in 1961 was the building of a nation where none had existed, the discarding of "colonial mentality" and the creation of a development ethic in a people long suppressed, conditioned by authoritarian/paternalistic rule and treated as culturally and intellectually inferior.

The present economy was also structured during the colonial era; a useful way of discussing it is to make a distinction between the rural (farm) sector and the urban commercial (non-farm) sector.

Rural Farm Sector: Rural Tanzania contains more than 13 million unevenly scattered people whose shambas (farms) are in separate or communal holdings (sometimes surrounding villages), or who live as semi- or pure nomadic cattle herdsman. It is mainly the young people who have progressed very far beyond illiteracy, and the majority of farmers operate barely above subsistence. Traditional plots of land under cultivation were fragmented and scattered (shifting cultivation), and were operated only with crude capital consisting mainly of hand tools. The power supply was human muscle, animal power being ruled out because of the deadly tsetse flies which inhabited large expanses of the countryside causing sleeping sickness in humans and trypanosomiasis in domestic animals. In obtaining and applying technology, cattle herders were even more backward than indigenous farmers.

As is usual in African LDCs the traditional food producing sub-sector of agriculture was neglected. Hardly any technology, improved management or purchased inputs were applied to it. Rather, public attention was given to cash-export crops to enable the earning of foreign exchange and provide a basis of trade with the metropole.<sup>7/</sup>

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<sup>7/</sup> For the most part Tanzania's large commercial farmers and ranchers were either European or Asian. Many of these farms have been nationalized since independence.

Where African farmers were concerned, government policy through the colonial era (i.e., pre-Ujamaa) reflects a series of trials and errors. Even under German colonization two major changes occurred. First a plantation system emerged under European management (especially sisal and tea). These units continued to multiply (the rate depending greatly on general economic conditions) through the British Mandate period. Second was the importation of European goods and development of indigenous demand for these items.

The outcome for Africans was the movement of an increasing mass of cheap migrant labor onto the plantations. The tempo of this trend increased into the 1950s so much so that for months at a time whole districts showed a near void in an African male population of working age. In order to buy European goods and to pay taxes and school fees considerable numbers of African farmers shifted to commercial export agriculture - coffee, cotton, cashews. There was talk by senior colonial officials about producing an elite group of "wealthy African farmers", of free hold land ownership to advance access to economic expansion; and government policy was to support the most progressive African farmers. Market forces were to guide African decision-making and "integrate them into the world economy." <sup>8/</sup> As it turned out nowhere did commercial crops do more than supplement subsistence farming. There was hardly any shift to large-scale specialization, nor the up-grading of technology. But this period saw the rise of individual ownership and farming of land, thus contesting the traditional view that land belonged to the community.

In fact by 1946 British administrators shifted direction and felt that outright European control was the only way of transforming African agriculture - this thinking led, for example, to the later discredited "Tanganyika Groundnut Scheme." Later, policy turned again to promoting African commercial farming with emphasis on soil conservation and resettlement. These fits and starts in African agriculture lasted to the eve of independence.

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<sup>8/</sup> See: John Iliffe, Agricultural Change in Modern Tanganyika Historical Association of Tanzania, Paper No: 10-1971. p. 58.

Non-farm Commercial Sector: The urban (non-farm) commercial sector consists of a beehive of retail trade involving Asian shopkeepers and some African traders in particular market areas, or as individual roving sellers. This kind of economic activity is quite distinguishable from manufacturing, the operation of service industries, banking and finance, and mining. Ownership of most of these latter businesses was in foreign hands. Very few Africans were employed above the clerical level. Financial institutions catered to the large (European) export crop farmers. Industry was held down as goods were to be imported from the home country in exchange for the agricultural exports. The small non-farm sector was, then, European controlled and designed to serve colonial interests. It is important to note, however, the rise of Asian shopkeepers and their domination of retail trade. They now constitute what we would call the middle class. But in Tanzania, as there is no group with great wealth, they are seen as the upper class. Thus it is the Asians and remaining Europeans who have borne the brunt of Tanzania's squeeze of the well-to-do in its search for equity, and clamp-down on imports of ill afforded "luxury" goods. The accusation of racial implications is obvious but not always visibly demonstrated. The cost in productivity is more easily shown.

Formulation of Ideas and Concepts Revelant to Development: During the earlier colonial era there obviously was very little opportunity or consistency by way of indigenous political guidance and cohesion. As in other colonies and mandated territories, Tanzania underwent British tutelage but it was not until the late 1940's and more importantly, the 1950's that indigenous political leadership began to crystalize about the person of Julius Nyerere. From the very beginning the concept of several parties, i.e., an opposition, had practically no appeal among Tanzania's Africans.

Their idea was that the job of instilling a national consciousness among 120 tribal entities and the cleansing and restoring of African attitudes which had been "corrupted" by Europeans was the single most critical task ahead and could not stand the luxury of an opposition party. Although the British themselves supported opposition parties, the concept was alien to African decision-makers among whom there is almost reverent respect (and fear) of authority as personified historically in ruling Chiefs. Thus, Tanzania's "one party democracy" encompassed the political setting for independence and subsequent decisions pertaining to economic development.

This authority rested with the Tanganyika African National Union (TANU). In Tanzania, perhaps more than anywhere else in Africa, party influence, participation and guidance are very strong. Foreigners engaged in economic assistance should keep this fact clearly in mind.

In fact during the colonial era very few unifying bonds were to be found in economic pursuits. Except for economic cooperation in the East African Community (EAC) the only unifying forces for nation building were Julius Nyerere and the political tools he created.<sup>9/</sup> Even after independence unifying ties were tenuous at best. One of these was Swahili which offered a national language and verbal communication with neighboring countries like Kenya or Zanzibar. It is perhaps for these reasons that economic guidance and inspiration was sought in the older African principles of "Ujamaa" (family-hood). Even under the best conditions, the realization of unity is most difficult in new countries like Tanzania. Backwardness itself tends to keep people in isolation as does poverty. Tribal histories and relative economic statuses resist commonalty. Indeed much credit should be accorded to the political leadership for the country remaining as stable and unified as it has. Perhaps the single factor that sets Tanzania apart, that gives it self-identity and a degree of status is its claim to a special brand of socialism.

In brief summary, such were the prevailing conditions in 1961 and shortly thereafter when Tanzania moved toward independence and the subsequent launching of its first development plan. In some respects these conditions corresponded to those of other African nations but in other respects they took on a uniqueness that has become more distinct with the passing of time.

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<sup>9/</sup> The EAC is a regional arrangement, created by the British before independence, consisting of Uganda, Kenya and Tanzania. It involves common services such as ports, railroads, airways, customs, post and telegraph, exchange of personnel. In recent years the EAC has undergone severe political and economic strain, and there is speculation about its survival.

## 2. Post Independence Indicators

If we are to examine our own assistance program in depth it is first important to better understand the larger frame where economic development is to occur. Several direct questions can be asked. For example, out of the historical and colonial experiences as sketched above, how worthy a candidate for development is Tanzania; what is the extent and quality of its resources; how is it approaching development; and what are the recent and current social/economic/political problems that the country is facing? These questions are investigated in the sections that follow.

The Leadership Factor: Tanzania's candidacy for development cannot be discussed beyond the surface without making special mention of its only President--and philosophical leader-- Julius Nyerere. In fact, a vital clue for understanding any of Africa's countries is to recognize the great respect for authority that exists-- a chieftaincy complex.

Those outside have no doubt read President Nyerere's books and learned tracts and have concluded that he is politically enlightened and is a scholar in his own right.<sup>10/</sup> While this is a justified conclusion his real power and ability to command within Tanzania have very little to do with his outside popularity. Rather, this power derives from the manner in which he carries out his role as Chief, not of the tribe or clan any longer, but of the country.

Under normal international standards we accord African leaders the esteem that we accord other Heads of State. But within their own countries they are more than that. Their relationship with the citizenry (i.e. wananchi) is traditional. It is that of a father figure in close and perhaps mystical communion with the people.

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<sup>10/</sup> President Nyerere was the first Tanzanian to earn a University degree in Europe.

And, whereas the President utilizes the party (TANU) and the government as main organs for implementing policy and exacting compliance, and although he must keep looking over his shoulder to see what's happening in the military;11/ by the fact of his position, he possesses the authority and power to function with few if any restrictions. One of the most readable factors therefore for detecting and explaining the broader happenings in African countries is to be found in the person and acts of one man - their Heads of State. In Tanzania, this of course, is Nyerere.12/ An African country may obtain its character and style, even its stability (the same could be true for instability) through its National Leaders. In Tanzania if we take a fix on Nyerere we have a very good and dependable barometer for how the country will approach its problems.

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11/ In the absence of a united and aggressive African middle class, industrial group or any other equivalent buffer, the military is the only real power base in African LDCs. No African leader can survive without control, or at least without forbearance of the army. The military's relation to economic development, though oblique, explains much about political instability.

12/ Given the time Nyerere spends on Pan-African and Third-World affairs, and his numerous travels abroad, his subordinates exercise much actual control over internal matters.

B. Economic, Political and Social Developments

We restrict our discussion of these topics to relevancy about national development.

1. The First Five Year Plan

Tanzania at the time of independence in December, 1961 was a classic example of an open, dualistic economy at a very low level of development. The modern sector consisted of urban commercial activities, limited manufacturing, commercial farms and plantations, and some African cash crop producers who were almost completely dependent upon the outside world to provide a market for primary exports and a source of manufactured imports. Linkages with the traditional sector were sporadic, being limited mainly to the buying of supplies and selling of cash export crops. Manufacturing accounted for only three percent of Gross Domestic Product (GDP).

Tanzania's initial development strategy, as expressed in the First Five Year Plan (FFYP) for the period July 1964 to June 1969, was based on what was called the "transformation" approach to agricultural development and reliance on private investment to develop local industry. The "transformation" approach drew on Israeli experience and involved an attempt to transform agriculture through the establishment of capital-intensive settlement schemes. It soon became evident that the schemes were extremely expensive and were not eliciting the desired self-help efforts on the part of settlers. By 1966 the idea was largely abandoned though existing units continued in being. At the same time, it also became clear that neither foreign private investment nor foreign aid could be relied on to speed Tanzania's industrialization. These developments led in late 1966 and early 1967 to a series of government actions intended to dramatize Tanzania's commitment to its own version of "African Socialism."

In fact, for anyone living and working in Tanzania repeated references to African socialism indicates that development is guided more by political and social considerations than by hard economic analysis. The Arusha Declaration and its attendant concept of "Ujamaa" (family-hood), though having the heaviest of economic impacts, are essentially political and social conceptualizations.<sup>13/</sup>

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<sup>13/</sup> Arusha is a city in northeastern Tanzania

## 2. The Arusha Declaration

The adoption of the Declaration and its inclusive policies did not emerge overnight. Kindred ideas had appeared in President Nyerere's pre-independence writings and in the early 1960s. These ideas came to a head in Arusha in 1967 out of disappointment with the results of the First Five Year Development Plan (1964-1969) and as a means of demonstrating the sharpest possible break with Tanzania's colonial past. TANU convened to reappraise the entire political and economic situation and issued the new philosophy of nation building.

To emphasize the point that his brand of socialism was rooted in traditional African values, President Nyerere underscored three values common to Africa which he said were the heart of the philosophy. These were:

- a. Respect - The recognition of mutual involvement with one another. Each member of the family understood and accepted the place and rights of all other members. While these rights varied according to ability, character, age and sex, there was a minimum level below which no one could exist without disgrace to the whole family.
- b. Common Property - All basic goods were held in common, and shared by all members of the family unit. Thus all had the basic necessities of life, or at least no one could go hungry while another hoarded food. The level of one person within the extended family - or even within the tribe - could never get too far out of proportion to that of all others. There was not complete equality - some family members, and some families within the clan could own more than others. The acquired this addition through their own extra efforts but in time of need their surplus was available to all.
- c. Work Ethic - Everyone had an obligation to work. Different people did different work, but no one was exempt. Only by the acceptance of this principle were the other two possible.

It may be worthwhile to further highlight the role of TANU in the development process. First, having been the driving force in the independence movement, it became the single political instrument for nation

building. It embodies a national movement as well as a political party, and party and bureaucracy are intertwined and share power from village up to the national level. In fact, dual office holders frequently represent both government and party. Nonetheless, there is a system of contested elections within the one party system and competition is such that it is not unusual for ministers to be defeated. But after elections while there are often sharp debates in the Parliament they are on "timing and detail", not on basic policy.

New nations like Tanzania face a very difficult problem in the complex business of guiding development. Before independence, the National Government's role was largely that of peace keeper and tax collector. Except in crisis times, it stayed clear of daily life in the villages. But with the push for independence based upon the twin goals of national dignity and economic betterment, the new leadership, dedicated and sincere, had to give priority to nation building and economic development. This, of course, means a heavy involvement in daily life. Thus the danger that force may take over from persuasion as the key motivating factor. A critical concern is to keep the one-party system from turning into a dictatorship.

Fortunately, Tanzania has escaped dictatorship while achieving a level of stability that is rare for Africa. Moreover, development planning has now been decentralized and there is participation and the hope of being heard from the villages up through the levels of the party and government. But it is the party nonetheless that sets the broad policy for the country.

For example, the Arusha Declaration carries the sub-title "And TANU's Policy on Socialism and Self-Reliance." It is divided into five parts.<sup>14/</sup> Part I, called "The TANU Creed" lays out a number of fundamental guiding principles some of which are very similar to our own "Bill of Rights." In Part II, "The Policy on Socialism" is described. This statement possesses earmarks of doctrinaire socialism and indeed the country has never failed to acknowledge its preference for this ideology. Nonetheless, in dozens of later tracts and essays Nyerere makes a clear distinction between socialism based on Africa's ancient Ujamaa, i.e., tribal socialism rooted in the foundation of the extended family; and authoritarian socialism based on class struggle as promoted by European Marxists. Nyerere refers to the latter type as "European socialism."<sup>15/</sup> Part II talks about:

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<sup>14/</sup> Parts IV and V are not germane to our discussion.

<sup>15/</sup> J. K. Nyerere, Op cit p. 11.

Equity Considerations: To the leaders of Tanzania, the central task of development was to rule out exploitation of any sector of the population and to work consciously for social equity. It implies that the government's primary concern is with distributing the benefits of growth rather than maximizing growth itself. To this end there is a very steep progressive income tax.<sup>16/</sup> In reverse, but for similar reasons, there is no sales tax on food and, in fact, government subsidizes prices of imported staple foods such as rice, maize and flour thus keeping the prices artificially low. The prevailing minimum wage is relatively high for Africa and the terms and conditions of work for servants and laborers are enlightened. According to the Ministry of Finance, government policies in this regard have reduced the gap in effective purchasing power between upper and lower public sector employees from a ratio of 10 to 1 down to a ratio of 5 to 1. Parallel to this, the government is dedicated to providing services which it presumes will help the mass of its citizens. For example, rural health clinics rather than additional urban hospitals are now emphasized, and health care is free. Day care centers with government support are beginning to be seen and more discussion is being heard about nutrition. A well drilling project in rural areas is being launched in order to produce clean drinking water for villages. Elementary school fees, which heretofore were a burden on low income people, have been eliminated.

There is a leadership code created to prevent party and governmental officials from gaining personal advantages at the expense of the average citizen. While party corruption and other means of exploiting the poor still are in evidence, it is generally acknowledged that Tanzania has done more to rid itself of corruption than almost any other developing country in Africa. The Party leadership seeks to root it out and punish offenders. Thus, this top goal of equity encompasses social/political as well as economic policies. The drive for equity includes non-discrimination among tribal and religious groups and equality of the sexes.

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<sup>16/</sup> Income taxes start on wages and salaries slightly above the minimum wage (\$ 48.00) per month, rising to 75% of earnings.

There are no large tribes with proud ancestral pasts to pose major problems for national unity. Where there might be a tendency for separatism, such as among the Masai, the TanGov is working hard for integration based upon development.

The President is a Catholic and the Prime Minister is Moslem. We have no knowledge of religious discrimination affecting the flow of national life.

President Nyerere stresses women's equality as a cardinal point in his philosophy. He has criticized the traditional society for its treatment of women and says that "If we want our country to make full and quick progress now, it is essential that our women live in terms of full equality with their fellow citizens who are men." Women have legal status as equals. As might be expected, the change in rural society is slow, but in cities, educated women hold public positions. There are increasing numbers of women in managerial and professional jobs. The stream will grow as more women take advantage of increasing educational opportunities.

A National Women's organization (U.W.T.), formed with government assistance, exercises leadership in moving women into the modern sector.

It should be understood that equity in Tanzanian terms does not mean complete equality. Income and social differences will remain. It is poverty on the one hand and excessive individual wealth on the other that are to be eliminated, as is dominance of one individual over another. The goal is the wiping out of economic extremes and social indignities. This point is vital to keep in mind in the later discussion of the place of individual and group incentives. It also weighs in Government's unwillingness to give priority to the most advanced regions where they might have the highest immediate production pay-offs.

Part III emphasizes:

A Policy of Self-Reliance: As seen by Tanzanians, this policy should be guided both by economic and political considerations. It derives from President Nyerere's view that given the relative weaknesses and poverty of African countries, the cry for more money, more capital and more foreign exchange in the face of this poverty is as he calls it "stupid." As a corollary over-emphasis on manufacturing and urban development when over 90 percent of the people live in the rural areas is equally stupid.

Nyerere also cautions against indiscriminate requests for foreign aid since he looks at it as a threat to independence.<sup>17/</sup> Foreign aid becomes a medium term necessity required to reach the stage of self-financed growth. To date it has been accepted only when political strings are not attached and basic social/economic policies not required to be changed. Foreign Aid is accepted from East, West and neutral countries alike. However, when faced with a situation of maintaining its political stand and losing foreign aid, it has given up the aid (with Great Britain over Rhodesia). In any case, the only sensible approach to development he says is through self-reliance and the Arusha Declaration states that conditions of development under a policy of self-reliance are: (a) hard work, and (b) intelligent use of available resources.

In keeping with its policy of self-reliance the government is working hard to mobilize both financial and human resources. Tax revenues account for over 22 percent of the monetary GDP and internal capital formation as a proportion of the monetary GDP reached 26 percent in 1970. The country was able to finance 65 percent of the development expenditures in the First Five Year Plan (1964-1969). In 1961-1962, the first year of independence, the government was able to spend only \$ 56 million equivalent on both recurrent and development expenditures. By 1973-1974 the figure had multiplied seven times.

In the manpower field self-reliance at the higher managerial and technical levels is also progressing.

Government statistics show that in 1961 there were about 5,000 high level government and industry/commercial posts in Tanzania of which 90 percent were foreign held. By 1971 the doubling in real terms of the monetary economy and the shift of government aims from simple administration and law and order to complex development planning and direction had led to an increase in high level posts to 10,000. Training and education combined with an active "Tanzanianization" strategy had increased Tanzanian held high level posts from 500 to 5,000 or from 10 percent to 50 percent, of the total.

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<sup>17/</sup> One can only wonder whether the near psychosis that African countries display about neo-colonialism and imperialism is genuine fear, or mainly a ploy to distract from problems closer to home.

In the case of government service proper, the number of expatriates actually declined but in the parastatal (state-owned economic enterprises) sector it rose sharply. In both sectors, however, the expatriates in 1971 largely filled positions which had not existed in 1961 either because the functions had not existed, or, as in the case of secondary school teachers and doctors, the demand for services had expanded more rapidly than the growing supply of Tanzanians.

By 1981, it appears likely that the total number of high level manpower needed will double again to 20,000. On the basis of the present trend and medium-term manpower plans there will be 18,000 to 19,000 Tanzanians filling 90-95 percent of these posts. The remaining expatriates will largely be in construction, engineering, technology and management positions, most of which do not exist today; plus a limited number of doctors, university faculty, etc.

While the numbers are impressive, the quality of Tanzanian professionals is very uneven. Technical competencies are highly variable from ministry to ministry and among skill categories. Shortages seem especially serious in certain management positions and those dealing with financial control. There also is a great lack of experience and exposure to modern ways of working. Thus many positions are filled by persons lacking in either the skills or the experience needed to do the job required of them. The newly created university system has not yet reached the point where it is able to provide the quality education managerial and technical candidates must have.

Notwithstanding the acceptance of expatriates from a number of diverse sources, Tanzania has managed to resist political pressures from foreign powers and remain free of big power entanglements. However, its criticism of Western Powers is severe while countries like China escape such censure.

Of course, the key to true self-reliance is the development of one's economy including its agriculture, a subject which will be treated in a separate section of this paper.

Concentration of Development Efforts in Rural Areas, i.e., Ujamaa: As stated above, the reason for development emphasis in rural areas derives from the fact that the vast majority of people in Tanzania live and work there; the economic units of production being the Ujamaa villages, plantations, and individual farms. The economic rationale for Ujamaa villages as stated by Tanzanians is that group effort and larger holdings (i.e., a village in contrast to a single farm) will yield economies of scale in production, and savings in the cost of delivering economic and social services. The applicability of this rationale is discussed at a later point.

Pages 17 through 19

The above pages are attached as a separate  
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### 3. The Second Five Year Plan Period (SFYP)

The FFYP was nullified to an extent by the Arusha Declaration and most of the government's energies were absorbed by the launching of the Tanzania-Zambia pipeline, railway and road projects and in adjustments required by other actions and programs. The Declaration's practical implications were first spelled out in detail in the Second Five Year Plan (SFYP) issued in May, 1969 (for the period July, 1969 to June, 1974, later extended to June, 1975).

Characteristically, the SFYP stressed progress toward meeting basic social needs (healthy diet, adequate clothing and shelter, access to basic health and educational facilities) and continued structural change with the goal of creating a high investment high growth economy in which, on the one hand, rural mobilization and social change laid the foundation for continuing agricultural expansion; while on the other efficient investment institutions were to have been developed to provide a local bias for industrial growth. <sup>18/</sup> Quantitative targets were accorded a distinctly secondary role.

As expected, the SFYP assigned highest priority to rural development, primarily using the vehicle of Ujamaa villages, and reiterated that ujamaazation would permit peasants:

"to farm...with modern techniques of production, and share the proceeds according to the work contributed. People who are farming together can obtain the economic advantages of large-scale farming, in the better utilization of machinery, purchase of supplies, marketing of crops. It becomes easier to supply technical advice through agricultural extension officers who can teach a group more easily in one place, rather than travelling from one shamba to another. It is also easier to provide social facilities like water supplies, medical and educational services, to farmers who live in groups, rather than in scattered holdings." <sup>19/</sup>

With respect to implementation strategy the SFYP opted for a "frontal" or broad-based approach as opposed to a "selective" approach, in order to "mobilize the widest possible participation in socialist activity throughout the rural society." <sup>20/</sup> The task of ujamaazation in the rural areas was not entrusted to any specific

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<sup>18/</sup> GURT, Tanzania Second Five Year Plan for Economic and Social Development (1st July, 1969-30th June, 1974) Dar es Salaam, 1969, Volume I, General Analysis, p.2.

<sup>19/</sup> SFYP, Volume I, p.26.

<sup>20/</sup> *ibid.*, p.27.

agency, but was to enlist the special attention of TANU, all levels of local government, and the relevant central government ministries.

The SFYP did not attempt to set forth an industrialization strategy, but noted that a detailed strategy would be developed prior to preparation of the Third Five Year Plan. In education, the SFYP took over the basic FFYP goal, as well as the policies of universal primary education as soon as financially feasible (i.e., by about 1990), basing post-primary education (secondary, technical, university) on manpower requirements for development. It went beyond the FFYP, however, in emphasizing the expansion of the number of primary students receiving the full seven years of primary education, the revision of primary school curricula to make primary education more relevant to rural life, and the strengthening of sciences and mathematics teaching at all levels. With respect to health, the SFYP placed increased emphasis on preventive medicine and on the expansion of rural health services through increasing the number of health centers (serving roughly 50,000 people each) from 50 to 130, with full coverage of the rural population to be achieved by the mid-1980s. Another notable feature of the SFYP was the designation of nine towns other than Dar es Salaam as "poles of development" and the establishment of a ceiling for expenditure on urban services.

Economic Indicators: In terms of quantitative targets, the SFYP set a GDP target growth rate of 6.5 percent per annum (as compared with an overall growth rate of under 5 percent per annum during the FFYP, a gross investment rate of 25 percent of GDP, growth of monetary sector agricultural production of 7.2 percent per annum and growth of industrial output of 13 percent per annum. Based on these growth rates, subsistence production was to decline to 22.4 percent of total GDP by 1973-1974 (as compared with 26.4 percent in 1968-1969), agricultural output was to decline from 50.4 percent of GDP to 47.2 percent and manufacturing to increase from 6.2 to 8.4 percent. The growth of wage employment was projected at 7 percent per annum.

Measured against these targets, the Tanzanian economy's performance during the SFYP period thus far has been only fair. While gross investment now exceeds 25 percent of GDP, the average overall growth rate has declined slightly to about 4.4 percent per annum, implying that the efficiency of investment is decreasing (i.e., the incremental capital-output ratio is increasing). Per capita GDP is increasing at only about 1.7 percent per annum, per capita GDP as of mid-1974 is estimated at about \$100. Both monetary agricultural output and manufacturing output have grown at only half the SFYP target

growth rates. This can be partially blamed on drought conditions in the case of agricultural output, but obviously policy and organizational factors have played a part as well. The stagnation in agricultural growth has put increasing pressure on the balance of payments. The widening trade deficits were more than offset by high foreign aid inflows until recently. Mainland Tanzania's foreign exchange reserves peaked at about \$145 million (roughly 3 months' import coverage) in November 1973 but have been declining since and were down to about \$38 million as of September 30, 1974. At the end of 1974, including \$34 million of IMF drawings and \$11 million of bilateral balance of payments financing, it is estimated that reserves will be \$56 million or less than one month's import equivalent of 1974 imports. 21/

Institutional Developments: Perhaps at least part of the explanation for the relatively poor growth performance during the SFYP period lies in the continued rapid institutional change which is characteristic of Tanzania. There was further nationalization (wholesale trade in 1970, rental properties in 1971, coffee estates in 1973), major reorganizations of parastatal bodies (particularly the break-up in 1973 of the State Trading Corporation into six product-line entities and, ultimately, 18 regional entities) and further developments in TANU organization leading toward greater mass participation in decision-making.

Potentially the most far-reaching change, however, was the government decentralization of July, 1972, which was based on recommendations prepared by McKinsey and Co., the U.S. management consultant to the Prime Minister's Office, and is designed to make government more responsive to the needs of rural local development and generally more efficient. One aspect of decentralization is the formulation of development plans at the local level flowing into preparation of a consolidated Regional plan. Implementation of local projects, such as rural roads, becomes the responsibility of the locality. While this will bring government closer to the people, it puts a great burden on

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21/ For recent discussions of Tanzania's economy, see IMF, Recent Economic Developments, June, 1974 (SM/74/146); IBRD, Proposed Program Loan to the Republic of Tanzania, November 25, 1974 (P-1517a-TA); and the IMF paper on Tanzania dated October 21, 1974.

Regional and District managerial/technical capabilities, already stretched thin. Under decentralization, each of the 20 Regions continues to be headed by a Regional Commissioner who is the chief political officer and has Ministerial rank. Under him and head of the administrative/mechanism is the Regional Development Director, who has rank equal to that of a Principal Secretary. Likewise, the chief political officer in each of the 64 districts is the District Commissioner, and the head of administration is the District Development Director. All civil servants working in the Region and District Administrations are directly responsible to the Regional and District authorities, rather than central government as before. Ultimately the Regional and District governments are to be responsible for the spending of 40 percent of total recurrent expenditures and 10 percent of capital expenditures. (The Regions and Districts will be responsible for 26 percent of recurrent expenditures in 1974-1975. 22/

As noted above, the SFYP gives primacy to social and economic equity. It is clear that income and wealth is less skewed than formerly among the 400,000 employed workers, who account for 6 percent of the working age population. Wages and salaries at the lower end of the scale have outpaced higher salaries, and generally, have kept up with price rises. It is less clear whether the rural/urban income gap has narrowed. Those producing cash crops whose world prices have been rising recently should have improved their relative positions, but pricing policies and the inefficiency of the marketing system hold gains below what they might otherwise be. For the rural population in general there probably has been some increase in living standards through improved access to health services and water and the elimination of primary school fees. 23/

Progress with respect to economic integration has been disappointing. The East African Community has moved from one crisis to another in recent years, due largely to Uganda's behavior under General Amin and the increasing ideological divergencies between the three member states.

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22/ For a brief discussion of the decentralization see IBRD "Recent Economic Developments in Tanzania", December 4, 1972 (30-TA).

23/ Progress and problems in the rural areas is discussed in greater detail in Section II below.

The applications of other states to join the Community seem to be muted for the moment. The decline of the EAC is particularly tragic for Tanzania, which as the least developed of the member states, could have had the most to gain.

Employment Factors: It is difficult to discuss the implications of employment objectives since nowhere have we been able to find figures on unemployment. Our inquiries on unemployment have brought bland replies to the effect that nobody in Tanzania needs be unemployed since there is plenty of land to farm.

We do know that from a population of over 14 million, 405,000 receive wages and salaries and that wage employment has an annual compound growth rate of 3.6 percent. More than a fourth of these people were employed in estate agriculture.

Of course the great bulk (93 percent) of the population and the attendant labor force in rural Tanzania are engaged in some form of farming. Looking at this a priori the usual advice to USAIDs in countries like Tanzania is to calculate the employment effect in every project design and to substitute plentiful and cheap labor for scarce and costly capital. We completely accept this as good and timely advice, but in accepting it we must bear in mind that labor in African agriculture is not a perfect substitute for capital (even imported capital), and the optimum rate of substitution varies with the job to be done. The general admonishment "not to import capital" but instead to use labor is not very helpful for anyone who has observed African farming. Looking at crop farming in Tanzania, the nature of the soils is such that during the dry season they become brick-hard and unmanageable with the hand tools available to farmers. For this reason farmers have no choice but to wait until the first rains come. The soil then softens and becomes more manageable. But the volume of weeds is such that even an extended family working full tilt simply cannot prepare and plant more than a few acres before native weeds fed by the rains take over. In fact labor shortages occur annually at peak seasons. Actually, then, Tanzanian agriculture is highly labor intensive, in fact overly dependent upon labor.

So the hope of increasing labor intensity on farms where 93 percent of the people live is not feasible even in the long-run. Farms could be enlarged but only with the aid

of appropriate equipment. Traditional agriculture would have to undergo a major transformation even to relieve seasonal underemployment and the only short-term relief would be rural public works programs. While we appreciate the need for labor intensification and the reduction of underemployment, relief within traditional agriculture will probably be very modest. Thus our concern that the employment issue in Tanzanian agriculture has not received the type of intensive farm management research that it deserves.

### C. Development Prospects

#### 1. General

The development prospects for Tanzania are modest. Possibilities exist in minerals, tourism, transit trade; but all are secondary to agriculture. While there has been off-shore drilling, no oil bonanza is on the horizon. However, given the world-wide price increases and shortages of raw materials, serious consideration is now being given to further exploring Tanzania's mineral base. There is enough known coal and iron ore to start a small steel industry. <sup>24/</sup> Phosphate rock and potash look encouraging, though both will require heavy capital investment, and earnings are some years away. A small diamond mining operation exists, and exploration for copper and other minerals continue.

Prospects for a significant increase in tourism are not encouraging. Only \$18.2 million was earned in 1973. Increasing travel costs, the government's ambivalence about tourism as appropriate for both ecological and philosophical reasons, state ownership which has meant a lack of investment funds, and inability to cope with Kenya's more dynamic private sector operations makes major growth seem unlikely.

Earnings in transit trade from landlocked Zambia, Eastern Zaire, Rwanda and Burundi are not as promising as once thought. Congestion in the Dar es Salaam port, and overall port costs, have dampened the enthusiasm of the using countries. Now that Mozambique (and soon Angola) has achieved independence, those routes may be restored as the prime paths of trade for Zambia.

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<sup>24/</sup> Reports are that the Chinese will build a steel mill, extend the new railroad to the iron and coal areas, and provide an interest free loan of at least \$75 million. Some of the steel would be exported. It also is reported that Japan may attempt to exploit potash and phosphate deposits.

All in all, agriculture will remain the basis of the economy and the number one earner of foreign exchange. For this reason, development potential must center on it.

2. The Third Five Year Plan Period - Priorities and Constraints

The Third Five Year Plan (TFYP) was to cover the period July, 1974 to June, 1979, but its introduction has been delayed by one year to permit each of the 20 Regions and their constituent Districts to submit unit plans which later will be assembled by the Prime Minister's Office. The regional plans will be aggregated and coordinated to form the first of Tanzania's Five Year Plans to be developed "from the bottom up."

Although the TFYP is not scheduled for publication until March or April, 1975, the probable priorities can be predicted from the government's continued commitment to the principles of the Arusha Declaration, decentralization, sectoral policies already announced, and the exigencies of Tanzania's food crisis and severe balance of payments situation.

The TFYP will be based on a statement of development policies and priorities covering the next 20 years. This will move up the government's current target of universal primary education from 1990 to the late 1970's, emphasize rural water development putting the entire rural population within easy reach of adequate and good water by 1990, stress near universal access to rural health facilities by the early-1980's, and attempt the completion of the basic trunk road system by the early 1990's. It will probably include targets for rural electrification, nutrition and population growth, as well as a detailed industrialization strategy. Relative to the SFYP, the TFYP will clearly give greater emphasis to regional development, although the 9-towns strategy will likely be modified toward a more comprehensive coverage of the 20 Regions, and of course, Dodoma and its Region will receive particular attention due to the government's decision to move the capital there over a 10-year period. Of course, highest priority will continue to be in agriculture and special attention will be given to food crops. This emphasis has already been announced by the Planning Minister. The completion of the TanZam communications links may permit a reduction in the percentage of Tanzania's resources devoted to infrastructure development, although the inadequacy of the transport network, the need for rural infrastructure development and the increased urgency of developing mineral resources and non-oil sources of power will generate continued heavy demands on the budget. These pressures will have to be balanced against the resources needed to support increases in production of food and export crops as well as increases in manufacturing and semi-manufacturing for both import-substitution and export. These latter

considerations will also affect the relative emphasis to be accorded to investment in social services rather than production programs.

However these issues are resolved, Tanzania will face a series of obvious constraints in accelerating GDP growth and simultaneously moving toward the development of more adequate infrastructure and toward fulfillment of the country's social goals. For the next few years, a chief constraint will be the balance of payments, although the external resources constraint is likely to be a serious one in the longer run as well. Among the longer-run constraints, the most critical in addition to external resources are likely to be manpower; financial resources; lack of knowledge, infrastructure and institutions; the ecology; and possibly ideology, which could show itself through inflexible adherence to questionable economic and social policies.

The SFYP assumed that external resources would be an increasingly constraining factor as the plan period progressed, and in fact the current account deficit was increasing throughout the early 1970's, although it was offset by fairly large aid inflows and dampened by rapid increases in the prices of Tanzania's exports. The widening of the external resource gap was however vastly accelerated by galloping oil prices after October 1973 25/ and the failure of the 1973 and 1974 rains. The result of higher oil prices and the drought will be increased 1974 imports on the order of \$200 million, made up of about \$75 million in increased oil costs and close to \$125 million for cereal imports. This could represent an increase of 40 percent over Tanzania's 1973 imports of about \$500 million. 26/

The overall balance of payments outcome for 1974 of course depends on Tanzania's export performance, other imports, and other current and capital account items. The IMF, for example, had earlier projected a 1974 balance of payments deficit in the \$110 million range (as compared with a \$30 million surplus in 1973), but this assumed increased oil and cereals imports of only \$85-90 million, along with lower net capital inflows and a slight deterioration in the current account balance. 27/ Based on the higher current projections of cereals requirements due to the continuing drought and worldwide inflation the IMF is now projecting an overall balance of payments deficit for 1974 of \$138 million. Since consumer goods imports have declined from over 50 percent of total imports in the early 1960's to less than 30 percent at present, imports cannot be significantly reduced without affecting development programs and production. Moreover, exports of cash crops

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25/ According to an analysis carried out by AID/W-PPC, Tanzania ranks as one of the countries most seriously affected (MSA) by the oil price increases.

26/ IMF, October 21, 1974, paper. P.2.

27/ See IMF June, 1974, report. P.55.

have been affected by the drought and 1974 export prices may be lower than anticipated due to recession in some industrial countries (most primary product prices had started falling from their peaks by May or June 1974). Tourism earnings will also be affected by slowing of economic growth in industrial countries.

The availability of external resources will remain a serious constraint throughout the TFYP period, particularly if oil and fertilizer prices remain at or near their present levels. The less favorable prospects for primary agricultural exports combined with continued worldwide inflation will likely lead to a deterioration in Tanzania's international terms of trade. Consequently Tanzania's balance of payments will remain very sensitive to price changes for its primary products.

The availability of domestic financial resources will also be a constraint for the foreseeable future. Since the projections of savings and investment for the TFYP period are not yet available, it is not possible to say with any precision how serious the domestic resources constraint will be. Given that Tanzania's tax effort is already quite good and that recurrent expenditures will probably continue to increase rapidly, there is little likelihood that the recurrent budget surplus will finance more than 10-15 percent of government development expenditures. The remaining financing will have to come from foreign assistance and domestic borrowing. In 1974/75, for example, the recurrent budget surplus was expected to finance only about \$40 million out of the total development budget of \$270 million, while foreign loans and grants were to provide about \$160 million with the remaining \$70 million coming from borrowing and other domestic sources (such as profits of parastatal corporations).

Another constraint on Tanzanian development during the TFYP period will be the availability of qualified manpower to which we have earlier referred. This constraint cuts across the entire economy and has long-term implications in both the selection and the implementation of workable strategies of economic development.

It will be useful to make special reference to technical agricultural manpower as a constraint. One might expect that the returns from technically trained agricultural manpower would be unusually high. But somewhere during the years of colonial rule, getting an education became equated psychologically with getting a job in the money economy, and the higher the formal education that one was able to attain (even agricultural education) the further it removed him from farm work or the farmers' problems. Even the least educated--the so-called school leavers and others--attach to the lower rungs of the money economy. Some of them fall off the ladder into unemployment,

but returning to the farm is avoided when possible. 28/

The upshot is that while those interested in agricultural development are worrying about technical manpower shortages and trying to fill these gaps, problems of attitude and honorific ideas about job prestige arise. Because of these problems, agricultural productivity suffers not only because of the shortage of skilled agricultural manpower but also because too many Tanzanians who are trained do not apply their knowledge to the realities of small scale farming. It seems to us that the need is becoming more urgent to restructure incentives in line with development demands. While continuing to train managers and technical agriculturists, more emphasis should be put on the training of second-level personnel such as mechanics, and to upgrading the technical abilities of the peasants who farm, while breaking the white-collar mentality of those who normally receive technical agricultural training. We also need to keep in mind that as Tanzanian agriculture expands and modernizes the parastatals and co-ops will be ever more critical elements in determining success or failure. Within these bodies both managerial and technical shortcomings require large scale expansion and upgrading. If this is not done agriculture and rural development goals will not be reached.

Institutions are likewise a major long-run constraint affecting the achievement of Tanzania's social and economic goals. While there is no irrefutable evidence that poor growth performance is significantly correlated with the rapid institutional changes which have been taking place, there is reason to believe that the two may be related. Fortunately, most of the major institutional directions—villagization, nationalization, creation of parastatals, decentralization, establishment of a broader role for TANU and its members are already known. The TFYP period is likely to be a period of consolidation and gradual strengthening of institutions. A particularly critical problem is strengthening at levels below the Region and District, i.e., at the Wards and Villages. This will obviously have a significant impact on the extent to which the government is able to reach the farmer in carrying out its programs in the rural areas.

What about the quality of Tanzania's agricultural land as a development constraint? Again, one has to be very careful in the absence of confirming research data, but in our opinion the land is not as good as it may appear to be. First, it is estimated that only about 20 percent of the available farm land is arable, i.e., could be made immediately suitable for crops. Vast acreages are infested by tsetse

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28/ For an excellent treatment of the school leaver problem and its effects on employment see: N. Arthur Lewis, Reflections on Nigeria's Economic Growth Development Centre, OECD, Paris, 1967, pp. 41-47.

flies and in any case would be very expensive to clear and prepare for crop production. 29/ Other vast areas of land receive too little or too erratic rainfall for reliable crop production--in fact, significant areas suffer from recurring drought--and while some land may appear to have natural fertility as judged by natural vegetation, upon removal of "native bush" it is found to have very thin top soil and tilth, such that a year or two of arable cropping will "burn it out." Maintaining fertility through commercial fertilizers on these kinds of soils would be costly.

While we agree with the generally expressed viewpoint that Tanzania could surely double or triple its agricultural output, the fact remains that most of its fertile land is confined to a few major valleys and other specific areas of the country. It is not abundant everywhere. Thus the location for particular producing enterprises (crops vs. livestock for example) becomes very important if costs are to be controlled and the land base protected.

A final constraint is Tanzanian ideology itself. Will it be overly doctrinaire? How far will egalitarian measures be pushed? Will a reasonable degree of pragmatism be maintained? To the extent that output goals are not accorded sufficiently high priority relative to social and other goals, achievement of all the government's development aims could suffer. This is especially true during the present crisis in food grain production, since continued poor performance in food grain production could have consequences which would be drastic and immediate. 30/ Acceleration of output and particularly output growth is also important in the longer run, since continued slow growth will delay the development of infrastructure and social services as well as lengthen the period of time required for any given increase in per capita GDP. Concerns such as these may of course be exaggerated, since President Nyerere has always maintained a relatively open government notwithstanding Tanzania's unique brand of socialism.

### 3. Assistance Requirements, and Other Donor Assistance

Tanzania will require massive balance of payments support in the short-run and probably in the medium-term unless it can greatly boost agricultural production. Continued substantial capital and technical assistance in the longer-run can be foreseen. The IMF paper

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29/ Less clearing is needed for opening new cattle ranches, but even here large tractors with drag-lines and follow-up spraying for tsetse flies must assist clearing by hand.

30/ Recent discussion between IBRD and Tanzanian officials indicate that a rather dramatic attention to output priorities will be taking place.

projects the 1974 and 1975 balance of payments deficits at \$138 million and \$116 million respectively. Since foreign exchange reserves are minimal, this implies a requirement for balance of payments assistance of \$115-140 million for each year. Capital and technical assistance requirements for the TFYP period will become clearer with the publication of the TFYP in early 1975. However, the IBRD reported to the last Consultative Group meeting for Tanzania (January 1973) that the country would require about \$400 million over the subsequent five years on a disbursement basis, or \$550 million on a commitment basis. Allowing for price increases, Tanzania would then need capital inflows of over \$500 million over the TFYP period, or an average of over \$100 million per year. However, we feel that this projection is outdated and actual requirements will turn out to be very much higher.

Based on manpower projections discussed above, the outside high-level OPEX-type manpower needed for Tanzania's development should decline from 5000 at present to about 1000-2000 by 1980, and the number of technical assistance personnel needed (currently 1500) may decline. In any case, technical assistance requirements will become more specialized.

Tanzania's major aid donors at present are the World Bank Group, UNDP, the Scandinavian countries, China, the U.S., the U.K., West Germany, Canada and the Netherlands. While assistance is provided across the board, there is a discernible shift in favor of agriculture. The prospects appear good that the principal donors will continue their capital and technical assistance at present or increasing levels, and will generally be able to meet Tanzania's requirements for technical assistance. However, capital requirements will not be met without a special effort by the donors, given current gap projections. There is no assurance at present that Tanzania will be able to attract adequate balance of payments assistance for the 1974-75 period. There are several possibilities of course including an IMF Standby Arrangement, a program loan from the World Bank Group, assistance from a special oil fund in the IMF or elsewhere, some sort of relief from oil producing countries, and program-type assistance from bilateral donors. At present the Bank is developing such a package for implementation early in 1975.

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Pages 32 through 35

The above pages are attached as a separate  
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## II. USAID Areas of Concentration

### A. Introduction

The current and proposed USAID program falls into two sectors: Food/Nutrition and Health/Population. Within these sectors the areas of concentration are Food Crops, Livestock, and Rural Maternal/Child Health. Particularly critical problems within each subsector have been identified. Our approach, how it fits into TanGov requirements and priorities, and how it relates to the work of other donors is discussed in the separate sections below.

The concentration on these sub-sectors flows naturally from our Development Overview.

Agriculture production is the foundation of the economy. The current food grain shortages are causing a serious drain on foreign exchange reserves which in turn is slowing down development efforts as well as providing a potential threat to political/social stability. Livestock development (Tanzania has the continent's second largest herd) is both an opportunity and a necessity. For ecological reasons large areas are suited only for livestock production. Over-grazing is beginning to cause the type of problem so vividly seen in the Sahel and Ethiopia. With tsetse eradication and the opening of virgin lands the ecology problem will multiply. Livestock products are excellent as a major source of protein. Tanzanians are meat eaters, and the export potential is still largely untapped. In other words the cattle are already here, the question is whether they will be a major asset or not.

We look upon our MCH project as an important part of Tanzania's drive to promote equity, particularly in rural areas. Health services are sought after, and are a form of income redistribution when subsidized. MCH programs can also be an important step in the acceptance of the small family norm. Further AID assistance in the health field -- integrated health delivery systems with a minimum input package -- is dependent upon what we learn from our MCH project, now in its earliest stages.

Thus our assistance efforts are in two of AID's three priority sectors. We do not plan to move into general education in the foreseeable future for several reasons.

First, resource constraints indicate caution. Second, other donors are involved in the conventional approaches, and Tanzania already has a wide ranging adult literacy program. However it should be noted that both formal and non-formal education are integral parts of our other sector activities, and we are making a major contribution to human resource development through them.

Our program has, of necessity, concentrated upon the building of an infrastructure critical to the future well-being of the country regardless of the social system that evolves. Thus our health activities are in the training of paramedical manpower and in upgrading rural health centers. Our agricultural program has focused on improving research capacity, on foundation seed production, livestock development and a national marketing capacity. We will be taking a hard look at managerial manpower needs in the parastatals given their growing importance to agriculture modernization.

But we recognize that our agriculture endeavors cannot be successful until they reach the village, and that to insure that success, we should have programs directly at the village level. Thus our general strategy for the immediate future can be described as maintaining the building of development infrastructure and a solid manpower base and moving to more participation in actual production. We hope to become more deeply involved in production for low income farmers, using key projects like agriculture research, seed multiplication and agriculture manpower as support activities. We are proposing a village related project for FY 1976, designed to begin using the foundation that is being built up with AID and other donor support, in an attempt to train practicing farmers. Depending on the results of a livestock Subsector Analysis we may wish to provide additional inputs here. We will wish to participate through both Capital and Technical Assistance in the 3rd Plan's major push to increase food production. Thus there will be additional loans in the agricultural sector, with the funds going to help break particular resource and incentive bottlenecks. But integrated development grants are more suitable for Tanzania than loans. IBRD/IDA/IMF and the UNDP have separately urged that in view of the country's limited debt service capacity it is desirable for as much new aid as possible to be on concessionary terms and that donors should also absorb local costs associated with projects to the fullest extent possible. Sweden has recently switched its program to 100% grant.

Thus we will press for grants, seeking loans only if grant funds are unavailable.

B. Agriculture<sup>1/</sup>

1. Importance and Trends

The economic, political, and social factors affecting the agriculture sector have been discussed in the Development Overview. In brief they are the TanGov emphasis upon rural development, attention to the lower income groups, mass public participation through a one-party system (TANU), and Ujamaa. Implementation of the country's development philosophy is still evolving. Whether Ujamaa will be pushed to its final stage or whether a pragmatic compromise will be reached cannot be foretold. After a speed up there are signs of the process slowing down.

But the predominant role which the agricultural sector (including livestock) plays, and will continue to play for the foreseeable future in the Tanzanian economy is beyond dispute. Agricultural exports, primarily coffee, cotton, sisal, cashews, tea and tobacco, amount to over 60 percent of total exports (1973), and most of Tanzania's food is locally produced.

What this does not indicate is the quality of the agriculturally useful natural resources with which Tanzania is endowed. There are problems to contend with. Less than 10 percent of the land is under cultivation and only 20 per cent is classified as suitable for crop production. At least 60 percent of the land could be used for livestock pastures but tsetse fly infestations reduce the areas significantly. Tanzania has about 9.5 million cattle and an equal number of sheep and goats. However, it is poorly distributed and much over grazing results. The rate of growth in the monetary agricultural sector (in constant prices) was about 3.6 <sup>2/</sup> percent during 1968-72 compared to an economy wide rate of 4.3 <sup>2/</sup> percent and well under the Second Five Year Plan target of 7.2 percent.

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<sup>1/</sup> In Swahili, Agriculture is "Kilimo". We use this term interchangeably with Ministry of Agriculture.

<sup>2/</sup> International Monetary Fund Report -- Tanzania -- Recent Economic Development, June 25, 1974.

In the food crops sub-sector the evidence is that since the mid-sixties production has not kept pace with population growth, worsening the already inadequate average diet. The highly visible food problem in 1973-74, continuing into 1975, requiring substantial food imports to relieve the drought situation is the most dramatic manifestation of an inadequate production position made worse by poor weather, but only partially due to the weather, as explained in the overview, the following sections, and the Sector Analysis.

Export crop production has risen modestly and the value of export crops has continued to grow with coffee the most important export followed by cotton (1973). The decline in sisal output slowed down as prices fell, but prices are again rising. The growth in export value of agricultural crops is more a reflection of higher prices than larger quantities.

There is, in reality, two production systems in the agricultural sector wherein export crops are produced under one set of conditions while food crops are produced under another. And, as has historically been the case in agriculture, particularly in the ex-colonial countries or where foreign exchange earnings are a priority requirement, food crops had been relegated to a secondary position. This has been recognized by the Tanzanian Government and policies have been established and actions taken to re-focus attention and resources on food crops.

Food crop development mainly involves small farmers with the average cultivation per household ranging from one to eight acres. Under Ujamaa, of course, this could be drastically changed since more land and farm machinery probably will be available for cultivation as part of the cooperative farm.

## 2. Food Crops

The most important food crops are maize, rice, vegetables, sorghum, wheat, millet, cassava, and bananas. The average Tanzanian consumer is heavily dependent on maize and other grains as sources of both calories and protein, although in some places cassava replaces maize as a main food source. In many areas up to 40 percent of calories are from maize and an additional 20 percent from other grains.

Although adequate data from nutrition surveys are not available, the general opinion seems to be that the basically cereal diet of the average person is of poor nutritional quality and needs improvement, particularly

in the amount of protein intake. This is a matter of special concern for children of weaning age.

Yields of the major food grains are low. For Tanzania as a whole, maize yields are probably on the order of 12.5 bushels per acre and sorghum and millet yields are probably around 8-11 bushels per acre. Rice is 14 bushels per acre, wheat about 12, and soybean yields based on very small production acreages may be in the neighborhood of 19 bushels per acre. By comparison United States yields are:

Maize-- 75 bushels per acre; sorghum--76 bushels per acre; and soybeans--28 bushels per acre. Preliminary research results indicate that maize yields could be increased to 2-3 times the present levels by the use of improved varieties and hybrids, fertilizer and improved agronomic practices.

The basic problems in food crops are:

- (a) increasing production to meet the needs of development and an expanding population,
- (b) improving the nutritional quality of the average Tanzanian diet,
- (c) maintaining an acceptable equity in incomes.

The food crop production problem has been explored in some depth by the World Bank and also by an AID commissioned University of Missouri study. The attached Agriculture Sector Assessment discusses those studies and the whole food crop sub-sector in depth.

### 3. Livestock

Livestock production has not risen as fast as domestic demand stimulated by low consumer prices. The result has been increased local consumption but a decline in exports. Recently the TanGov has taken steps to raise production and raise prices and this may reverse the trend. Most of the cattle population are in the traditional sector, and, although individually owned, generally are grazed on communal land. A recent study indicated that cattle ownership is relatively concentrated. It is estimated that approximately 250,000 rural farmers and herdsmen can be considered as the country's cattle producers.

The traditional herd in practice has a multipurpose use. It provides subsistence food in the form of milk, meat, and blood; plays a significant role in traditional social customs; may sometimes be used as a source of fertilizer and draft animals by cultivators; and serves as a self banking and insurance program. Thus, to a large degree, cattle reaching the market are in effect similar to shares of stock; often sold only because they are too old to risk holding any longer.

There are also a dozen or so government owned ranches planned or in various stages of development. Together they will carry only about 300,000 animals.

Ujamaa ranches are also planned, and as in crop production, would be made up of currently individual owners of cattle.

Since generally the number rather than the quality of cattle is the traditional symbol of wealth and marketing facilities are limited, overgrazing is widespread and unproductive stock not vigorously culled.

Husbandry and management practices result in minimal quality and value of beef production. The males require five to eight years to reach maturity and weigh only 500 to 700 pounds. The cows bear their first calf at five years of age, then calve every other year, producing a life-time average of only five offspring. The calves are weaned during the dry season when long distances must be traveled to and from water, and available forage is below basic body maintenance levels. During this period of stress the animals' resistance to disease is lowered and large losses are experienced. The calf mortality rate, up to one year of age, is extremely high, averaging 35%, but ranging up to 90% in bad years.

As indicated the livestock industry is not achieving its potential. From a national herd totalling some 9.5 million head, total offtake (including commercial slaughter, home consumption and deaths), is about one million (estimate based on hide sales) with approximately one-third passing through official market channels. The value of beef offtake in 1971 was about \$50 million or approximately 11 percent of total agricultural production. Of agricultural exports, processed beef, live cattle, hides and skins amounted to approximately \$8.0 million or 4.5% of

agricultural exports in 1971. For a nation where agriculture provides a livelihood for some 90 percent of the population and where approximately 23 percent of the land area is used for cattle grazing, with another 40 percent in idle range and bush; and where an increasingly urbanized, increasing monetized economy is demanding larger quantities of meat (from 1967-72- the demand for meat in the Dar es Salaam market grew at a rate of 36% per annum), this is very unsatisfactory output level.

As an indication of a new emphasis upon livestock, a Livestock Development Authority was established in June, 1974. Its purpose is to plan and implement a nationwide integrated livestock development program-- from production to disease control to marketing. This will be the organizational means of implementing a \$20 million IDA input into livestock and an AID Livestock Marketing Project.

But marketing is only one of several purposes for which cattle are grown. Will the small producers take advantage of opportunities offered by the large scale TanGov production/marketing program?

It has been a general thesis that because beef cattle are multipurpose and traditional/developing society livestock owners regard their animals as wealth on the hoof, they prefer to increase the total size of their herd, rather than to increase sales.

For untold generations the herds have been plagued with disease, parasites, drought, poor nutrition, predators, tribal war/thefts, etc. At best the calf crop and number of animals that reached maturity was little more than adequate to maintain the basic breeding requirements and a subsistence livelihood for the owner's family. At worst the herd was decimated during bad years. This required that every animal that lived, regardless of quality, had to be saved to maintain the basis for the family's existence.

Given this environment it is little wonder that a "maximum herd size" mentality developed among that portion of the community whose well being is largely dependent upon cattle. (There is a very close analogy here with acceptance of family planning and a small family norm in societies with high child

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mortality rates.) Therefore response to marketing opportunities will not come automatically but only as several other factors are combined with it. An example, is the Maasai Project supported by the USAID. An early step in the Maasai Livestock and Range Management Project was tick dip and water development. Using the tick dips reduced the incidence of the tick-borne diseases. This combined with other improved management practices demonstrated to/ convinced the Maasai that such practices improved their cattle, resulted in reduced animal mortality and so was desirable. They immediately wanted more of these facilities. This required they raise the necessary capital. They had to sell cattle to raise cash. From this, increased market off-take resulted, not as an economic activity to the Maasai, but as a means of obtaining more facilities to improve management and herd conditions. From this beginning increased marketing can evolve, given proper incentives. Exposure to consumer goods -- a demonstration effect -- probably would be such an incentive.

A readily available source of consumer supplies which they can afford or would purchase if easily available, is one means of providing proper incentives. Until the wife(s) and family have consumed, or observed others with similar resources enjoying some of the "better things", there is limited need for cash. The desire, need, or demand for items requiring cash is a great incentive for getting cash, which can be obtained only by selling livestock. A fuller description of the livestock scene and its constraints will be available following a sub-sector analysis proposed for 1975.

#### 4. TanGov Organizational Changes

The past few years have also seen rather dramatic changes in the organizational structure servicing agriculture. In 1969 the Ministry of Agriculture was reorganized and renamed the Ministry of Agriculture, Food and Cooperatives to reflect the Arusha Declaration's emphasis on food production and cooperatives. At this time all agricultural parastatals were made responsible to the Ministry and the Ministry's field organization was devolved to give greater autonomy to the Regions and Districts. Since 1969 fisheries and forestry have been transferred to the Ministry of Natural Resources and Tourism while the Water Development and Irrigation Department has gone to the Ministry of Water Development and Power. When decentralization began in late 1972 the Ministry was renamed again, simply, the Ministry

of Agriculture. In September 1973 it was further reorganized and responsibilities were shifted to the four designated divisions, namely planning and Administration, Crop Development, Livestock Development, and Manpower Development, with each of these being responsible for research as it may apply to that particular discipline. A reasonable judgement is that these frequent changes have had an unsettling effect on the Ministry and perhaps agricultural production even though presumably implemented to improve performance. The Ministry is short of qualified personnel and its planning activities are especially weak.

In addition to changes in the primary governmental agency in the sector, a number of parastatals have been formed and reformed to handle various agricultural supply, production and marketing functions. These include the Tanzania Rural Development Bank established in 1971 to provide required agricultural credit, the National Milling Corporation which acts as the national food crops marketing organization, the Tanzania Livestock Development Authority with responsibility for livestock production and marketing activities, the National Agricultural Company with a range of crop production responsibilities, the Tanzania Seed Company to handle the distribution of improved seeds, and numerous other bodies. Most have been formed since 1969 and have experienced the normal growing and shakedown pains of new organizations which means their operating effectiveness has perhaps been lower than it will be in the future.

Along with these new organizations and changes in Kilimo has come the overall Tanzanian policy of decentralization. It has directly affected the agricultural sector through: (a) the re-orientation of the structure of the cooperative movement toward multi-purpose cooperatives with a regional coverage instead of specialized cooperatives with a multi-regional or local coverage (there are now regional cooperatives in 18 out of 20 regions); (b) some projects and administration of some programs operated completely by the region with only token support from the central government; (c) multi-disciplines, e.g., agriculture and water co-mingled into one project with no demarcation. At the farmer level the most significant feature of the past half decade

is the ujamaa movement. While the background, rationale and general aims of the movement are outlined elsewhere in this paper it is important to emphasize its objective of preventing further rural socio-economic stratification. Only replacing the expatriates in the old colonial stratified system with Africans, but not doing away with the system itself, is inconsistent with the basic tenets of Tanzanian socialism. The ujamaa movement is clearly designed to halt and eventually reduce the stratification already existing. A central issue is whether these equalitarian goals will smother production goals.

##### 5. Constraints

The constraints to be overcome if the agricultural sector and agricultural production are to grow are not too different from those of many other African countries. Technically trained people are in short supply, so are competent managers and related services, as well as competent smallholder farmers. Those currently in senior jobs also suffer from lack of practical experience. An attendant constraint is the separation of technical training from actual farm work. As it happens those who receive training are not farmers, but more of a problem is the fact that farmers seldom, if ever, receive training. Institutions are short of funds, staff and equipment, less than optimally organized, and are unable to provide sufficient inputs and services when and where required. They also lack a "tradition". Modern technology is not generally available in a form adapted to Tanzanian conditions, and poor agronomic practices are the rule. Transportation and communication networks are inadequate. Availability of domestic resources to finance agricultural development is bottleneck. There would appear to be a continuing problem of incentives to farmers if, under the Tanzanian socio/political philosophy, prices are not allowed to perform this function. Finally, land use is curtailed by ecological limitations, including periodic drought.

Perhaps the most critical administrative/logistical constraint to increased agricultural production is the quantity and quality of trained manpower including lack of farmer training. Research stations are inadequately manned, cooperative organizations do not have enough qualified manpower, administrative talents of existing staff need to be developed, planners are in short supply. At the key farmer contact level there is both a quantity and quality shortage. Increased numbers trained is no guarantee

of higher output. Customary work practices that developed with the expansion of modern education dictates that the higher the training the further detached people become from actual farm work. We therefore have to put as much attention to training cultivators (illiterate/semi-illiterate or not) as we do in training administrators, scientists, and extension agents. Training for both groups are equally needed if production is to increase. The situation appears worst in the food crops sub-sector which has been relatively neglected with the past emphasis upon export crops. Most crop average yields are well below what could be achieved with existing varieties and known technology. In general, as one proceeds from top to bottom in organizations servicing agriculture the situation deteriorates. Over the past decade Tanzania has done well in expanding the number of trained individuals but the sector has absorbed the output and requires many additional numbers and improved quality if the demands placed upon it are to be met.

A second constraint, related to the first, is the inadequate and inefficient network of organizations providing agricultural services. The general extension service is ineffective. Moreover, one can question to what extent the extension agent's advice is practical to the peasants. For, except for certain cash crops, extension is not coupled with an integrated service system including credit, agricultural inputs, marketing services, etc. We have made mention that cooperatives are the most critical link in the agricultural service chain. They have the responsibility of providing inputs and farm supplies and of providing credit directly to farmers on behalf of the Tanzania Rural Development Bank. Perhaps of greater importance cooperatives are the buyers of farm products. In other words cooperatives have replaced Asian and expatriate middlemen who once provided these services. Moreover under current development plans the last stage in the three stages of ujamaazation of villages is the registering of those villages as worthy cooperative societies. It is therefore regrettable that to date cooperatives have not only been weak management and service-wise, but also appear to be corrupt. Government seeks to root out and expose corruption, but it's audit control is weak. No part of the institutional structure requires more urgent improvement than the whole cooperative organization.

Technology is a genuine constraint but certain crops are affected more than others. Adaptive research is needed, as is additional research on systems of farming. In general the whole research network needs upgrading and revamping. Labour at time of peak demand may well be a most critical constraint.

The poor transportation network is an important constraint in certain parts of Tanzania. Moreover good agricultural husbandry practices are extremely time dependent. If transport is not available at the right time, damage to production may well be done. Roads either do not exist or are impassable at certain times of the year. The poor condition of many roads and the hilly terrain also greatly increase transport costs reducing farm gate values or production and increasing input costs. A feeder and farm to market road program is clearly required.

The availability of domestic resources is a problem for the TanGov that underlies and has implications for the above constraints. For example, in 1974-75 the TanGov has budgeted nearly a 100 percent increase in Agricultural sector activities over the 1973-74 figures. However to meet this figure, in light of recent economic performance, will almost certainly require reductions in the budgets of other sectors (which may or may not be possible). IBRD projections indicate a large growth in agricultural sector funding is required if acceptable development targets are to be achieved. However, for the reasons mentioned earlier the TanGov is likely to have great difficulty in generating the additional resources. The indicated result of this resource gap is projects and programs which are planned and which could alleviate problems but which will not leave the drawing board or which will be only partially implemented. In our opinion the TanGov must make maximum efforts to provide the full amounts the agricultural sector can absorb utilizing all the means at its disposal to mobilize necessary funds.

A constraint thought by many to be the most important for increased production is farmer incentives. Through 1973 farm prices were held at low levels. For the large number of subsistence producers with little to market this, of course, may not have been of great importance. However, there must be some reason for them to be able and to want to increase production. In 1974 there have been substantial price increases (announced in April and October). The new prices are considerably above

those of neighboring Kenya and Zambia, but probably are still slightly below world prices. The newly announced prices should provide the incentives, particularly if additional production inputs and consumer goods are made available in the rural areas. Alternatively, it is thought by some Tanzanians that the price/profit incentive may be replaced by peer group pressure and a desire to help the nation as more and more people become members of Ujamaa villages and understand the objectives of the TanGov development strategy.

For the Masai and other herders the incentive problem is quite different. The constraint here is lack of demand for the things money can buy. We are hopeful that this will break down as education and outside contacts change values.

As has been mentioned only small portions of Tanzania's land area is immediately suitable for crop production. Other large areas are tsetse fly infested or receive too little or too erratic rainfall for crop production. In this situation people and their livestock are forced to concentrate in limited areas. In many places the growing population densities are having a detrimental effect on the ecology as too many people and too many livestock seek to use resources which are suitable for sustained use under traditional technology only on a less intensive basis. It is a vicious cycle of too many people further depleting existing resources which leads to fewer resources for more people which leads to greater depletion etc. Socially acceptable and economically viable solutions which maintain the long-run productivity of the environment are not easily found. Clearing land of tsetse, allowing permanent settlement, may result in destructive cultivation. Opening up drier areas through the development of crop varieties requiring less moisture may provide only short-term relief if soil management and water conservation are not introduced along with the varieties. Clearly needed is more research on what is and is not possible. Also needed is a monitoring system of some type to identify ecological problems at an early stage. Finally the TanGov must be prepared to take necessary positive steps to meet current problems if greater difficulties are to be avoided in the future.

6. How Other Donors Address Constraints

A policy decision was made in 1973 by TanGov to the effect that planning for the 1975-79 Third Five Year Development Plan would be decentralized to the country's 20 regions, and they in turn would call upon local entities to participate in these plans. Thus rather than coming from the top, plans however crude, would begin in ujamaa villages, be expanded at Ward and District level and would then be assembled, reviewed and edited at Regional headquarters and then forwarded to the Prime Minister's Office where final assimilation and coordination for the National Plan rest.

Each donor country was requested to choose a Region, send a planning team there and assist it in preparing an "Integrated Rural Development Plan". The plan would focus on agricultural production including livestock where appropriate. But it also would address and recommend strategies and approaches to development of education, health, other services, rural infrastructure -- water impoundment, access roads and the like.

When USAID pointed out that it would be impossible for us to obtain AID/W approval, recruit staff and help prepare a plan for Arusha Region in the allotted nine months, TanGov withdrew its request to us and asked Swedish AID for help. It is very definite, confirmed by close contact and continuing discussions, that all Regional plans will place high priority on food production in view of the critical nature of this problem.

Some donors already are engaged in assistance to agriculture, but like ourselves their attention has stopped short of the villages and farms. The Scandinavians for example are heavily involved in assistance to agricultural cooperatives including technical assistance to the cooperative colleges. They also are giving help to research on both food and cash crops, large scale storage and dairying. Training in all of these endeavors is provided. The Canadians are assisting in several agricultural areas including the construction and operation of storage at local collection points, crop research, and the provision of equipment. The IBRD is providing most heavily to livestock (beef) production and marketing, dairying, regional planning,

cash crop loans, and is now to become further involved in food crops. The UNDP/FAO provides technical assistance in the areas of agricultural planning, rural technology, crop production, rural institutions and livestock development. These are by far the largest donors to agriculture, but the Dutch, Chinese, Australians, West Germans, Indians and a few others are contributing in varying ways and amounts. How these donor programs relate to our own is discussed below. Significantly the Swedes have switched all of their inputs to grants and currently Sweden is the largest donor overall to Tanzania at \$30 million a year. The U.K. has just renewed assistance to Tanzania after a lapse of several years and will be providing \$24 million in various fields.

#### 7. Proposed U.S. Assistance Strategy in Agriculture

The goals sought by our agriculture programs are self-sufficiency in food grains; self-sufficiency and exports of livestock products; with the resulting income gains going to the small farmer/herder. All of our inputs into this sector make up an interrelated package designed to overcome selected critical constraints that are obstacles to achieving these goals.

As discussed throughout this DAP the constraints upon Tanzanian agriculture are numerous, but not too different from those to be found in other African countries. These constraints may be summarized and approached in several categories:

- a) policy
- b) infrastructure and institutional
- c) financial
- d) ecological

Our strategy is to attack some of the constraints within each of these categories, as limited by TanGov ability to respond, resources made available to the USAID, and the realities of U.S.- Tanzanian relations.

Pages 51 through 53

The above pages are attached as a separate  
Limited Official Use addendum.

b) Infrastructure and Institutional Constraints

We employ these terms broadly to mean training, activities in manpower, institution building, physical infrastructure (roads, storage, etc.), as well as technology and cultural practices.

To date our AID program in agriculture has concentrated upon technical assistance designed to improve or create the infrastructure needed for a successful attack on agriculture problems. Strengthening the capacity of delivery systems we contend is a precondition to any successful production activities in the food grain and livestock sub-sectors. The small amounts of available capital assistance from the U.S. has been used to provide imported equipment required by these technical assistance projects.

We propose to continue current efforts in infrastructure and institutional improvement by way of projects in agriculture research, seed production, training of manpower, assistance to credit institutions, marketing; and to focus more heavily on production at the farmer/herder level.

We are also studying the possibility of involvement with access road building and maintenance. However, given the costs involved and the fact that rural road programs have been decentralized to the regions -- where technical manpower resources are particularly weak-- any programs would require careful planning and local resource availability calculations.

Projects of this kind should probably begin in one Region in order to gain experience that can be used in a more widespread undertaking. A logical place for us to start is in the drought stricken areas of, and around, Maasailand. In so doing we could take advantage of our contract team that is already on the scene and knowledgeable about both requirements and implementation obstacles. At the same time, of course, we would be meeting the Congressional mandate to alleviate the effects of future droughts, thus the special drought appropriation (R&R) would be used for this part of the program.

c) Financial Constraints

Financial constraints consist of both foreign exchange and budgetary shortages. The country's problems have been multiplied by oil price increases and food grain shortfalls. To date AID's response to financial problems has been minimal, limited to the import of

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project related equipment and minor amounts of local currency also for project support. Given the seriousness of the current financial difficulties and their expected continuance, perhaps throughout the 1970's, we have proposed a significant input of foreign exchange, which would also generate local currency for the agriculture sector. Tanzania's most immediate need being food, P.L. 480 would serve a dual purpose-- saving foreign exchange and providing local currency for the agriculture budget. This would be a one or two year program until food production recovered from the affects of the drought. Given Tanzania's limited ability to pay its growing debt, especially with the drought related loss of foreign exchange, we recommend Title II to the extent possible; though this would limit local currency generation for budget support.

A second input of capital would be by way of sector loans (or grants).

Agriculture sector loans (or grants) serve the dual purpose of providing foreign exchange and increasing the TanGov's agriculture budget. The \$3,000,000 grant already contracted under the credit project also serves these ends, and helps provide needed inputs as well.

d) Ecological Constraints

The impact of the drought, our work in Maasailand, and the Tsetse eradication projects, have raised the whole ecology issue to a new level of consciousness within the Mission. Ecological concerns have already been built into our two livestock projects. A key to our work with the Maasai is the range management program which seeks to attack the overgrazing problem. Thus land use, grazing plans, water development, and reduction of herd size are all interrelated factors. A range management aspect is also part of the Livestock Marketing Project.

The recent drought together with what we have learned in Maasailand have emphasized the fragile nature of much of Tanzania's land base. Using the special drought appropriation we hope to assist in expanding the gathering of land use data beyond Maasailand so as to cover the whole country, and to help the TanGov undertake needed research on resource availabilities and capabilities. The results of such research, particularly the resulting

land use plans, would be built into the rest of our programs--the Livestock Marketing, Research and Manpower projects especially would benefit.

Before the next drought a critical need is expansion of physical infrastructure that would allow more rapid movement of people, animals, food and other supplies in and out of drought areas. Thus low cost rural roads are a high priority. Small irrigation works, water catchment areas, etc. also are vital.

Improved crop forecasting, reporting, and market information is an obvious need, as is better weather forecasting. These are subjects we are now discussing with the TanGov under the blanket of the special drought appropriation. Possible long term projects could come from these contacts.

e) Specific Constraints to be Addressed

Specific constraints to be addressed are poor access by small farmers (the principal food producers) to capital and attendant physical resources for increased production; domestic financial resource shortages; lack of knowledge on the part of small farmers; lack of follow-up advice and on-the-farm assistance during the crop growing season; lack of trained technical and managerial manpower and lack of management in the villages and farms; lack of timely and adequate institutional services; poor and insufficient infrastructure; lack of research applicable to small farmer production; and lack of efficient marketing mechanisms.

A Food Crop sub-sector analysis which has recently been completed is our attempt to have the TanGov look at the various aspects of food production as they interrelate and identify bottlenecks which may or may not be covered by AID or other donor programs.

It is also an attempt to influence TanGov agricultural planning and decision making. In keeping with AID's present style of operations the sub-sector study was carried out with, and for the Ministry of Agriculture. In our day-to-day contact with the Ministry we do not attempt to directly affect macro-economic or major policy decisions. What we have to say is said in context of our various projects.

USAID's Agricultural Research Project will assist in establishing a national agriculture research system initially focusing on maize and food legumes breeding and agronomic research, with expansion to other crops and activities as requirements dictate and resources permit. The human nutritional aspects will be part of the breeding program starting with high lysine maize. Breeder seed proven and released by research will be multiplied, genetically pure, on the foundation seed farms of USAID's Seed Multiplication Project through foundation classification, and sold to the Tanzania Seed Company for final multiplication and distribution to producers.

The resulting production, surplus to farmer needs, and entering the commercial marketing channels, will flow through the cooperatives to the National Milling Corporation (NMC) which USAID is assisting through the Agricultural Marketing Project designed to upgrade NMC's performance in marketing, storage, processing and distribution of food crops.

As a component of the Seed Multiplication Project and a condition precedent of an Agricultural Support Loan (621-H-015), a seeds law was enacted encompassing necessary regulations. A seeds testing laboratory is to be established, and seed certification programs begun to protect the seeds industry and assure that producers obtain high quality planting material.

We are starting an Agricultural Credit Project with the Tanzania Rural Development Bank encompassing a \$3,000,000 capital grant and also technical assistance.

USAID's Manpower Development Project will design broadly conceived training scheme for middle level extension workers. It will also provide staff, commodities and participant training to upgrade two diploma level institutes that are training middle level manpower, one in general agriculture/food crops and one in livestock production, range management and animal health. It will also design and conduct in-service training for field service staff assigned to agricultural production improvement programs. The whole thrust will be to make this type of training relevant to the needs of the small farmer. Another component will be a survey to assist the Faculty of Agriculture to design the program and requirements for establishing a Department of Agriculture Education/Extension at the Faculty, to train senior level agriculture field service staff and teachers, again with a bias towards the problems of the small farmer and field work.

AID's East African Regional Food Crops Research Project conducts research that supports, but does not duplicate Tanzania's program. Many other donors are engaged in a variety of activities related to our priorities. Canada (CIDA) is assisting Tanzania with wheat breeding and agronomic practices research. The breeder seed/varieties released from this program are multiplied on the Arusha Farm of USAID's Seed Multiplication Project.

Six West European countries are providing grants or loans to the Tanzania Rural Development Bank.

The establishment of the Tanzania Seed Company, not directly supported by USAID, was a condition precedent of Agricultural Support Loan 621-H-015 and was set up jointly by the Commonwealth Development Corporation and Tanzania's National Agricultural and Food Corporation.

Nordic countries are assisting with cooperative development. Cooperatives are an essential link in food crops as they have sole responsibility for initial marketing, and are the primary source of farmer credit and production inputs. The produce is purchased by primary cooperative societies, passed to the cooperative unions, thence to the National Milling Corporation, which has sole authority to procure from the cooperatives. Nordic AID also provides technical assistance to the cooperative college in which officers are trained for the cooperative movement.

The FAO Market Development Bureau is assisting the Ministry with Market Research: conducting studies to develop new market outlets, particularly export, marketing trends; produce prices; and establishing marketing policy and intelligence. This is essential to the NMC/USAID's Agricultural Marketing Project.

Swedish AID is assisting in the construction of commercial storage and training Tanzanians in storage management/operations. Canadian AID is also assisting in construction and operations training of smaller scale storage at primary collection points.

Nordic AID is building a research and training institution which will work in both livestock and food crops; IDA funds have been provided for construction and equipping of several other institutes.

Our Maasai project, while its stated aim is all aspects of livestock development, is actually an experiment in social change--bringing a whole people into the monetized part of the economy and then into the nation.

Other USAID projects in the livestock sub-sector are in tsetse fly eradication and in marketing. A loan was made to purchase equipment that will be used to clear a large site of tsetse flies. The area will then be used for grazing.

Another Tsetse fly project (AID/W funded) is a research undertaking in the control of the flies, using the sterility methods that have proved effective on other insects.

Our marketing project is tied in with the IDA loan. We will provide technical assistance to: (a) help the new livestock development authority set up its management structure and system; (b) help implement the range management and water development aspects of the loan; (c) help establish an effective marketing system. The IDA loan has been geared to the larger commercial producers, our activities will focus upon the smaller farmers. How well it will reach the Maasai and similar people, whose entire livelihood and social system is bound up in cattle, will partly depend upon the results of our special efforts with the Maasai.

We have Ministry of Agriculture approval to submit to AID/W a new project that is small farmer oriented. It will require the addition of three maize and legume agronomists. They will help develop a farmer training center which will then follow-up with outreach work in the villages. This will be one way of linking the achievements of our other projects with the farmer, which is a major thrust of our program. A small part of FY 75 agricultural sector loan will be used for budget support to improve and upgrade research and training.

World Bank officials have made recent trips to Tanzania. One of their ideas resulting from a 1973 study (and in light of recent food shortages) is to finance a maize project and an Agricultural Development Project to include a huge fertilizer import program. Secondly, they also are discussing the working out of a production "package of inputs" for small farmers and would then call upon themselves and other donors to provide up to 170 production experts for a mass food production campaign stretching over 25 years. AID would of course be expected to join in such an endeavor.

Depending upon TanGov reaction to the Bank Proposals and the Missouri Food Crops Sub-Sector Study we will wish to expand our capital and technical resources in the food crop area.

In FY 1976 a USAID-financed livestock sub-sector study is to be conducted with particular emphasis on smallholder livestock operations and on the role of small animals, including poultry. Depending on the results we may wish to become financially and technically involved in supporting one or more new programs in these areas.

The drought has caused us to take a harder look at our on-going program. In particular it has highlighted the importance of a strong marketing mechanism for both food grains and livestock--a two way flow of products in and out of rural areas. This in turn has stimulated our interest in rural roads and land use studies; our crop research project will give greater consideration to millets and sorghum, both better suited to drought prone areas than maize or wheat. Thus while drought concerns do not require any significant change in our regular program, shifts in the locus of intensity have resulted.

C. M.C.H. and Population1. Brief Background

Between 1891 when the German colonial government established the first government medical department (mainly for government employees) and 1961 when Tanzania became independent there had been several studies, plans and policies to up-grade health facilities in the country. The idea of rural health centers has been advocated at least since 1949.<sup>1/</sup>

After the early days of independence and particularly during the Second Five Year Plan, the high priority on health with emphasis on the rural population has been more nearly realized. Table I indicates growth trends in this regard by construction of facilities, admissions, and visits by patients.

TABLE I

The Development of Health Facilities in Tanzania

	1961	1965	1969	1971	1973	1980 (Projections)
Dispensaries	975	1236	1362	1436	1515	2200
Rural Health Centers	22	40	50	87	108	300
Hospitals	98	109	121	123	123	130
Outpatient visits per person	1.9	3.0	3.4	4.0	5.0	
Admission per 1,000 people	29.7	34.8	39.0	42.6	64.5	

It is noted that the trend toward rural dispensaries and rural health centers has been steadily growing at the expense of hospitals which for the most part are urban. Moreover reference to the appendices shows that the development budget for health has increased 330 percent and the recurrent budget has increased 220 percent between 1970 and 1973-74. The health expenditure, in spite of indicated budget increases, is at present only 3 percent of GNP. In money terms this amounts to an annual expenditure of T.Shs. 21/- (\$ 2.94 per capita). Moreover development in the health sector in real terms is extremely modest when viewed from the prospective of total requirements, and in fact implementation of the expanded rural health program rests to a large degree upon foreign assistance.

<sup>1/</sup> E. Pridie, Report on Medical and Health Services in Tanganyika, 1949.

As in most developing countries, not only have the basic health services been generally inadequate to meet the needs of the people, but these services have been concentrated in a few selected areas. In Tanzania, the colonial governments constructed hospitals in the large towns, and this trend continued for some time following independence. The yard-sticks presently used to measure health coverage and distribution of health services as they apply to Tanzania are outlined below.

The ratio of population to doctors and health facilities to population are often used to measure quantitative adequacy. At the end of 1967 the doctor/population ratio was 1:24,000, but this ratio varied greatly among the various administrative districts. In numbers of hospital beds to population, the ratio varied from 1:400 to 1:3,500 in the various districts with an average ratio of 1:800. The 1236 dispensaries in 1965 provided a dispensary to population ratio of 1:9,500, again, with great variation from district to district. The second measure of the adequacy of health services is the expenditure per person in the various districts. There is a wide range in the per capita expenditure on health services varying from T.Shs. 2/- to T.Shs. 90/- per capita per annum.

Another measure is based upon population distribution and placement of health services in centers of population. An arbitrary figure of 10 kilometers was chosen as the limit of reasonable accessibility to a health service facility. A study of the geographical distribution of health service centers recently completed by the University of Dar es Salaam showed that some  $2\frac{1}{2}$  million people, or about 17% of the population, live more than 10 kilometers from any health service center.<sup>1/</sup> This percentage varied from 2% to 40% depending upon the district. It was also found that only about 25% of the population lived within 10 kilometers of a hospital.

A final measure used to assess the degree of access to health care is the way in which health services are used by the people in the various parts of the country. As most medical care in Tanzania is free of charge, hospital charges per se are not a barrier to access

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<sup>1/</sup> With the past few months accelerated movement to villages this figure has undoubtedly dropped. In fact that is one of the key arguments for "Villagization."

to health services. This does not mean a complete absence of economic barriers, however, cash on hand may determine if a patient can cover transport costs to the hospital. The urban population in 1967 representing 6.2% of the population, accounted for over 25% of all government hospital admissions and more than one half of the outpatient visits.

## 2. Tanzania's Approach to Rural Medical Services:

By June 1973 the TanGov had developed a decentralized health services plan, with implementation projected into the 1980s but depending heavily upon external assistance. At the top are three highly developed medical facilities located in Dar es Salaam, Moshi and Mwanza. These facilities provided specialized backup services to district and Vol-Ag hospitals, hospitalization and training. Each of Tanzania's sixtyfour districts has a hospital staffed by medical, nursing and paramedical personnel. The district hospitals provide support and supervision for the dispensaries and rural health centers. The size of district hospitals varies from 25 beds to over 300 beds depending on the population and the availability of Vol-Ag hospitals within the districts.

In order to reach more of the rural population, an expanded system of dispensaries and RHCs is planned which by the early 1980s will provide basic health facilities within reasonable walking distance (ten kilometers) for at least 90% of the population. The basic strategy is to place great emphasis upon the expansion of rural health services with the concomitant necessity of constraining the growth of urban health facilities. This approach has been accepted by the TanGov and Parliament and is a part of the overall development policy of Tanzania.

### A. Facilities

The type of health service center to be provided is largely determined by the size of the population it is intended to serve:

1. Village Health Center - This is the smallest type of health service and is usually associated with a school, primary cooperative society or other existing structure. Since services provided include treatment for minor ailments, first aid, and is an important base for health campaigns, the actual structure is meant for newly formed Ujamaa villages in their initial stages of development, and plans are to gradually upgrade the centers to dispensaries as increased health services are required.

2. Rural Dispensary - As of July 1974 there were 1,555 dispensaries (300 belonging to Vol-Ags) which gives a ratio of one dispensary to 9,000 people. The target by 1980 is a ratio of 1:7,000. One hundred dispensaries must be build each year to meet this target. The standard design provides rooms for: waiting, examination, delivery, dressing, medicines, laboratory, and injections. The unit also has a latrine and staff quarters. The main functions of the dispensary are to provide outpatient treatment and to serve as a center for organizing and running health campaigns. The staff will consist of one Rural Medical Aide (RMA), a Maternal and Child Health Aide (MCHA), a Health Auxiliary (HA), and one or two supporting staff.

3. The Rural Health Center - There are at present 108 RHCs with a ratio of 1:99,750. In order to reach the target of 1:50,000 by 1980, thirty centers must be build each year. There is some doubt as to whether there will be enough money to reach the target. In addition to population ratio, other considerations which decide allocation of RHCs are: accessibility to existing RHCs and district hospitals (including VolAg facilities), and a limit of six RHCs to any district. The standard RHC design includes: ample outpatient area, 14 beds - 6 maternity, 8 holding-and rooms for examination, laboratory, inoculations, dressing, toilets, records and offices. The RHCs are manned by 7 to 9 primary health workers, including a medical assistant who is in charge, one grade "B" nurse (or Community Nurse), two RMAs, one MCHA, one HA, and one or more nurses aides. Each RHC supervises the dispensaries in its catchment area, usually 4 to 5 and provides a mobile health service to remote areas.

4. Hospitals - There are 123 hospitals (60 are VolAg) with a total of 18,000 beds (8,000 are VolAg) giving a ratio of one bed to 780 people.

### 3. Manpower

Health care policy in Tanzania stresses preventive rather than curative services. In order to accomplish this and to adequately man the health care infrastructure described above it has been necessary to carefully evaluate each level of staff needs and to design or redesign curricula to meet the recognized needs. Where new skills are required a few categories of staff have been dropped or retrained.

Medical auxiliaries or primary health workers are easier to recruit and much cheaper to train and employ than physicians. They have proven more suitable for effective work in rural areas than

many persons with university education. Since only 25% of the population are estimated to live within 10 kilometers of a hospital and 90% may be within 10 kilometers of a health facility by 1980, it means that at least 65% will receive care from primary health workers. Thus these workers will be the mainstay of the health services in Tanzania, and are described in some detail below.

A. Village Medical Helper - This level of worker will have seven years of general education, will be selected by fellow villagers to pursue a 3 to 6 months training program at a district hospital. This training will enable the Village Medical Helper to treat minor ailments, provide first aid for more serious diseases and accidents, help villagers in prevention of common diseases, and help to mount health education programs.

B. Maternal and Child Health Aides (MCHA) - The functions of this new cadre of primary health workers are : organize and provide maternal health services, including antenatal and postnatal care and recognition of at-risk patients; conduct normal deliveries; organize and conduct clinics for pre-school children (under five clinics); provide health education and initiate or continue family planning services. The MCHAs with 7 years formal education and 18 months specialized training will provide the rural base for public health nursing, community nursing and midwifery. As noted the MCHAs will work primarily in dispensaries and RHCs. Both nutrition education and family planning will be added to the services which are presently offered at the dispensary and RHC levels.

C. Health Auxiliary - The curriculum for the health auxiliaries is being revised, the requirements of 7 years education with prior experience in health and community development will continue as basic admission requirements.

Functions of the HAs will include the following:  
general health education;  
promotion of village sanitation through education;  
visits to homes, schools, communal centers and participation activities necessary to improve environmental health;  
helping to trace outpatients who do not attend regularly for treatment; and  
participation in campaigns against specific diseases.

D. Rural Medical Aide - The RMA has at least seven years education followed by a three year specialized training program. The principal functions of the RMA are:

outpatient treatment of simple diseases;  
initial treatment of serious illness pending referral to a RHC or hospital;  
follow-up care, as required, of patients discharged from hospital or RHC; and  
participation in all community health programs, immunization campaigns, and other activities as time permits.

The RMAs curriculum is being revised. The aim is to produce a primary rural paramedical who is the "doctor" at the dispensary and RHC and not a physician's helper. The target for 1980 is 2,800 RMAs. The RMA will gradually replace the present Dispensary Assistant (formerly "Dresser").

E. Medical Assistant - The most important health service center is the RMC. Since the MA is trained to run the RHC, it follows that he is a key person among the Tanzanian rural health personnel. The MA has a minimum of eleven years basic education with three years specialized training at one of the five Schools for Medical Assistants. The target is to train 1,500 MAs by 1980.

F. Licensed Medical Practitioners (Assistant Medical Officer or AMO) - The AMO is able to perform functions intermediate in skill between those performed by a Medical Assistant and a fully qualified physician. He is a Medical Assistant with at least four years work experience and has completed successfully an 18-month up-grading course.

It is not possible to discuss all the health personnel who in one way or another help in the provision of rural health services. However, manpower forecasts have been made for: nurses, dental assistants, dental technicians, pharmaceutical assistants, dispensing auxiliaries, radiographers, radiographic assistants, laboratory assistants, laboratory auxiliaries, health education officers and physiotherapists.

The upward mobility of the primary health workers is part of the revised curricula planning. The village medical helper through additional training can become an MCHA or RMA; the MCHA and RMA can receive additional training to become a community health nurse, or nurse grade "B"; and it will be possible for medical assistants to enroll in upgrading courses leading to the doctoral level. Table II shows the manpower levels for the above cadres from 1961, and projections for 1980.

TABLE II  
MANPOWER DEVELOPMENT

	1961	1969	1971	1973	1980
MCHAs/Village Midwives	400	545	650	750	2,500
RMA's	380	462	544	621	2,800
Medical Assistants	200	249	289	335	1,200
Nurse/Midwife "A"	388	683	838	934	1,960
Nurse/Midwife "B"	984	1,619	2,110	2,690	4,100
Health Auxiliaries	150	180	230	325	800
Assistant Medical Officer	32	103	115	140	300
Doctors: Citizens	12	90	155	231	700
Non-citizens	413	355	324	302	130

As pointed out above, the key to providing the beginning of modern health services to the rural population is well-trained paramedicals with skills in both preventive and curative services.

The manpower and infrastructure requirements can only be met by planned assistance from external donors. To date such assistance has met TanGov's modest program needs. With assistance from Finland, the number of Rural Medical Aide Training Centers will be expanded from five to sixteen over the next two years. The United States will assist in construction of 18 Maternal and Child Health Aides training centers to be located in 18 of the largely rural regions. Each MCHA training center will have a capacity of about 30 trainees. A VolAg is building one MCHA TC in the West Lake Region. (see Appendix III).

4. Utilization of Available Resources:

Besides the Ministry of Health services, the health delivery system in Tanzania includes the services and facilities provided by voluntary agencies, occupational health services, private practitioners, the Family Planning Association, the Flying Doctor Service, bilateral or external aid, the services provided by other government Ministries and self-help schemes. A brief outline of the major services follows:

A. Voluntary Agencies - Twenty separate agencies provide health services in Tanzania. In the past any VolAg could build a dispensary, health center or hospital in almost any area it chose. Now prior approval of the responsible development committees must be obtained. In this way, costly duplication is avoided and health facilities can be located where they are most needed. In districts with no government hospital, a grant is provided a VolAg hospital to cover all charges so that treatment may be offered free to the public. Such a hospital is referred to as a "Designated District Hospital."

B. Self-help Projects - There are many health projects that are being implemented by Tanzanians through various nation building activities. These include construction of dispensaries, RHCs, hospital wards or extensions to hospital wards. Most development projects in Tanzania have an element of self-help, e.g., certain buildings at hospitals or RHCs such as kitchens and mortuaries are not provided by the government but are expected to be build on a self-help basis.

C. Mass Health Education Campaigns - The project which is popularly known as "Mtu ni Afya" ("Man Should be Healthy") is a good example of the joint efforts between the Ministry of Health and other government Ministries and organizations to promote health. This project was planned in close collaboration with the Adult Education Directorate in the Ministry of National Education. The main objective was to insure that literate villagers were continually supplied with reading material to improve their reading skills. Besides providing reading material, the project aimed at giving villagers information of the symptoms and prevention of common diseases. The materials for the projects were prepared by the Health Education Unit of the Ministry of Health. The preparatory phase was extensive, including successive seminars for "teachers" at Regional, District and Divisional levels.

The project was formally launched in April 1973, with 75,000 study groups and two million people taking part. Radio broadcasts, including two speeches by the Prime Minister, and widely distributed magazines, newspapers, booklets and posters were used in disseminating the health information. After listening to a radio program or reading a section in the campaign materials, discussions were held of the materials. The group approach in this campaign increased participants' involvement and encouraged group action in bringing about better health for its members and the community. The next campaign to be known as "Chakula ni Uhai" ("Food for Life") which emphasizes proper nutrition will be launched soon. This is expected to be followed by another one on environmental sanitation.

- D. Traditional Medical Practitioners - A significant number of Tanzanians, especially those who live far from the organized health services, continue to depend on medical care provided by traditional practitioners and midwives. These indigenous systems of medicine are at present not yet integrated into the organized health services. Registration of traditional practitioners is not done, and the only requirements for practice are: practice of a bona fide nature, the practitioner must be recognized by the community as trained in such practice, it must be practiced among the community to which he belongs and it must not be dangerous.

The government has recently decided to put greater emphasis on research into traditional medical systems. The Faculty of Medicine of the University of Dar es Salaam is cooperating with the Ministry of Health in this investigation. Bilateral aid has been granted to assist in this research and to coordinate the integration of traditional and modern methods into the health delivery systems.

5. Tanzania's Approach to MCH and Population:

The analysis of the 1967 population census concludes that population growth has been steadily increasing over the last decade due to improved health conditions and lowered mortality. Birth rates remain high and the "official" growth rate is 2.7%. The census does not come to grips with the problem of the carrying capacity of the land resources of Tanzania. The observable indicators are that the carrying capacity varies widely according to soil characteristics and rainfall. But as pointed out before in this DAP, ecological concerns are real and of growing importance. As noted above the TanGov does not have the resources to provide even elementary services for all its increasing population even with considerable financial assistance from outside donors. Despite low population density and room for agricultural expansion, at this point Tanzania is having difficulty producing enough food for the present population although there is no severe population pressure as in Southeast Asia, population increase can become a barrier to the accomplishment of the country's planned social improvement goals.

The "empty lands" mentality affects Tanzania as it does many other African countries. However, this concept has not prevented the use of government hospital facilities and personnel for an expanding family planning program which is being planned and run by the Family Planning Association of Tanzania (UMATI).

UMATI has its secretariat in Dar es Salaam. A small professional staff headed by the Executive Secretary provides training for the family planning workers and through IPPF provides all contraceptive supplies for the country. UMATI conducts field seminars and workshops in family planning for Regional and District medical staff and has regular two week training courses for nursing and para-medical staff. The courses are conducted both in Dar es Salaam and selected area centers throughout the country. During their junior year all medical students attend a two week session at various family planning clinics in Dar es Salaam. Many of the government hospital facilities provide family planning services. At present UMATI services over 115 clinics all of which are either government or VolAg medical facilities. Family planning services are generally provided as a part of the MCH services. At present about one half of the government hospitals are covered. From this modest base, expansion is progressing as rapidly as limited resources will permit. If the present rate of expansion continues, all hospitals and RCHs will have FP clinics by the end of 1976. Even then, UMATI does not estimate more than 75,000 to 100,000 acceptors.

But increased demands for services, recognition by senior and middle level officials for the need of FP services, the acceptance of child spacing by the planners of national health education campaigns, and improved statistics upon which development planning will be based, all point toward more acceptance of family planning.

The MCHA's will provide Family Planning at the grass roots level as part of their inter-related package of services.

#### 6. The Third Five-Year Plan and MCH:

Although the Third Five Year Plan, due to start on July 1, 1975, is still in preparation, the trend toward decentralization of health services with priority upon rural health delivery systems, and emphasis upon preventive medicine appear to be holding sway. The Preventive Services Division has now expanded to include an MCH section and the training of primary health workers will be greatly increased, while the training of physicians will not be increased appreciably. A Senior Health Economist has just been added to the Planning Section of the Ministry of Health to provide the expertise required for planning purposes.

By the end of the third Five Year Plan it is anticipated that basic modern health services will reach 90% of the rural population. A fundamental part of these services will be the MCH program with emphasis upon prevention rather than curative services. These services include all aspects of child bearing and rearing of children.

The MCHAs will be trained in the delivery and follow up of family planning services.

The Ministry of Health Planning Unit has kept its Minister and professional staff apprised of the increased budget requirements over the next five years. The additional training costs at the national level, and increased recurrent costs at the Regional level, required to provide staff for the expanded numbers of RHCs and Dispensaries have been regularly approved by Parliament, the Ministry of Planning and Economic Development and the Ministry of Finance.

As can be seen from the foregoing, the Tanzania Government's Health Program is currently and will continue to be concentrated in rural areas. The TanGov is expanding its health budget and staffing as best it can. While percentage increases are appreciable, actual health coverage will be no more than "minimum basic" in 1980. While these basic services will cover about 90% of the population, they will be performed by paramedicals with limited capabilities. By Western standards few Tanzanians will be covered by an adequate range of medical services.

Health care is also handicapped by the institutional difficulties described in the Overview.

In summary, a sincere effort is being made to provide care to the rural masses, but much time and assistance is required before the quality and quantity of health care can be considered adequate.

The Mission is in full agreement with this effort and believes that it directly reflects the emphasis of the Foreign Assistance Act and is completely in line with the Agency's priorities.

#### 7. AID's Approach and Program:

The decentralization of medical services, improvement of preventive services without further expanding curative services, and the high priority placed upon training paramedicals to work in the rural areas provide a sound basis for international support of the TanGov health delivery system. For several years the approach to population and family planning in Africa has been through the MCH route. In Tanzania this has acquired a national dimension with the plan for extending MCH services to the rural populace where high birth rates persist.

The TanGov has obtained foreign assistance to provide the beginning of modern health services to that sector of the population which in most developing countries is traditionally the forgotten majority. By providing assistance to the rural population our efforts will establish or upgrade health services where they are presently inadequate or where none exist. The infrastructure which we are providing for the training of MCHAs will be located in the area where the services will be provided.

Our technical assistance will help to intergrate the MCH services with family planning and all other elements of the health delivery system; and our impact upon nation building can be significant.

Given the receptivity that has been shown and the obvious needs that exist, it is anticipated that the Manpower Training Program for Maternal and Child Health Aides is only the beginning in the wide range of possibilities which will ultimately develop. A nation must be concerned about the health of all the people in order to modernize. Health delivery systems cannot be specialized except at great expense and the MCHA must be viewed as a generalist with a particular speciality. As her skills are expanded and her services accepted, the MCHA will reach par with the RMA. Increased numbers of young women will go on for more advanced work in the paramedical fields. Because of the types of contraceptives found to be most acceptable (pills and conventionals) the delivery of family planning services must be as broadly based as possible. It is just as important to have the MA and RMA trained in family planning as it is to have the MCHA trained in family planning. Health education, better nutrition, clean water supplies and improved housing are areas which must be equally supported in order to develop an integrated rural health plan.

AID will continue to push for the completion of the 18 Maternal and Child Health Aides Training Centers. It is estimated that construction may take up to two years (until July 1976) to complete all 18 centers. During this time the technical assistance personnel provided the TanGov will be actively participating in the development of the health/family planning services including importation, warehousing and distribution of contraceptive supplies. In the MCH area the technical advisor will be able to provide leadership in planning all services including the interrelations of preventive and curative services. There will be greater Mission involvement in the area of nutrition. As the MCH program develops it will be necessary to upgrade and modernize the entire rural health delivery system. All donors including AID will be called upon to participate in the planning, provision of technical assistance and some financial support. Thus we may in the future move into more broadly based activities in rural health delivery systems, including capital assistance to provide the local currency and foreign exchange required if the infrastrucure is to expand at more than its present modest pace.

8. The Nutrition Aspect:

In view of AID's emphasis upon nutrition, our current significant involvement through Title II, and its relation with both MCH and family planning this section has been added.

Research in human nutrition and in nutrition education in Tanzania is not highly developed or coordinated. Some work is done by the Ilonga Research and Training Institute, Nutrition Unit of the Ministry of Health and the Catholic Relief Services (CRS). The Ilonga Research Institute under the Ministry of Agriculture

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has conducted or is conducting nutrition research in the following areas:

- (A) Food processing and dehydration -- mostly methods for home use on fruits, vegetables, root crops, and meat products.
- (B) Small scale manufacture of jam from tropical fruits.
- (C) Formulation of enriched food mixtures using high protein supplements such as fish protein concentrate.
- (D) Experimental cereal -- legume mixtures.
- (E) Pilot plant production of enriched mixtures.

The Nutrition Unit, Ministry of Health carries out food analysis and nutrition surveys and conducts regular nine month certificate courses for qualified candidates who upon graduation are assigned to Regional and District hospitals as nutrition officers.

The CRS has a nutrition specialist who conducts regular one week seminars on nutrition for persons who work in distribution centers.

UNICEF is conducting pilot studies at Morogoro on preparation of soybeans for home consumption.

The Tanzania Food and Nutrition Center (TFNC) was officially organized on July 1, 1974 with the appointment of a Governing Board with the Minister of Health as the Chairman. The TFNC is a parastatal under the Ministry of Health and is responsible for national policy concerning nutrition. The implementation of policy will rest with the various action Ministries.

In the field of enriched foods the National Milling Corporation will begin small scale production of a commercial weanling food in 1975. This product will be a combination of maize and soya flour with appropriate additives. As might be expected The National Milling product will be purchased mainly by the urban middle class. At this time the TanGov has no plans to distribute the product in its child feeding programs. We look upon a successful indigenous weanling food (or foods) as a replacement for Title II in pre-school feeding programs as well as for use in our MCH program. A more decentralized approach by the Nutrition Center is a village based one where the whole range of foods available in a given village will be checked and mothers will be advised of what will serve best for her family.

Unfortunately nutrition programming is enmeshed in bureaucratic infighting between the Ministries of Agriculture and Health. Both are battling for control of TanGov's nutrition program and their own viewpoints of effective approaches. The new Food and Nutrition Center is caught in this power struggle and most activities in nutrition, including effective development and distribution of the National Milling Corporation's weaning food, rests upon what shape the Center finally takes.

There is the usual problem of whether malnutrition is a function of calory or protein deficiency; of whether malnutrition is due to poverty or lack of knowledge; of whether the appropriate attack is through supplementary feeding or increased production; etc. (In order to be successful both approaches are required either in combination or through careful coordination.) Thus nutrition cannot be left to the Ministry of Health or any single Ministry. The new Institute must take a catholic view and draw all concerned parties together in a complementary program. AID's further involvement is yet to be determined. A Swedish input will provide all required help in nutrition planning.

We are not satisfied with the Title II feeding program and its relation to the overall Tanzanian nutrition effort. We have recently drawn up a completely revised Title II strategy - in keeping with Aid priorities - which we will now work with CRS and the TanGov in implementing.

TOTAL GOVERNMENT NATIONAL AND REGIONAL  
DEVELOPMENT BUDGET ESTIMATES  
1970/71 - 1974/75

APPENDIX I

(in '000 Shs.)

Source of Information Ministry of Health. Planning Unit

Item	1970/71		1971/72		1972/73		1973/74		1974/75	
	Approved Estimates	% to Total								
I. Hospital & Ancillary Facilities ...	11,458.1	52(a)	2,280.2	52(d)	4,138.6	27(e)	8,700.0	15(e)	8,860.0	12(f)
II. Rural Health Centres and Dispensaries ...	5,288.4	24	1,447.11	33	5,364.8	35	19,140.0	33	17,727.0	24
III. Preventive Services ...	220.4	1	87.7	2	1,532.8	10	1,160.0	2	5,787.0	8
IV. Training and Manpower	4,847.7	22(b)	570.0	13	2,759.0	18(f)	27,840.0	48(h)	39,635.0	55(k)
V. Manufacturing ...	220.4	1 (e)	-	-	1,532.8	10(g)	1,160.0	2 (g)	360.0	1 (g)
Totals ...	22,035.0	100	4,385.0	100	15,328.0	100	58,000.0	100	72,369.0	100

- (a) About 70% in Dar es Salaam
- (b) Virtually in Dar es Salaam
- (c) Mabibo Vaccines Plant
- (d) About 60% in Dar es Salaam
- (e) Less than 10% in Dar es Salaam
- (f) Nothing in Dar es Salaam
- (g) Pharmaceutical Plant
- (h) Less than 5% in Dar es Salaam
- (j) Less than 4% in Dar es Salaam
- (k) Nothing in Dar es Salaam

TOTAL GOVERNMENT NATIONAL AND REGIONAL  
HEALTH RECURRENT EXPENDITURE  
1970/71 - 1974/75

Source of Information Ministry of Health, Planning Unit

APPENDIX II  
(in '000 Shs.)

Item	1970/71	1971/72	1972/73	1973/74	1974/75	% to Total				
	Actual Expenditure	% to Total	Actual Expenditure	% to Total	Approved Estimates		Approved Estimates			
I. Administration & General ...	3,323.0	2.4	2,210.0	1.4	2,243.0	1.2	1,137.0	0.6	2,631.8	0.9
II. Hospital Services (a)	108,321.0	79.8	121,964.0	78.9	137,858.0	71.6	142,088.0	69.0	181,792.5	60.2
III. Rural Health Centres (b)	5,894.2	4.3	8,538.0	5.5	9,429.0	4.9	19,198.0	6.9	22,416.1	7.4
IV. Dispensaries (c)	6,500.0	4.8	8,300.0	5.4	25,856.0	13.4	25,443.0	12.4	35,328.5	11.7
V. Preventive Services (d)	6,758.0	5.0	5,965.0	3.9	7,587.0	3.9	9,758.0	4.7	37,499.7	12.4
VI. Training & Manpower	3,249.0	2.4	4,767.0	3.1	6,716.0	3.5	9,857.0	4.8	18,875.5	6.3
VII. Medical Production and Supplies ...	1,712.6	1.3	2,776.0	1.8	2,905.0	1.5	3,212.0	1.6	3,338.2	1.1
Totals ...	135,757.8	100.0	154,520.0	100.0	192,594.0	100.0	205,693.0	100.0	301,882.4	100.0

Explanatory Notes:

- (a) Including Grants paid to the Voluntary Agency Hospitals (10-15%) which are mostly rural;
- (b) R. H. Cs taken over from the local authorities on 1-7-1969;
- (c) 1970/71 and 1971/74 figures constitute grants to local authorities. It is estimated that local authorities spend about 12-15/- million for running the dispensaries every year.
- (d) This is the amount spent on purchase of vaccines, nutrition services environmental health education and does not include elements of preventive services i.e. M.C.H. services, family planning etc; provided by Hospitals, R. H.Cs and dispensaries. This is, therefore, an under-estimate.
- (e) This is very high because the regional budget did not include a special vote on preventive services before 1974/75. This vote was introduced during 1974/75. Prior to this it formed a part of II. D'Salaam became region and all its public health expenditure which was not included in estimates previously has now been added.

General: The approved estimates appear inflated because of the Governments decision to increase wages w.e.f 1/5/1974, and inclusion of Dar es Salaam City (this was not included previously) It is estimated that voluntary Agencies spend about 25-30/- millions on medical services in the rural areas every year apart from the grants received from the Govt.

APPENDIX III

External Aid for Health in Tanzania 1 July 1974  
to 30 June 1975. (Annual expected expenditures  
not including AID -- Source, Ministry of Health,  
Planning Section.)

I.	<u>SIDA</u>	T.Shs.	\$
	25 R. H. Cs	10,000,000	
	Hostels KCMC, Tanga, Mwanza	4,013,000	
	R.H.C. Radioes	150,000	
	Auxiliary Seminar Center - Dodoma	1,000,000	
	T.F.N. Center	<u>2,203,000</u>	
		17,366,000	3,052,000
		=====	=====
		T.Shs.	\$
II.	<u>NORWAY</u>		
	101 Rural Dispensaries (Capital Constnution & Equipment)	5,050,000	
	Public Health Institute	<u>27,000,000</u>	
		32,050,000	4,580,000
		=====	=====
		T.Shs.	\$
III.	<u>FINLAND</u>		
	R.M.A. Schools	11,120,000	1,588,000
		T.Shs.	\$
IV.	<u>DENMARK</u>		
	1 M.A. School, Mbeya	1,600,000	
	2 District Hospital	3,000,000	
	2 H.A. Schools	<u>2,000,000</u>	
		6,600,000	942,000
	Bilharzia - Approved but not yet funded		

V.	<u>SWITZERLAND</u>	500,000	71,000
VI.	<u>UNICEF</u> MCH - Bagamoyo, Moshi, Dodoma	1,600,000	228,000
VII.	<u>WHO</u> Epidemiological Services	374,000	
	3 Nursing/Tutors, Nursing School	<u>500,000</u>	
		874,000	125,000
VIII	<u>CHINA</u>	T.Shs.	\$
	Pharamaceutical Plant	6,000,000	857,000
	48 Doctors	NA	
IX.	<u>WEST GERMANY</u>		
	Equipment at Central Pathology Lab.	<u>1,000,000</u>	<u>140,000</u>
	T O T A L : -	<u>77,110,000</u>	<u>11,583,000</u>

D. EDUCATION AND HUMAN RESOURCES

1. Background

The quantity and quality of trained manpower in Tanzania is what can be expected of a country which at the time of independence (1961) had a literacy rate of about 10% and no college level educational institution.

The overview section of the DAP discussed the managerial/technical manpower situation and also Tanzania's efforts to achieve self-sufficiency. In quantity terms Tanzania will be able to fill over 90% of their high level manpower needs by 1981. But quality is much more difficult to come by. It must be kept in mind that almost all managers and technicians are "first generation". They had neither the home environment, educational system, nor work environment to prepare them to assume current high level responsibilities.

For example, once on the job there are few experienced colleagues from whom to learn "the ropes", and few qualified supporting staff to provide needed technical advice. Thus there is a lack of most of the basic ingredients that have led to high quality management in the U.S. This is something that can be cured only by training and the passage of time. Changes in management attitudes and skills, when measured against a whole society - rather than a few outstanding individuals - must be thought of in units of decades, if not generations.

While the training of an elite in modern management techniques is important, equally so is the evolution of the whole social environment in which managers work. The two interact and produce change and development. It is this overall need for change and the requirement of practical experience that makes management improvement a long time process. It also means that training managers is not enough but that the whole work force-attitudes and skills - need to be looked at as well. Thus we are equally concerned with the quality of middle level manpower, and skills at the farm level.

Given the enormity of the education and human resources field we have chosen to concentrate our inputs on those aspects that directly support our program - upper and middle level agriculture manpower, middle level health manpower. We are now probing that most difficult of subjects, the farmer, and hope to come up with a workable approach to farmer training.

If we can successfully do this much we will have made a major contribution to Tanzania's Human Resources needs, and will look to other donors to fill the other gaps particularly in the formal educational system (primary, secondary, university).

2. EDUCATION AND HUMAN RESOURCE PHILOSOPHY

Education in Tanzania is based on the Arusha Declaration of 1967 and President Nyerere's "Education for Self-Reliance" of the same year outlines this philosophy. In this booklet, President Nyerere questions the relevance and suitability of Western-style education for Tanzania. He states that the purpose of education "is to transmit from one generation to the next the accumulated wisdom and knowledge of the society, and to prepare the young people for their future membership in the society and their active participation in its maintenance or development". Unfortunately, the educational system developed during the colonial period was designed "to train individuals for the service of the colonial state." The President continued by saying that since independence Tanzania had made great strides in changing the structure of education but had not seriously considered the question, "what is the educational system in Tanzania intended to do - what is its purpose"? He goes on to say that one must take into consideration the fact that Tanzania is a poor nation which cannot afford devoting great amounts of resources to education.

Since funds and trained personnel are limited, Tanzania cannot afford to waste them on non-relevant education. Tanzania is predominately a rural, agricultural country and education must take this into consideration in its curriculum, location of schools and teacher training. As Mr. Bomani, the Ambassador to the United States, put it in May 1973, "we had to introduce education for self-reliance - teaching pupils to use their hands as well as their brains. We had to teach our people to respect work, because at one time there had been the misconception that once a person has gone to school he is above manual work."

In summary, education must foster living and working together in a rural society. It must relate not only to social values but also to the work young people must do in a rural society. And above all, education must be geared to Tanzania's overall development and not be considered in isolation. The ideas of self-reliance, emphasis on rural development, and increased relevance to life in Tanzania are the underpinnings of the Education Section of the Second Five-Year Plan.

3. Tanzania Second Five-Year Plan (July 1, 1969 - June 30, 1974)

Beyond the idea of self-reliance, the basic policies of the Government of Tanzania as stated in the Second Plan (but carried over from the First Plan) are three fold:

- a) To achieve essentially full self-sufficiency at all skill levels in the economy by 1980 (more recent TanGov estimate placed at 90% by 1981).
- b) To give every child a basic education (Primary) as soon as the financial circumstances permit.
- c) To provide additional or further education (secondary, technical and university) only to the extent justified by the manpower requirements of the economy, to support students by bursaries only in post-secondary courses which will produce the specific skills needed for development. Students receiving government financial support must spend up to five years in government employment.

The Second Plan attempted to carry out the self-reliance, rural development theme and to further the basic policies stated above. For instance curriculum changes called for in the Primary schools reflect the need for basic training required for life primarily in a rural economy. The Plan stresses self-help in building rural schools particularly because of the labour cost involved in constructing the 1900 primary schools needed to meet the objectives of the Plan. While the First Five-Year Development Plan placed more emphasis on secondary, technical and university training, the Second Plan included increased expansion on the primary level with the goal of Universal Primary Entry by 1989, from just under 50% in 1969. (TANU recently moved this date up to 1977). By the end of the plan period, about 52% of primary school age children were to be enrolled in school. In addition, a shift from English language instruction to Swahili was accelerated, the rationale being that fully 90% of primary leavers do not go onto secondary school and therefore do not need English training.

On the Secondary School level, emphasis was placed on increasing "science" subjects over "arts", reflecting Tanzania's most urgent needs for individuals in university level occupations which require a science/mathematics foundation. As a result by 1973 66% of the students in Forms V and VI were in science and math based fields - in contrast to 33% in 1964. The Plan also made provision for a great increase in the number of local teachers at the secondary level at the expense of non-citizen teachers. 1977 is the target date when secondary schools will be staffed 100% by citizens. The plan envisioned the building of eight new secondary schools, the enlargement of 12 existing schools, the completion of 13 additional schools in various stages of construction, and the provision in a number of schools of special arrangements for agriculture, commerce, manual arts and domestic science training.

There is renewed emphasis on teacher training and re-training in the Plan with enlargement of three colleges and the establishment of two new ones. At the time the Plan was written Tanzania had 10 Teacher Training Colleges. On the technical education level, the Dar es Salaam Technical College is the central institution training engineering technicians. The plan calls for an increase in the number of graduates from this college. Both the Second Plan and the Annual Manpower Report to the President in 1970 discuss the possibility of a second technical college at Mwanza. This report in addition, mentions four secondary schools which will increasingly emphasize technical subjects shifting away from the more traditional approach to education.

During the Plan period the University College, Dar es Salaam, became the University of Tanzania when the University of East Africa ceased to exist in July 1970 and was replaced by three independent national universities. The plan made provision for an expansion of university facilities and staff, the development budget increasing from \$361,000 in the 1969-1970 school year to \$1,592,000 in 1970-1971. The plan anticipated an increase in new entries to the University from about 560 in 1969-1970 to over 1,000 in 1973-1974 with graduates increasing from about 350 in 1969-1970 to over 670 in 1973-1974. The greatest growth was to occur in the "sciences" including engineering, medicine, mathematics, agriculture, etc.

Another important emphasis of the Second Plan was adult education, stemming again from the theme of self-reliance. The ideas of adult education, rural development and literacy are intertwined. The plan was to involve various government departments, TANU, UWT, the cooperative movement and the various church groups in this literacy campaign, but to essentially place the main organizing responsibility in rural areas on the local primary schools. These would become community educational centers with the headmaster given the general responsibility for the adult education activities. The Institute for Adult Education at Dar es Salaam University would concentrate on the urban areas and would train Adult Education Officers.

The above discussion has been limited primarily to the more formal education system centered in the Ministry of National Education. There are many other educational institutions which are covered in the Second Plan but outside the Education Ministry. These include the two Management institutes, the Institute of Finance Management in Dar es Salaam and the Institute of Development Management near Morogoro. There is also the Civil Service Training Center, the various secretarial and business colleges, and the several training centers for National Service and leadership/political training. And of course the Ministry of Agriculture has various training schools ranging from the rural training centers to a series of training institutes throughout the country (see page 85 for a brief

description of the Mission's one Agriculture Education Project). Beyond this, the Ministry of Health has a series of schools to train both medical and para-medical staff. (See the Health Area of Concentration Section for a brief description of the Mission's Maternal and Child Health Aides Training Project). Other Ministries also have training centers in their areas of technical responsibility.

For all of these non-Ministry of Education schools, the Second Plan shows funding increases and capital expansion.

It is impossible at this point in time for the Mission to comment on the success or lack thereof of the education development goals of the Second Plan. The results simply have not been published and since we have no programs with the Ministry of Education we have not attempted to keep current on general educational progress. The Third Five-Year Plan, currently in preparation, begins July 1, 1975 and will undoubtedly discuss performance of the Second Plan and take into consideration any shortfalls. It may be worth mentioning that in the First Five-Year Plan actual development expenditures for education by the Ministry of Education reached only 51.6% of planned spending, although direct contributions from external sources helped performance somewhat. As in other development fields, the TanGov is heavily dependent upon foreign assistance.

4. Other Donor AID (see below for USG assistance)

According to the listing in "Development Assistance to Tanzania" (as of 31 December 1973) by the UNDP, April 1974, a total of 23 bilateral and multilateral donors were providing assistance to all types of education. Much of the aid was on a grant basis but loans were also important with the IBRD providing four education loans over the past several years, the last in 1973 for \$10,300,000.

Following is a representative listing by general education categories of other donor aid in education.

Primary Education:

1. UNICEF - primary teacher training
2. UNDP/UNESCO - technical assistance and scholarship programs.
3. Australia - technical assistance and scholarship programs.

Secondary Education:

1. Denmark/Norway - construction of four new schools.
2. Norway - planning and construction of agricultural units at 20 schools.
3. Canada - training 16 teachers in Canada in mathematics,

science and English.

4. Various - 80 additional Tanzanian teachers training abroad.

Teacher Training:

1. Netherlands - construction and equipping Tabora Teacher Training College.
2. Denmark - construction, equipping, teachers for Iringa Teacher Training College.
3. Canada - one-year teacher training course in Canada for 59 Tanzanian Teachers.

Technical Education:

1. UNDP/UNESCO - experts, overseas training, equipment of Dar es Salaam Technical College.
2. Bulgaria - one teacher to Dar es Salaam Technical College.
3. Canada - six teachers and training in Canada for six Tanzanians at Dar es Salaam Technical College.
4. Netherlands - building expansion, equipment experts, overseas training to same school.
5. Norway - two Norwegian teachers at same school.
6. Netherlands - construction, equipment, overseas training and teachers for Ifunda Technical School.
7. Canada - three teachers and overseas training for secondary-school vocational education.

University:

1. UNDP/UNESCO - construction, personnel, equipment Faculty of Science.
2. UNDP/WHO - construction, personnel, equipment Faculty of Medicine.
3. UNDP/FAO - construction, personnel, equipment Agriculture Faculty.
4. Fed. Rep. of Germany - Same for Engineering Faculty.

Adult Education/Literacy

1. UNDP/UNESCO - personnel and funding for Lake Victoria literacy campaign.
2. Fed. Rep. of Germany - funding for printing of books.
3. Canada - paper for Adult Literacy Program.
4. Sweden - personnel at Institute of Adult Education and funds for the general adult education program.

Government/Business Training:

1. Ford Foundation - construction, technicians, equipment for Civil Service Training Center in Dar.
2. UNDP/ILO - funds for an industrial vocational training program.
3. Denmark - construction, equipment, personnel for the Industrial Training Center in Tabora.
4. UNDP/ILO - training for the National Institute for Productivity.
5. Fed. Rep. of Germany - construction, administration of College of Business Education in Dar es Salaam.
6. Sweden - construction, equipment, personnel for the Tabora Secretarial College.
7. Nordic Aid - expansion of the Institute of Development Management near Morogoro.
8. Canada - staff and overseas training for this same school near Morogoro as well as assistance to the Institute of Finance Management in Dar.

As can be seen from the above, donors are involved in all areas of education to a substantial degree.<sup>1)</sup> One of the major tasks of the Tanzanian Government has been to coordinate all of this aid and to assure that it is the right aid, at the right place, at the right time, and also that it is not duplicatory.

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1) In addition assistance is given to Manpower/Education Programs carried out by Ministries, i.e. Sweden to the Cooperative College of the Ministry of Agriculture.

5. USG Assistance to Education/Training:

The USAID program through the years has not concentrated to any great extent in the formal education system. The three major grant-funded projects in the 1960's, now phased out, were the Agriculture College at Morogoro (this has since been made a part of the University of Dar es Salaam as the Faculty of Agriculture), the Dar es Salaam Technical College, and the Zanzibar Technical College. US assistance included construction, technician support, equipment and overseas training. On the loan side, funds were provided in support of the three projects mentioned above (except the Zanzibar Technical College) as well as for the Teacher Training Colleges in Dar es Salaam and Iringa. Other aid involved short-term contract services for specific tasks such as improvement in teaching methods and materials, provision of "topping off" funds for qualified personnel to fill operational positions in various Government agencies, and participant training primarily in the United States. Participant training has been a vital part of most USAID grant projects with a total of 644 (94 degree) participants in all fields having returned to Tanzania by June 30, 1974.

At the present time, USAID is not involved in any traditional education project but is concentrated in agriculture and health. However, our health project has as its purpose the improvement of the rural health program by training in Tanzania over 2,000 Maternal and Child Health Aides (see the Health Area of Concentration Section for a brief description of this project). The Mission also has one project in the field of Agriculture Education in which USAID is funding a contract team at two Ministry of Agriculture Training Institutes in a multi-year project. The objective of the project is to increase the supply of effectively trained/qualified Tanzanian manpower engaged in the food crops and livestock subsectors. The project calls for nine US technicians to work with the Ministry of Agriculture training institute system (MATI) for a period of seven years. A total of 45 US-trained participants is also being planned for. The project is aimed at helping the Tanzanian Government achieve its goal of having one technical agricultural or veterinary agent for every 500 families by 1980. The MATI system expanded from two schools in 1967 to ten in 1972 and is scheduled to expand further to 12 in 1976. If this expansion is met it is expected that during the period 1973-1980 approximately 1881 diplomates and 4991 certificate holders will have received training. With this output, Tanzania will meet its requirements in all but a very few areas within agriculture.

In all of our other activities in-service, counterpart, and participant training have a very definite priority.

The Mission has no specific plans to expand its program into the Education field within the timeframe of this Development Assistance Paper. As shown in other sections of this DAP, the Mission is heavily committed in the Agriculture and Health fields with definite possibilities of building on the current activities - such as farmer training and parastatal management.

The Education field already has an abundance of donors who have rather thoroughly covered the entire range of Education and Human Resource activities in Tanzania. Our contributions to Education will continue to be in both health and agriculture education with across-the-board participant activities within each of our grant projects. However the Mission will remain alert to any opportunities and needs in the Education field and as the occasion arises will explore areas of mutual interest with the Tanzanian Government.

One additional area in which the Mission may wish to become involved is participant training outside the confines of our projects but with the Ministries with whom we work. This will be a small training program which would be designed to alleviate some of the operational constraints with which our contractors and we are confronted almost daily, but which are difficult to resolve within the context of our current projects. This training would not involve long-term, degree programs but short (six to nine months), specialty training in such areas as budgetting, taxation, personnel management, planning, project analysis, etc., as it impinges on successful implementation of our program. The Mission continues to receive requests for training in these areas and in almost all cases has had to reply negatively. The Mission plans to begin a dialogue with AID/Washington regarding this aspect of our program. We would expect this training to be funded under the Education and Human Resources section of the Foreign Assistance Act.

### III. AID Resource Requirements

#### A. Financial Requirements

The USAID program will remain focused upon food crops, livestock and Maternal/Child Health. There will be a revamped and expanded nutrition element to the M.C.H. program. We will also be seeking a larger role in the population area as the opportunity arises. Work in M.C.H. provides a base for involvement in the whole health delivery system. Depending on progress in the M.C.H.A. project, we may desire such an involvement. There are no current plans to move into the general field of education or public administration. However, strong elements of manpower development are in our Agriculture/Nutrition and Health/Population areas of concentration. Using R&R funds we will explore the possibilities of building an ecological element into long term TanGov programming. The current technical assistance program should run about \$ 4.7 million in FY 76 and will decline to \$ 4.2 million in FY 77-79 as our budget support element in the M.C.H. project decreases. Expanded assistance in either health delivery systems, parastatal management or ecology could add \$ 100,00 to a half million per year to that figure by FY 77. A major commitment to a nation wide food crop production program could add as much as \$ 1,000,000 more beginning in FY 77. For capital assistance an additional \$ 15 million Agriculture Sector loan will be required in FY 77 if the first two \$ 10 million sector loans are successfully implemented. This would be a third tranche to build upon or expand the programs being assisted under the first two sector loans and the agriculture credit grant. We would also wish to support the 4th and 5th years of the Five Year Plan at capital levels determined by TanGov performance. However, given Tanzania's long term balance of payments problem and the fact that debt servicing already is looming as a critical factor, we believe a grant rather than a loan is more in keeping with development realities. Thus we hope AID/W will be sympathetic in seeking and authorizing grant funds for the "most seriously affected."

With the 1975 harvest, Tanzania food production could be back to the level of recent pre-drought years. Title I type inputs through the first half of 1975 would be of critical importance, though whether food aid is necessary in FY 76 (and beyond) depends upon how rapidly expanded production programs fill the gap.

B. MANPOWER REQUIREMENTS

The USAID will begin to implement three new grant projects in FY 1975, new sector type loans in FY 1975-76, a new PL 480 program, new initiatives based upon the special drought appropriation, and a new technical assistance project in FY 76. The addition of three direct hire positions - two of which are interns - should enable us to handle this increased work load. The other positions necessary to manage the program increase were added in FY 1974, and along with tightened management practices give us the minimum essential personnel to oversee our activities. Two additional local positions are necessary, however. Our staffing level is based upon three assumptions:

- 1) Continued support from REDSO and the EAAC ( which todate has been excellent).
- 2) High quality replacements for the people due to depart in FY 75 - 76.
- 3) No additional reporting or programming requirements placed upon us.

With the arrival of technicians to implement scheduled projects, our contract personnel will increase from 22 to 50 by the end of FY 1975, and will stabilize at about that level in future years, unless the new projects mentioned on the previous page are implemented. This would add up to a dozen staff in FY 1977. The manpower picture is laid out below:

MANPOWER REQUIREMENTS  
(AS OF JUNE 30)

	1974	1975	1976	1977	1978
USAID TECHNICAL SPECIALISTS	0	0	0	0	0
USAID GENERALISTS	15	18	18	18	18
LOCAL DH	17	19	19	19	19
LOCAL CONTRACT	3	3	3	3	3
PASA	0	0	0	0	0
US CONTRACT	22	50	50	49-61	49-61
TOTAL	57	90	90	89-101	89-101

### C. LOGISTICAL PROBLEMS IN OPERATING IN TANZANIA

There are three logistical type problems that have a major affect on our ability to implement programs in Tanzania. They are:

- 1) Technician housing - especially outside Dar es Salaam.
- 2) Vehicle maintenance outside of Dar es Salaam.
- 3) Production/shipping lead times on U.S. procured project commodities.

#### Housing:

Family housing acceptable to expatriates is not available in sufficient quantity anywhere in Tanzania. As a result whenever we add a new technician position we must first make sure that housing is available. From a practical standpoint this has meant providing grant or loan funds to the TanGov for construction of housing to be reserved for USAID contract personnel. Two projects are now being delayed while such housing is being constructed. In any future expansion we will need to keep in mind that 9-12 months may be required to construct houses in the more remote posts of duty.

#### Vehicles:

U.S. government regulations require us to buy American made automobiles for our projects. Given Tanzanian road conditions we have standardized on the Jeep Wagoneer. However experience shows that adequate spare parts, repair facilities, and mechanics who can repair the wagoneer are not available outside of Dar es Salaam. Thus the Wagoneer presents the TanGov and ourselves with difficult operational problems. The government itself has standardized on the British Land Rover, a vehicle with which there is long and widespread experience, and reasonable outlying repair capabilities. Because of this situation we have received a waiver for our MCH Project. We may wish waivers on several other projects in order to provide Land Rovers, and avoid the problems of breakdowns of U.S. manufactured equipment which can not be properly and quickly repaired.

#### Production/Shipping Leadtimes:

We currently have three loans which are providing U.S. manufactured agricultural and related equipment. Given recent conditions in the United States manufacturing lead time on agriculture equipment is now approaching 18 months or longer. This has seriously delayed

several of our projects, causing Tanzanians to question the efficiency of U.S. private enterprise and our ability to meet commitments. This problem is compounded by the crowded conditions of the Dar es Salaam port. Ship turn around times have increased, and for whatever the reasons few American ships call at Dar. Some of them off load their cargo elsewhere with no pick up here at all. This has resulted in losses and damage to equipment as well as long delays in receipt.

This combined set of conditions will influence implementation of future projects. We may therefore have to press for waivers of U.S.-procurement in critical cases.

9/1/92

USAID  
AGRICULTURAL SECTOR ASSESSMENT

TANZANIA

December 30, 1974

## F O R E W O R D

Material on which this assessment is based comes primarily from four sources:

The World Bank  
The International Monetary Fund  
Government of the United Republic of Tanzania, and  
USAID-prepared and/or financed studies and materials

Particular use was made of IBRD's "Tanzanian Agriculture and Rural Development Sector Study", 1974; the USAID-financed University of Missouri "Tanzania Food Crops Subsector Study (1974)", the IMF "Tanzania Recent Economic Developments (1974)", the IBRD "The Economic Development and Prospects of Tanzania - Volume II" (1972), and "The Tanzania Second Five Year Plan for Economic and Social Development (1969)". Information on the livestock subsector is taken from the above reports and from the IBRD "Appraisal of Second Marketing and Development PROP" (1974). The reader desiring additional statistical and technical information on the sector should consult these sources.

It should be noted that a new Five Year Plan (the third) is being prepared and is expected to be issued July 1, 1975. While indicators about the content of the third plan are beginning to come forward, our knowledge about it is obviously incomplete. For this reason a degree of open-endedness accompanies program projections in the final chapter. In no way, however, does this affect the general thrust of the paper.

## INTRODUCTION

The position of agriculture, including livestock, in the Tanzanian economy is dominant. About 93 percent of the population reside in rural areas with some 90 percent deriving a livelihood in full or in part, from the agricultural sector. Approximately 40 percent of the nation's GDP comes from agriculture (down from 50 percent in 1968 - but still the major sector). Subsistence production accounts for about one-half of total agricultural output. Agricultural exports, primarily coffee, cotton, sisal, cashews, tea and tobacco, amounted to over 60 percent of total exports in 1973. Food production has lagged behind the production of cash export crops and recently large food imports (mainly grain) have been required.

In fact, the present food shortage in Tanzania may be tending to obscure the longer-run aspects of agricultural development. It is true that the food shortage has been exacerbated by two successive years of drought but the food sub-sector has reached a state of stagnation beforehand. Our assessment therefore must probe beyond the immediate for longer-run causes, effects, and approaches.

In Tanzania's development plans, high priority is accorded the rural sector because of its importance to overall national progress. Consequently, poor performance by agriculture to date has been of central concern and the cause of considerable frustration. As a result, urgent appeals are being made from the highest levels of government to stimulate additional efforts and propel the sector into the forefront of the economy rather than allowing it to continue as a brake on overall development. While the declared ideological and structural frame of rural development is defined by the ujamaa concept (Swahili for family-hood) the strategy to transform the sector with its millions of smallholders into a force for development is by no means on a fixed course. Therefore the immediate future will be one of technical change and institutional experimentation, and perhaps a few false starts before a permanent strategy can be confirmed.

With these general remarks in mind discussion in the paper begins with a coverage of traditional agriculture as found in Tanzania. We believe that agriculture here (and sub-Sahara Africa) is unique enough to warrant such a discussion. We then proceed to survey and comment upon agricultural characteristics including the resource base, administration and services, and general sector performance. Constraints to agricultural development are then listed and discussed. This is followed by a brief review of Tanzania's approach to agricultural development. Finally, the paper examines foreign assistance to agricultural development in Tanzania with emphasis on AID's contribution to the sector and our strategy for future action.

A review of the several sector analyses which provided a basis for this assessment is found in the appendix.

## I. THE NATURE OF TRADITIONAL FARMING

It was noted in Part I that since Tanzania is so far without substantial mining or industry its development depends largely on farming. We have the strongest impression that problems of developing traditional agriculture as found in Tanzania are underestimated and we wish at this time therefore to establish a general benchmark of where agriculture is in Tanzania, and in so doing to indicate how far it has to go on the road to development and the main problems that it faces. We note at the outset of this assessment that 99 percent of Tanzania's population are Black Africans and over 90 percent live in rural areas. The relevance of stating this is that during the colonial era occupations, opportunities, access and the consequent levels of development followed racial lines and for whatever specific reasons Europeans were out in front, Asians and other non-Africans in the middle, and Africans considerably behind.

For those unfamiliar with farming in sub-Saharan Africa it will be useful to imagine Tanzania's traditional agriculture as a large sea occupied by islands of tree and bush crops - coffee, tea, cashews, bananas and wild fruit - other cash export crops - sisal, cotton, tobacco, pyrethrum, sunflower seed - mixed food crops - maize, rice, wheat, sugarcane, vegetables, sorghum, millet, beans and peas, cassava and lesser crops like potatoes, groundnuts and soybeans. <sup>1/</sup> In addition there is land in bush fallow (resting between rounds of cropping), and land that is used for extensive grazing or is otherwise relatively empty.

We may now look at the type of farms common to Tanzania. Through the formation of ujamaa villages, there is a growing proportion of land farmed communally, but the typical pattern has been that land is in smallholdings under the control of a family. Whether these plots are in scattered units or a block of a village's land, the family holding is referred to as a shamba.

One's shamba would typically comprise a few scavenger chickens or goats and a disorderly layout of cash crops interspersed haphazardly

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<sup>1/</sup> Although we frequently speak of subsistence farmers almost all of them produce something for the market. Usually cash crops such as coffee or cotton are combined with grain crops or vegetables and surpluses of the latter are sold. However, without a crop authority (parastatal body) for promotion of foodgrains the market is poorly organized, and lesser food stuffs and perishables are sold only on local markets. Nomadic cattlemen enter the market through sale of live animals.

with patches of food crops. <sup>2/</sup> There also would be land in bush fallow reflecting the practice of shifting cultivation. While in some villages ox-teams provide power and custom plowing with tractors is being introduced in others, the great majority of these typical shambas, as noted in Part I, still rely on human muscle power and rather primitive hand tools. Typically, farms and villages may be linked, if at all, by trails or narrow dirt roads and are without modern communications and utilities.

Farmers who have traditionally operated these small shambas in Tanzania number above two million. Many are illiterate or nearly so. Throughout this paper the two million or more farmers and cattle herders and their families are our target groups. They are the ones who need help most desperately and they constitute about 90 percent of Tanzania's population. Historically emphasis of these small farmers was on group security rather than economic development. There existed presumably, a sort of extended family/clan/tribal home-grown socialism which has been refined, intellectualized and updated into the present day ujamaa concept. Farmer's diets are poor by any standard and their stamina is correspondingly deficient. They undoubtedly viewed their typical shambas not only as poor places to live but as unrewarding places to work. Farming came to be an occupation of last resort, and farmers will go to considerable lengths to educate their children in the hope of their escaping the drudgery, poverty and uncertain rewards of farm work. The farmer's psychic responses in his farming operations were perhaps shaped before but mainly during colonial times when, not without coercion, they were instructed to grow more cash export crops. The farmers income from such crops were the means of paying personal tax assessments and school fees for their children.

For the government, returns from cash crops were the principal source of revenue. To insure it, Marketing Boards and more recently Crop Authorities were formed to promote farming and to market the crops. Since prices received by farmers were residual and were usually administered prices rather than free market prices, farmers responses to market incentives frequently became entangled in marketing board determinations. And even when prices were nation-wide and announced in advance, the idea was to peg them sufficiently low to assure funds for government operations and non-farm development.

Amid this sea of small scale farms, and traditional farmers and cattle herders there were other producers, African and non-African. The atypical African farmers form two extremes as compared with operators of regular African shambas.

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<sup>2/</sup> While a single farmer or farming village may own cattle they are tended by herders distinct from the farming operation.

On the one hand we have just referred to the nomadic cattle herders who, though part of our "rural poor" target group, cultivate minimally if at all. The traditional beef herd in Tanzania, which encompasses nearly all the national cattle population of 9.5 million head, is in practice used for multiple purposes. It is a source of subsistence food in the form of milk and meat; plays a significant role in traditional social customs; provides manure and a source of power for a limited number of cultivators; and serves as a store of value.<sup>3/</sup> The gradations of the several cattle systems vary from Sukumaland where livestock are a minor source of income in a mixed cropping/livestock system to Gogoland where livestock provide the greater portion of income mixed with some cropping, to Masailand where nearly all income is from livestock with very little, if any, coming from crop production. The location of the herd and their physical presence in a given grazing area are broadly determined by the presence or absence of tsetse flies, which precludes extensive cattle keeping in the southern and eastern lowlands and in large areas of western Tanzania. In turn this leads to cattle concentrations and overgrazing in other areas, particularly on the northern plateaus.

Most of the cattle in the traditional sector are individually owned but graze on communal land. Consequently, there is little interest on land care and soil conservation. Ownership of cattle is relatively concentrated among an estimated 250,000 herdsmen and farmers. Based on the number of animals owned/produced, about one-half of the cattle owners are judged to be substantial producers and one-half are marginal producers. About 10 percent of the substantial producers (12,500) own some 50 percent of the national herd and individual herds of these large producers average 400 animals each. (This average includes the stock of the large government ranches - i.e., about 300,000 head on 12 ranches). The remaining 90 percent of the substantial producers own about 4,500,000 animals in herd sizes from 20 to 150 animals. The 125,000 marginal producers own the remaining 500,000 head possessing from one to 15 animals each.

At the opposite end of the scale are a number of relatively successful African crop farmers (although, percentage-wise they make up only 5-10 percent of the farm population). They may be a distinct social grouping such as the Chagga people on the slopes of Mt. Kilimanjaro whose well tended coffee has brought increased incomes. Besides there are some who as individuals have by some means accumulated land, capital and management skills (and use

<sup>3/</sup> Our discussion on livestock is extracted mainly from: IBRD/IDA Appraisal of Second Livestock Development Project, Tanzania, March 4, 1973.

hired labor) to become larger and more successful operators. Beyond these successful African farmers there are non-African farmers - Europeans and Asians who are mechanized. These estates and large farms are being nationalized and converted to government-run plantations or broken up into ujamaa villages. However, it is useful to note that out of the European farming community the Tanganyika Farmers Association (TFA) has now evolved into an almost all-African producer's institution that draws as its membership a cross section of Tanzanian agriculture. Today the diminishing European and Asian farmers are only a very small minority, while African farmers, the cooperative unions, the ujamaa villages, and the state-owned farms make up the bulk of the membership. Although TFA, this year, has also sustained financial stress engendered by the drought, it has resolved most of the problems that plague the cooperative movement -- high bad-debt ratio, poor financial management, dissatisfied members, high overhead, undependable service for its members, and difficult access to credit. The TFA is, for Tanzania, a strong engine of economic development and its growth could be a plus for the growth of the economy.

In the main however, the Tanzanian Government and agricultural donors have to always bear in mind that on any reasonable scale of economic development, we literally are starting from scratch. The choices that produced the traditional farming system were quite rational for their time but are today obsolete. Moreover, we have a developmental situation that is particularly Tanzanian where ideological and social factors are given more than equal weight with economic factors.

## II. GENERAL CHARACTERISTICS OF TANZANIAN AGRICULTURE

### A. Resource Base

#### 1. Land

While Tanzania, with about 39 people per square mile, is less densely populated than either neighboring Kenya or Uganda, highly productive land is nonetheless limited. Only about nine percent of Tanzania's land area of 361,800 square miles is judged to have fairly high agricultural potential. At the opposite end ten percent of the land is classified as wasteland (rocky, mountainous, uneconomic bush). Between these extremes there is land of low to moderate agricultural potential. The scale of the development problem is seen by the fact that less than five percent of the land is under cultivation at one time. Ten percent or more is fallow or in temporary pasture. Utilized range covers about 25 percent while about 40 percent is in tsetse fly infected bush. The remaining 20 percent is set aside for forests and game reserves.<sup>4/</sup> Because of distinct agricultural features such as proneness to drought or floods, presence of tsetse flies, requirement for clearance, or variation in soil fertility and ecological factors, full potential of the country's land resources can be realized only under effective land management.

Turning to land use, only about 0.8 acre per person is under cultivation and much of this land is of low to moderate potential. Typical small holdings, either dispersed or in village clusters comprise about 90 percent of the cultivated land. The remainder is in plantations and larger farms. Though odd plots of scattered crops may sometimes be seen on tsetse infested and forest land, this land appears otherwise to be relatively empty. We find, however, that even land with the better potential is made less favorable to rapid development because of the skewed distribution of population. For example, four regions containing about 24 percent of the land area and over 25 percent of Tanzania's population contain no land of high potential.<sup>5/</sup> On the other hand, six regions which contain 75 percent of the highest quality land carry only 33 percent of the population.

Reference to effective land management as expressed above, calls attention to facts about Tanzania's soils which should be understood. Much land of low to moderate agricultural potential usually has volcanic soils and calcareous tuff over basement rock, hard cracking clays and

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<sup>4/</sup> Statistical abstract for 1970.

<sup>5/</sup> Geographically and administratively Tanzania breaks down into 20 regions which are somewhat analogous to states in the U.S.

soils of lateritic and porous texture which hold very little water and slow down the conversion of chemical fertilizers for release of plant food. <sup>6/</sup> Before the annual rains much of this land becomes extremely hard and it usually brings forth low yields per acre. Farm incomes are correspondingly low.

Regarding tenure, all Tanzanian land is nominally publically owned with ultimate rights in government although much of this land is occupied by individuals or groups under rules of tenure which accord with tribal and customary use rights. In fact these lands have always been occupied by farmers under squatters rights, but since independence they have been officially converted to lease-hold status and presumably will continue to be occupied by farmers in perpetuity under these new rules of occupancy. Since there are no individual landlords, there consequently are no tenants as we know them in Latin America and Asia. On the other hand, farm labor on plantations is common. So far as we can tell, neither insecurity of expectations nor other negative aspects of tenure are putting a brake on agriculture development.

To summarize, yields from Tanzania's farmland definitely can be raised by improved management and additional productivity can be achieved by conversion of land from extensive to more intensive uses. Moreover, there is additional new land which can be employed in farm production. While affirming this we point out that prospects of high fertility, as suggested by lush natural vegetation, can be greatly exaggerated. Most land has only low to moderate potential. With the removal of bush for planting of arable crops, much of the land will deteriorate rapidly. Over-grazing in other areas has caused and is causing a similar decline. In the past long periods of bush fallow tended to restore soil fertility to the land. Obviously this is no solution when the goal is rapid development.

## 2. Labor and Capital

It is useful, we believe, to discuss farm labor and capital under a single sub-head since one critical issue is the extent and the degree to which capital should substitute for labor in Tanzania. Questions of farm size, equity and employment relate directly to this issue.

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<sup>6/</sup> There are of course good alluvial soils at the base of mountain ranges and escarpments. Sometimes they merge with good clay basins in the lowlands. See: Ellis D. Gordon and Joseph O'Rourke, Proposed Water-Resources and Land Capability Investigation, Arusha, Region, Tanzania - July 1972. p. 12.

We have indicated that plantations and other large farms are mechanized to the extent necessary for productive operations. They combine machines with hired laborers who during peak seasons number into the thousands and are paid a minimum rural wage (now TShs. 260 or about \$37.00 per month) as prescribed by government. On the other hand the vast majority of labor available to agriculture is provided by small low income farmers (and their families) who cultivate individual or communal farms. Cattle owners who tend their herds can be added to this group. This great mass of unskilled labor encompasses the rural poor though there are gradations of poverty based on location, type of farming and ethnic group. There also are rural government employees on agricultural research stations and training centers, and there are rural servants and other individuals providing casual labor.

While labor requirements peak at critical times and labor shortages become a definite constraint, hired farm labor and those tending shambas are particularly vulnerable to underemployment. By imagining that all rural unemployed are placed in a container, we would find that only during a few weeks of the year (land clearing, seed-bed preparation, weeding and harvesting) would the container be empty signifying full farm employment. At all other times of the year the container would begin to fill as rural labor became partially idle receding to such work as tending the more drought resistant crops like cassava or small patches of vegetables near streams. Near the end of the annual dry season most small scale farmers are effectively idle, there being few if any supplementary enterprises to cushion the lack of farm work. Even with ideal farm prices, incomes to small farmers would remain low because of the limited number of days worked. When rural idleness is combined with low labor productivity, average rural incomes amount to no more than a fifth of average urban incomes. Tanzanian farm workers of this kind find themselves in a particular economic dilemma and how to put them on the road to progress is at the heart of the development puzzle.

Since traditional agriculture in Tanzania has been capital starved, major injections of capital could, of course, be a means of increasing labor productivity on farms. But mention of this prospect immediately raises the specter of more unemployment. The mind's eye image when one speaks of capitalizing African agriculture is big tractors, subsidized directly or indirectly by government, atrociously maintained (and without spare parts support) and misused. This mechanical technology, it is claimed, denies labor intensity in agriculture and swells city unemployment leading to more urban social problems in LDCs.

Current views relate the "tractor" image of the labor/capital problem to size of farms and employment. The reasoning, and rightly

so, is that in a country like Tanzania, when we put development emphasis on small farmers (who are also the rural poor) we simultaneously pick up employment and equity considerations. Thus a compatibility between growth and equity should and can be maintained. This analytical formulation while theoretically sound, stops short of some peculiarities of African smallholder farming. Its model is that of small, labor intensive, but highly productive farms in countries like Japan, Taiwan or South Korea. Smallholders in these countries devote time and care to their paddies and miniature farms and consistently bring in higher and higher yields and income per acre. In fact, their per acre performance is undeniably better than large farms, reversing the normal economies of scale that usually accompany large industrial firms. Can't the same be true for Tanzania?

We certainly believe it can, but as a general rule it isn't so far. Thus, on the basis of bare per acre yields, the larger farms out perform the smaller shambas. Therefore, it may not be unreasonable, in the absence of other viable alternatives, for African policy makers to favor larger farms and the purchase of attendant equipment so as to manage them well. The main point is that improved performance on small farms is a product of development itself and is not given by the fact that farms are small. Yield economies noted on small Asian farms have not yet been realized on Tanzanian farms. This means that to date small scale farming in Tanzania (and sub-Sahara Africa generally) is significantly different from small scale farming in Asia, so much so that in our opinion the relevancies for labor/capital combinations and for labor intensification may well differ at least in the short-run. <sup>7</sup> Let us briefly compare highlights of the two small farm systems.

First the core food crops in Asia (rice, fruit, vegetables) are themselves labor-using crops. But more important, Japan's and Taiwan's rural economies are fortunate to have small farmers who through experience and education have developed into excellent farm managers simultaneously with the availability of critical inputs (fertilizer, sprays) and improved practices based on local research (good seed, correct plant populations, recommended spacing, good land preparation, water control, etc.). Perhaps even more important these small farmers have access to an effective support system (credit, reasonable prices, well managed cooperatives, dependable markets, promoters of small farmer interests, etc.). <sup>8</sup> Moreover, though not

<sup>7</sup> Egypt is the one African country which approximates these Asian countries.

<sup>8</sup> James P. Grant, "Development: The End of Trickle Down", Foreign Policy Publication No. 12, fall 1973. 435 E. 46th Street, New York. (This is an excellent article on how small Asian farmers have advanced.)

generally appreciated, these small scale farmers have greatly benefitted from increased capitalization by way of upgrading farm equipment all the way to complicated machines. Rotary tillers, gasoline or electric pumps, small tractors, or, at the very least, animal power and auxiliary equipment are in use everywhere, and Japanese industry has come to the aid of its farmers by adapting equipment to local needs and local economy. Moreover, in the whole wet rice regions of Asia, soil and water problems are quite similar so that innovations and equipment adaptations in Japan are almost invariably suitable for Taiwan or Thailand.

In Tanzania, on the other hand, smallholder farmers have not had long experience in commercial farming though some have done rather well with coffee, cashews and tobacco. Support systems that would be expected to give strong backing to small and semi-illiterate farmers also are weak. If fixed capital such as land, semi-fixed capital such as tree crops, and capital in the form of livestock are excluded the capital resources of most Tanzanian farmers would consist of a few crude hand tools. We repeat also that Tanzania's soil, rainfall and related production practices create problems unlike those in Asia. Agricultural growth, employment and equity considerations that relate to these differences are worth indicating.

In Tanzania notwithstanding non-used land, the size of farms is very small. These small farms are already labor-intensive since large families may cultivate only two or three acres of arable crops. While members of the family drift to towns in search of cash employment, the fact remains that 93 percent of Tanzania's people live and work in rural areas on a very small percent of its land. Labor intensity hardly could be much higher. As emphasized in Part I of this DAP the government is focusing sufficiently on equity problems of the rural poor. We support and applaud this. Now perhaps a more urgent need is for significantly higher production of both food crops and export crops.

There are two approaches for increasing total farm production. It can be done extensively by expanding acreage, or it can be done intensively by increasing productivity per acre (better still doing both simultaneously). Expanding acreage extensively at a pace consistent with rural population growth has been the traditional process for increasing total farm production in Tanzania. This was possible because no additional capital was required, only additional labor which became available with population growth. Now development programs are attempting to provide more capital, better inputs, services and improved practices in support of productivity increases. In

pondering the problem of low production and income, we note that the size of typical family shambas (both food and cash crops) have tended to remain stable at five acres or less. Many are only one or two acres. With unused land, why haven't farmers at least expanded acreage at a faster pace and used the extensive route to increased production and income? But how do families move from five acres to, say, ten acres?

A major bottleneck we suggest is insufficient energy and farm power, now human muscle for the most part. An obvious upgrading of farm power would be use of animals (oxen) and this is not lost on TanGov officials who recommend it and in fact, there is a program in Shinyanga Region for training work animals, and several thousand ox teams are in use. Unfortunately, the expansion of animal power has two limitations. These are the high incidence of deadly diseases, especially East Coast Fever and trypanosomiasis caused by ticks and tsetse flies respectively, and second, perhaps half of Tanzania's soil crust (especially in Central and North-eastern Tanzania) is so hard before the annual rains that ox plows, like the hand hoe, have difficulty turning the soil. Ox drawn equipment would, however, help to expand farm acreage and improve tillage practices. We recommend its use to the fullest extent possible. Costs aside for the moment, what one needs to do is focus on the utilization of power equipment where scarcity and ineffectiveness of labor are a constraint to increased acreage and good tillage practices. In other words, the problem goes beyond the economic trade-off of expensive capital versus cheap labor though we usually dismiss it at this point. Rather the need is to find a way, given rainfall patterns, that crops can be planted early, weeds successfully controlled and labor at peak seasons spread over more acres. It is basically a labor constraint and unless this problem is solved Tanzanian farmers will not achieve their potential as producers. And, in our opinion, its solution will require a higher level of farm power than human muscle and more competent equipment than hand tools. We would hope that farms can be enlarged and tillage practices improved without seriously reducing labor intensity and farm employment. Carefully thought out crop combinations and rotations, double cropping where water is available, new crops and supplemental livestock could all add to farmer's income. The critical farm jobs of planting seed, weeding, crop tending, harvesting, and storing still would be done whole or in part by hand and possibly by ox operations. We understand that in Swaziland a small, multi-purpose diesel tractor is becoming popular among smallholder farmers. Some rational combination of hand operations, animal and intermediate mechanical technology would seem to be the only means of meaningfully meeting

both equity and growth goals while maintaining high employment on farms. Continued reliance on hand tools and human muscle will not achieve this objective.

### 3. Climatic Conditions

Although meteorology is in its infancy in Tanzania, weather patterns have been observed and they are extremely important for agriculture. Average rainfall varies being heavier along the coast and in southern Tanzania and along the slopes of mountains. However, all over the country the cropping cycles are timed to fit the expected rains which have come to be known as "short rains" and "long rains", the former coming in September-November and the latter may come anytime between January and June depending on the part of the country in question and whether the rains are early or late.

The effects of climate vary between crops. Tree and bush crops such as cashews, coffee and sisal can endure considerable drought as can root crops such as cassava. Among the foodgrains, sorghums and millets are considerably more tolerant to droughts than maize or wheat. In the drier climatic areas there is a tendency toward periodic droughts which are said to run more or less in five-year cycles and seem to be most severe at roughly 20-25 year intervals.

All over Tanzania relationships between weather and ecological problems are being noted. There are areas of heavy and increasing soil erosion. In the drier areas overcropping and overgrazing limit the replenishment of natural vegetation and further decrease the capacity of the land.

### 4. Technical Information

Another characteristic associated with Tanzania's agriculture is a dearth of technical information. General research on which to base agricultural decisions is sometimes available but the specific research for the numerous eco-zones in Tanzania is not generally. The situation is worse for major food crops than it is for export crops with minor crops in both categories relatively neglected. The University of Missouri Food Crops Subsector Study identified "limited research data for putting together packages of practices" as an urgent constraint. There has been some research in livestock diseases and pasture but little on livestock production. Smallholders farming systems have not been researched while agro-economic research is very limited.

Additional research work is required in crops for maize, sorghum, soyabeans, millet, fodder crops and smallholder farming systems. In the livestock area additional work on enterprises which would fit into smallholder farming such as goats, poultry and pigs in addition to animal production and forage/pasture research is needed. A component of all research should be an economic evaluation of the results.

#### B. Agricultural Services and Administration

In Tanzania as in most LDCs, government and its organs are foremost in economic development. This reflects the absence of a strong private sector and the dominant role of government in decision-making during colonial times and since. In Tanzania, however, the nation's single political party, TANU, also plays a fundamental role in the formulation of policies. Decisions made by party leaders on ideological grounds can sometimes nullify programs prepared or proposed by government agencies. Over the life of the DAP this situation may well continue, thus an allowance for party ideology and policy must therefore be made.

The government's announced aim for rural Tanzania is to promote cooperative farming as extensively as possible. Government assistance takes many forms: research, training, extension, subsidized inputs, cooperative services, credit and others. The ultimate replacement of traditional cultivation and tenure as well as large private holdings now constitute one of the main elements of government policy mainly through the establishment of ujamaa villages.

The organizational channels through which policy is implemented and services flow also have undergone change. There has been significant decentralization to the Regions. The object is to give greater decision-making to the regions and their local sub-divisions. Marketing boards also have been revamped. Crop Authorities with responsibility for investment, promotion, guidance, production, implementation and marketing have been established for cotton, tobacco, pyrethrum, tea, coffee and cashews. Food crops are not represented by an Authority though one almost certainly will be announced under the Third Plan. <sup>9/</sup> The National Milling Corporation,

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<sup>9/</sup> A Crop Authority for maize, or better yet for all foodgrains has been recommended to TanGov by USAID and the Ford Foundation. It would provide a high level spokesman, could help channel investment, and in general promote foodgrains in its competition for developmental resources. We are led to believe that a Food Authority will be recommended under the Third Five Year Plan.

a parastatal, imports food, purchases locally, and processes food; while the National Agriculture and Food Corporation has assumed responsibility for the operation of several state farms, but has handed over its livestock responsibility to the recently formed Livestock Development Authority (LIDA).

The pricing policy of the government is determined by the Economic Committee of the Cabinet after reviewing proposals by the Ministry of Agriculture in consultation with Crop Authorities. But pricing policy varies among crops. Prices for foodgrains are nationwide and are announced in advance. However, some foods sold purely in local markets do not have an assigned price. For most export crops farmers receive the export price minus marketing and handling costs, while for others, where there is increasing domestic processing (cotton), they receive a fixed price announced in advance.

The chief government organ serving farmers is the Ministry of Agriculture. Its services are supplemented by numerous parastatal organizations. Agriculture cooperatives which also serve farmers are the responsibility of the Prime Minister's Office. The Prime Minister's Office also serves as the national coordinator for regional development activities and therefore has much to say about rural development in general. <sup>10/</sup>

The Ministry of Agriculture has four divisions, viz. Planning and Administration, Crop Development, Livestock Development, and Man-power Development. The total number of certificate, diploma and degree staff is nearly 3,000. These are complemented by about 5,000 lower level staff. The Ministry has nine research and twelve training institutes.

With decentralization, the responsibilities of the Ministry of Agriculture are more diffuse and perhaps less pervasive than previously, but still dominant in the sector. The Ministry is directly or partially responsible for agricultural research, agricultural training, seed multiplication, veterinary services and supervision of agricultural parastatals and some responsibility on price policy. Each division carries out research as it may apply to that particular discipline. The Ministry also maintains contact with regional and district offices and has responsibility for specified implementational activities in the areas of crop production, animal health and tsetse control.

10/ In deciding upon ways and means of producing a new five-year development plan (the third) and the general implementation of rural development, TanGov has delegated major responsibility and shares a budget with the country's 20 regions and they in turn involve their respective districts, wards and villages in the development process. The Prime Minister's Office, not the Ministry of Agriculture, coordinates these efforts.

Ministry performance in carrying out these responsibilities can only be rated as poor to fair. Support for export crops has been better than food crops and animal health work more thoroughly conducted than work in animal production.

The problems are many. The declared policy of self-reliance and socialism in itself shifts responsibilities to the Ministry of Agriculture (and other ministries) that they find difficult to assume. Sharing responsibilities with Crop Authorities and other ministries creates jurisdictional disputes. Physical resources, including transport, are desperately short and both development and operating budgets are woefully insufficient. A basic and all-encompassing problem is lack of manpower, experience and confidence, shortages, and white collar attitudes among the ministry's agricultural staff. Notwithstanding the 3,000 certificate, diploma and degree holders in the ministry, some 40 percent of all degree and 35 percent of all diploma level positions are still unfilled. <sup>11/</sup> The extension agents now in the field are frequently without transport and cannot possibly contact all small farmers. Unfortunately, the limited training of some field staff, the elitist attitude that training and education usually impart combined with a shortage of locally adaptable research have meant in the past that contacts made with farmers are often unproductive.

The system of agricultural cooperatives in Tanzania consists of the National Cooperative Union, regional unions and some 1,300 primary societies. After independence agricultural cooperatives were expected to perform all the functions, and more, that had traditionally been performed by European businessmen and Asian traders, transporters and middlemen. Success in cooperative operation has been limited at best. First, cooperatives have not performed very well in carrying out their marketing responsibilities. The result has been high costs and inadequate service. And since farmers are required to use co-ops they may well constitute disincentives. A rather high proportion of deficit societies (some chronically in debt), seem to go on almost indefinitely on overdrafts (loans) which in effect turn out to be subsidies. <sup>12/</sup> In part, this reflects too many very small societies handling a tiny volume of business but it also relates to the single channel marketing system which does not penalize inefficiency as rapidly as would be the case in a competitive

<sup>11/</sup> For a full discussion on Agricultural Manpower Requirements see: D. Yeaman et al, Agricultural Manpower Development in Tanzania, Ministry of Agriculture, Dar es Salaam, August 1972.

<sup>12/</sup> A thorough analysis of cooperation accounts was published by the University of Dar es Salaam in 1973. See: Paul Westergaard, Economic Research Bureau Paper 73.2, University of Dar es Salaam, 1973.

system. There is also a problem of lags in adaptability since the cooperative system is usually given added and more complex responsibilities by government before simpler operations are going well. <sup>13/</sup> While government has fostered cooperative policy, real management assistance has not been provided therefore the cooperatives have been unable to cope with the many problematic situations they face. Pointed up again is the severe lack of working capital, lack of trained manpower (particularly with managerial and accounting ability), and evidence of corruption. A lack of financial control over the operations of cooperatives is one of the critical problems in this regard.

The final important element of the organizational infrastructure serving agriculture is the parastatal bodies including the Tanzanian Rural Development Bank (TRDB), the several Crop Authorities and Marketing Boards, the Tanzania Livestock Marketing Company, the National Milling Corporation, Tanganyika Packers, the National Agricultural Company and others. In total, there are some 53 parastatal organizations related in varying degrees to the agricultural sector. Performance has not been uniform but, in view of the recent establishment of many and the revised responsibilities of others, it has generally been rather good. A number of the parastatals show an operating profit and are an important source of government revenues. Overall the parastatals (including those outside agriculture) have grown at a rapid rate and their contribution to GDP has risen significantly between 1966 and now. An important, albeit perhaps less serious, constraint on these organizations has again been manpower. However, they continue to employ a substantial number of non-citizens and in the past were able to offer slightly better working terms which enabled them to more easily attract qualified staff.

Parastatals of particular interest to AID's programs are the Tanzania Rural Development Bank (TRDB), Tanzania Livestock Marketing Company, the National Milling Corporation, The Tanzania Seed Company, the National Agricultural Company and the Tanzania Livestock Development Authority. The TRDB is the major government source of agricultural credit. In 1973 its loans amounted to \$15 million compared to \$5 million in 1972. Over 75 percent of the funds went for seasonal inputs and crop development (largely cash crops) primarily through cooperative unions and local societies. The Tanzanian Livestock Marketing Company has full responsibility for developing and improving the livestock marketing in Tanzania. The organization was only recently

13/ See: Herbert C. Kriesel et. al. Agricultural Marketing in Tanzania (Background Research and Policy Proposals) an AID study for the Ministry of Agriculture, Dar es Salaam, June 1970.

established but plans ultimately to handle in excess of 300,000 head of cattle annually drawn mainly from small producers. Among other responsibilities, the National Milling Corporation acts as the national food crops marketing organ operating independently and through the Regional Cooperative Unions. This is a recent change from the earlier system where the National Agricultural Products Board carried out this responsibility. The Tanzanian Seed Company was established in 1973 to multiply foundation seed through established seed farms and selected certified growers, and to sell seed to farmers. The National Agricultural Company has a variety of production enterprises on state farms. Production has not been as high as anticipated. Finally, the Tanzania Livestock Development Authority created in mid-1974 has responsibility for promoting all livestock development activities. It is still too early to determine its effect on livestock development.

### C. Sector Performance

#### 1. Overall

Our discussion here is limited to production indicators. It does not suggest anything about the improvement of infrastructure or the growth of agricultural institutions.

In a word, recent agricultural performance has been disappointing. This is clearly indicated by our discussion above. From 1968-72 monetary agriculture grew at an annual rate of 3.6 percent compared to a SFYP target of 7.2 percent. <sup>14/</sup> The overall food growth rate of 2.4 percent compares with a population growth rate of 2.7 percent, and a SFYP target rate of 5.1 percent. Per capita GDP declined slightly in absolute terms between 1968-72. For 1973/74 no firm production figures have been released. Cash crop production may have been down slightly but with increases in price, total revenue may still have been up. We estimate that in 1973 foodgrain (maize, wheat, rice, sorghum, millet) production fell from a record high of 1,466,000 metric tons in 1972 to about 1,200,000. As near as anyone will dare guess production probably will be no more than half that figure in 1974. <sup>15/</sup> In any case except in 1974 from pockets here and there very little foodgrain entered the market in spite of the fact that as of April 1974 prices paid to farmers increased six percent for rice, 42 percent for maize

<sup>14/</sup> Most agriculture growth figures in this report were taken from IBRD Tanzanian Agriculture and Rural Development Sector Study, East African Projects Dept. of IBRD, Washington, D.C. June 1, 1974.

<sup>15/</sup> We caution the reader here and elsewhere in the paper to appreciate that statistical reporting of food crop production in Tanzania is sketchy at best. Therefore food crop production estimates suggest an order of magnitude and nothing more.

and 77 percent for wheat. More recently (October 31) another round of price increases were announced.

Notwithstanding poor overall performance in agriculture, uses of modern inputs have grown somewhat in recent years. Fertilizer rose from 23,600 tons in 1966 to 55,700 in 1972. Use of pesticides more than doubled from less than 1,000 tons in 1966 to 2,300 tons in 1972. Slightly over 2,000 tractors have been imported during this time.

## 2. Food Crops

Statistics on the production of major foods are much less precise than those for export crops because most food does not enter the market. Consequently, production estimates vary and at best are only approximations. Nonetheless we have reviewed a cross section of reports and from these the following is offered. Mainly because of weather there are fairly wild swings in food production from one year to another. Between 1966 and 1972 production variation was high with an average between year variation of 23 percent. <sup>16/</sup> But 1974 grain yield per acre and total production have fallen to a new low. For maize, average production 1966-72 was 12.0 bushels per acre. <sup>17/</sup> As estimated in 1973 production fell to about nine bushels average and in 1974 may be as low as five or six bushels per acre. Or, on tonnages in 1972 maize production was thought to be a record 880,000 metric tons. In 1973 the National Milling Corporation's estimate was 650,000 M.T., and 1974 is expected to be below 400,000 M.T. <sup>18/</sup> This latter figure certainly reflects the unusual drought in 1973/74. Sorghum and millet at roughly eight bushels per acre, rose from about 135,000 M.T. to 191,000 between 1968 and 1972, but both sorghum and millet dropped off in the past two years probably because of drought conditions, but mainly because

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<sup>16/</sup> See: P.M. Newhouse, A Review of the Production and Monetary Arrangements for Maize, Paddy and Wheat with Particular Reference to the Milling Sector, Vol. I, Dar es Salaam, Marketing Development Bureau, June 1972.

<sup>17/</sup> Using 56 lbs. shelled maize per bushel, or 39 bu. per metric ton, a 1966-72 average bushel yield was calculated by dividing acres harvested into total tons (and bushels) produced, then taken a 6-year average.

<sup>18/</sup> As estimated by employees of the National Milling Corporation.

there was a shift from sorghum to maize as a preferred foodgrain. Paddy rice averaging about 14 bushels per acre showed the greatest increase from 126,000 M.T. in 1968 to 211,000 M.T. in 1972, but it too has fallen off. There has been some shifting from wheat (12.0 bushels per acre) to beans on the larger farms because of price advantages in the latter crop. Because Tanzania is not a sugar exporter, sugarcane is also classified as a food crop. Production yields, on managed estates compare favorably with other countries and output has steadily grown at about a 6.5 percent annual increase, but consumption of sugar has increased even faster. The World Bank is heavily financing sugar production and expects that the country will be completely self-sufficient within three years. Data for other food crops is fragmentary but it appears that since independence production of cassava, white and sweet potatoes, bananas, mixed vegetables, and ground nuts probably have kept pace with population growth. Bean production might have increased slightly more rapidly since 1971.

One other crop that merits mention is soyabeans. They grow well but they are a minor crop. Tremendous production potential could apparently be realized if there are introduction campaigns and if a market can be assured.

### 3. Livestock

A clear indication of recent production trends in the livestock subsector is not available. For beef cattle, marketed offtake passing through official channels has remained fairly constant but it is estimated that this represents less than one-third of total offtake. <sup>19/</sup> Exports of meat have declined as domestic demand has risen, probably stimulated by relatively low consumer prices (from 1967-72 the demand for meat in Dar es Salaam grew at a rate of 36 percent per annum). Exports of hides and skins have been constant but more have gone into local production. Imports of dairy products have risen.

Cattle numbers under normal conditions are estimated to increase at a rate of 1.0 - 2.0 percent per year with a current cattle population of some 9.5 million head. Sheep numbers are gradually declining while the goat population is growing. The two together number some nine million animals. <sup>20/</sup> Poultry production

19/ IBRD Report, IDA Phase II Livestock Development Project for Tanzania, 1973

20/ Ibid.

has risen steadily since 1968. The new Livestock Development Authority (LIDA) mentioned under "Agricultural Services", has plans and finance (mainly from the World Bank) to recognize, promote and guide the cattle industry to a higher level of development. AID is cooperating in this project.

#### 4. Export Crops

The production trend in export crops has generally been taken to reflect overall sector performance. Price increases have helped maintain export earnings but quantities produced of most crops have not grown at rates originally projected. In the Second Five Year Plan cotton production in 1974 was targeted at 700,000 bales. Actual production will be around 400,000 bales. <sup>21/</sup> Coffee production was projected at 67,000 tons in 1974, but by 1973 production was only 52,000 metric tons, up some 5,000 metric tons since 1968. Tea production was projected to increase by 50 percent between 1969 and 1974 and will be only slightly under the target with a annual growth rate of almost 10 percent. From the mid-1960's sisal output was forecast to decline from 225,000 M.T. to 160,000 metric tons by 1974. Production declined below the projected tonnage and in 1973 was about 155,000 metric tons. However, with sharp price increases of competing synthetic fibers (as a result of oil price increases) future production may show an increase. Tobacco production has exceeded targets, growing from 2,500 M.T. in 1961 to 24,000 M.T. in 1972. Cashew production has also grown tremendously from 56,000 M.T. in 1962 to 137,000 M.T. in 1972. Production increase of cashews in recent years has slowed but is still rising about five percent a year. <sup>22/</sup>

Certainly, during the earlier years, external market conditions had an adverse effect on several crops as world prices were low and markets were limited. But since 1972 prospects for most export crops have been good, but with the future rather cloudy.

To summarize, we repeat that agricultural production in Tanzania has been disappointing. Foodgrain production has stagnated and since the drought declined rapidly, especially in

21/ International Monetary Fund Document, Tanzania - Recent Economic Development, Report SM/74/138, June 11, 1974

22/ Ibid.

1974. Other foods, i.e., the heavy starches like cassava, bananas, and potatoes may have kept pace with population growth as have mixed vegetables indicating acreage expansion rather than yield increases. Sugarcane has increased mainly from new plantings and new mills will soon insure self-sufficiency in this critical crop. <sup>23/</sup> Livestock production is barely holding its own and while meat is underpriced by world standards but with recent price increases it is estimated that even urban workers can afford to eat meat no more than once or twice a month. Under normal conditions cattle herds tend to expand very slowly reflecting the growth characteristics of local breeds and the fact that beef supply seems to be price inelastic. In late 1973 and early 1974 cattle owners were urged to sell off stock rather than risk deaths from drought. This resulted in mildly increased sales coupled with drought losses which actually did occur. The herd count, in our opinion, therefore is down somewhat from the estimated 9.5 million, though we have no way of verifying it.

Compared with food crops, export crops are under tighter control, are on the whole more drought resistant, and have better management, promotion and surer markets than food crops. Nonetheless production has been spotty with tea, tobacco and cashews making the best showing, with cotton lagging. This is interesting because tobacco, cashews and cotton are all smallholder crops. While we are not sure of an explanation we note that cashews are a tree crop that will produce well with minimal management once the trees begin bearing. Tobacco on the other hand requires fairly intensive management but it has had adequate financing through a World Bank loan, a high produce price and is promoted by what is reported to be the best Crop Authority in Tanzania. Moreover, most tobacco is confined to a limited area making for better supervision. Cotton on the other hand spreads over large areas and even when concentrated as in Sukumaland is very poorly managed. These factors require further investigation which may reveal smallholder responses more definitively.

What we see in Tanzania is an example of a developing country where conscious effort is made to carry out production objectives and to expose mistakes and corruption. On the other hand, things get done very slowly or policies are often adopted on ideological grounds without proper investigation of the consequences. One sees a sense of frustration and sometimes dissent. The pronounced bureaucracy is overloaded resulting in pile-ups and sluggish decisions.

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<sup>23/</sup> Since almost everybody, particularly in urban areas, uses large amounts of sugar in tea and coffee it is said to be perhaps the most politically sensitive consumer item in Tanzania.

## 5. Comment on Production Performance

For those acutely concerned about lags in food production there is something troubling about the way and the frequency in which knowledge factors are set out to explain the poor state of agriculture in LDCs. As noted in almost all literature, a good deal of the production problem in Tanzania (and other LDCs) is attributable to not knowing and consequently not carrying out simple and cheap improvements like better plant populations, better spacing and better seed-bed preparation. Whether intended or not this leaves the impression that not much in the way of investment is required to obtain considerable increases in food production; that the food producers (the smallholders) are pretty dumb not to know the right number of seeds to plant nor how far apart to space them; that if they would only carry out these simple improvements production would certainly increase.

Nobody can contest the universal creditability of the low investment agricultural improvements that are commonly recommended. On the other hand this is an over-simplified approach and it fails to take account of the interdependencies among productive factors and the interchange that must exist between farmers and non-farmers if production is to consistently increase. For example, the use of fertilizer without water would in fact be injurious to plants even if they were correctly spaced. Or, we doubt that much would come from a recommended seed count without certified seed, the tools for subsequent clean weeding, without fertilizer or insect control or without non-physical factors like incentives. The sum of the effects of all these factors when in combination is likely to be much more substantial than the sum of all of them applied independently. In countries where capital and expertise are scarce the inability to combine and proportion all of these basic factors is a critical problem. <sup>24/</sup> For when we speak of better cultural practices in agriculture like recommended plant spacing or clean weeding, we also imply a need for control of plant diseases, insects and other pests, and the application of commercial fertilizers and sprays. These latter farming practices represent a higher level of technology (economists might say a different production function) that must be supported by good management and the ability to purchase inputs.

In fact, within traditional farming as practiced in countries like Tanzania, diminishing returns come early in the production process.

24/ See: Max F. Millikan and David Haggood, No Easy Harvest (The Dilemma of Agriculture in Underdeveloped Countries, Little Brown & Co., Boston, Mass. 1967, pp. 16-17.

T. W. Schultz observes that farms in traditional agriculture have been subject to a stagnant state of the arts and to a set of preferences such that they have long since reached a state of stationary equilibrium at a very low level of production. <sup>25/</sup> However, this situation does not reflect inefficiency. Schultz notes that in fact traditional farmers are very efficient at acquiring and using the customary inputs available to them. But these traditional inputs will not increase yields. Investment in more and more of the same crude tools or the same low quality seed is not a profitable proposition. The marginal rate of return on these types of investment inputs is low, so low in fact that there is no incentive to invest even if the funds were available. The high pay-off inputs that hold real promise for increased production must come from outside of traditional agriculture in the form of commercial fertilizers, insecticides, mechanical technology where applicable, genetically superior plant and animal varieties and of equal importance communication and access to a good support system (credit, markets, new knowledge, political and budgetary support). It is improvement in the quality of inputs that is important including improvement in the quality of smallholders as managing farmers. It is rather pointless therefore to talk about the knowledge and resources that food producers lack unless a means can be found to put them in effective contact with government, non-farm firms and agencies engaged in providing these agricultural resources. <sup>26/</sup>

<sup>25/</sup> Theodore W. Schultz, "An Efficient Approach for Modernizing Traditional Agriculture", A Paper, University of Chicago Office of Agricultural Economics Research, 1963.

<sup>26/</sup> Ibid.

### III. CONSTRAINTS TO AGRICULTURAL DEVELOPMENT

#### A. Weather

The constraint to which farmers are most vulnerable is weather. Of course in some parts of Tanzania rainfall is typically less than in others. People adjust to this. Even in the more productive areas of the country rains tend to hop and skip, but there is the general expectation that if crops fail in one corner of a district they would do well in the others. However, missionaries and others who have resided in an area a long time report that the 1973 and 1974 droughts in Tanzania were out of the ordinary in that they covered whole regions.

The general effects of weather are seen in wide swings in production from one year to another. Over the past ten years these sharp changes have made reliable production forecasts almost impossible.

#### B. Trained Manpower

It is important to make a clear distinction between off-farm manpower needed for agricultural development and on-farm manpower. By the former we mean high level Tanzanians in ministries, researchers, teachers and trainers, accountants and managers who man parastatals and cooperatives, and also lower echelon cadre such as diploma and certificate holders who serve as extension and livestock officers. It is for this group that almost all of AID participant training is intended, and they are extremely important to agricultural development since their decisions, successes and policies greatly determine whether we shall have agricultural development or not. On the other hand, we should be equally clear what not to expect from this category of manpower.

The one common element among all off-farm manpower is that they require formal training, and in Africa formal education has been such a scarce commodity and the rewards so outstanding that educated people tend to become an elite class removed from manual labor. Moreover, off-farm manpower cannot directly provide agricultural production increases or sustained physical labor in villages and on farms, though they may prepare an environment where production increases are possible. Reversing the situation, it is somewhat ironical that the on-farm manpower, the small farmer, who is on the

front line of production in the country's largest industry is almost completely overlooked when donors and TanGov allocate budgets for agricultural manpower training. Both groups, the off-farm as well as on-farm manpower, should come within the scope of our training plans.

### 1. Off-Farm Manpower

Every serious study of Tanzania's agriculture has concluded that an overriding constraint to development is formally trained manpower. Agricultural development in Tanzania will be severely hampered unless and until all agricultural institutions, support organs and relevant ministries are adequately manned.

In a 1972 study carried out by AID at the request of the TanGov, it was shown that if TanGov is to meet its minimum agriculture manpower needs for 1980 as set forth in its development plans, 2,848 additional people would require training comprising 226 with degree training, 346 with diploma training and 2,276 with certificate training. On the other hand, if maximum training requirements were reached 10,105 persons would have to be formally trained by the early 1980's.<sup>27/</sup> Many of these people would occupy vacancies in the ministries, parastatals, cooperatives, research stations, training centers and agricultural allied activities.

The negative effects of the quantitative and qualitative manpower shortages are manifested everywhere. Projects and plans are not well prepared, farmers are not effectively reached, agricultural policy issues are not thoroughly analyzed, implementation falters. In short the capacity of the sector to absorb resources is reduced and scarce resources are not used effectively. Expansion of Ministry of Agriculture training institutes, College of Agriculture, and training programs offered by donors will be required for the foreseeable future. They are all critical elements in supplying high level manpower needs.

### 2. On-Farm Manpower

Reference under this sub-head is made to the Tanzania small-farmer as we have described him throughout this paper. The assumption in developed countries is that farmers possess the education and basic know-how to apply new production ideas. All they require is access to the latest research findings, access to capital, incentives and a good

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<sup>27/</sup> Donald R. Yeaman et. al., Agricultural Manpower Development in Tanzania, Ministry of Agriculture, Dar es Salaam, August, 1972.

support system. In Tanzania, on the other hand, not only are these basic requirements weak or non-existent, but the farmers themselves have received little or no training to lift themselves out of traditional farming. Donor agencies have assumed that, as in developed countries, general agricultural extension agents (notwithstanding their dismal record to date) would effectively get the message across and obtain higher production. Many officials in LDCs, on the other hand, assume (without saying so) that little can be done to uplift the indigenous farmers. They depend on plantations for some of their output and invest in farm settlements and other types of state farms as the quickest route to modernization. However, if agriculture is to develop, farmer training must become a functional part of manpower training and the TanGov and donors will have to go further than the vague idea that something will rub off on farmers in their contact with extension personnel. In Tanzania only in those areas where farmers are reached more directly, e.g., through the Tobacco Authority, has there been a very definite return from training. In these cases the people in contact with farmers bring them to training centers and also work with them back in their shambas. How to reach and effectively train farmers who possess little or no education is one of the greatest challenges in Tanzanian agriculture today.

What we are advocating is a two-pronged approach to the manpower problem - each to reinforce the other.

### C. Domestic Financial Resources

The possibility that the supply of domestic financial resources would act as a brake on development has long been recognized. In the Second Five Year Plan it is stated "... more often the bottleneck will be available resources. Ministries are likely to have more projects available than there are resources to implement them." <sup>28/</sup> Since the Plan period is now nearly over it is possible to confirm that in agriculture expenditures have not been at targeted levels. While not all the shortfalls can be attributed to a lack of financing there are numerous examples where the sector was prepared to utilize more resources but they were not available. The severe reductions in the agricultural research budget and the non-funding of several projects including the rice production program mentioned in the PRP for the Tanzania Agriculture Sector Loan are two recent instances.

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<sup>28/</sup> SFYP. op. cit. p. 210

Now, as the TanGov confronts a stagnating agricultural sector and balance of payments problems, with implications for overall growth, shortages of domestic resources are certain to become an even greater problem. The IBRD Agricultural and Rural Development Sector Study calls for a significant expansion in the allocation of resources to the agricultural sector over the TFYP. If necessary, the study suggests that projects in other sectors be postponed or slowed down to allow an annual Ministry of Agriculture development expenditure (excluding other agriculture expenditure) of nearly \$60 million compared to the 1973/74 level of about \$30 million. Given the state of TanGov finances and the already good record of resource mobilization it appears that generating these increases, except at the expense of other programs, will be difficult. The surplus or recurrent account will simply not provide sufficient development funds. Without the funds and the attendant efforts to get agriculture moving again the outlook for Tanzanian development seems most difficult.

In our judgment the seriousness of this constraint will increase in the years ahead and could well prevent the TanGov from reaching its target even if progress on removing other constraints is satisfactory.

#### D. Incentives

This constraint refers to those psychic elements which motivate a farmer to assume new risks, work harder and be more ready to depart from tradition. Profit (rewards) and losses (penalties) and the undertaking of alternative opportunities signify guides for action in market economies. However, in Tanzania (as in most LDCs), a government body rather than the market regulates commodity prices and to complicate input-output relationships, inputs such as fertilizer are heavily subsidized, presently at about 50 percent of their delivered costs. <sup>29/</sup> Net profit therefore must take the subsidy into account. Nonetheless, Tanzania's brand of socialism does make use of price as an incentive factor. Prices to be received by Tanzania's food producers are now significantly above those in Kenya and Zambia. On the other hand, the Tanzanian government believes that the desire to participate in building a strong self-reliant and egalitarian society should be at least as important an incentive to productive economic effort as are prices and subsidies.

29/ The University of Missouri report strongly recommends a much higher (90 percent) subsidy on critical imports so as to encourage use of these commodities. See: M. Blase et. al. Analysis of Tanzania's Food Crop Sub-Sector. op. cit.

Be that as it may we tend to agree with the University of Missouri report (see Appendix), however, and are not convinced that price incentives at this stage of Tanzania's development are a panacea or that prices are more relevant to increasing production than an adequate mix of trained manpower, access to a smoothly functioning support system, or just plain good weather. Tanzania has chosen both prices and subsidies as incentive devices. But if local prices are below world prices because of subsidies (reduced costs) the larger, more alert farmers are likely to benefit most rather than the smallholder. Direct price increases may therefore be the better economic incentive to use whether it is a panacea or not.

In April, 1974, Tanzania raised its producer prices on main foodgrain six percent for rice, 77 percent for wheat, and 42 percent for maize. Recently the Economic Committee of the Cabinet again took price incentives under advisement and even before the effects of the prior increases were tested maize, for example, was raised again 50 percent (and now is more than double 1973 prices), rice 23 percent, wheat 29 percent, cassava 12 percent, beans 16 percent and cotton 75 percent. This means that prices paid to Tanzania's farmers are considerably above Zambia's and Kenya's. Notwithstanding a recent price rise the Kenyan farmer will receive Shs. 20 cents per kg. less for maize than the Tanzanian farmer.

#### E. Lack of Economic and Technical Information (Research)

The considerable ignorance about effects of factors like price incentives on traditional farming is magnified because even rudimentary farm management and other relevant research findings are unavailable. If it is true, for example, that farm labor becomes short at peak seasons and that this constitutes a farm size and income bottleneck, then an animal or appropriate mechanical technology designed to spread available labor over more land may be a pre-condition to any meaningful effect that price incentives may have. We simply need to know more about the economics of small farming if we are to talk intelligently about it.

In a similar manner, reference has been made to lack of technical research. This constraint applies in almost every area of agricultural development in Tanzania and partially explains why the agricultural extension service has been ineffective. The solution to this problem is not necessarily more studies per se but rather effective research, the findings of which have a good chance of being absorbed into small scale farming.

F. Inadequacy of Agricultural Infrastructure and Institutional Systems

Another constraint is the inadequate and poor quality of agricultural infrastructure and institutions servicing the sector. A portion of the inadequacy is due to manpower and management constraints and a portion of the poor performance is due to lack of financial control and general jurisdictional confusion in the system of parastatals and cooperatives. For the latter it seems that the system is organized poorly and some cooperatives are such small size they simply cannot perform as required, while Government and Party continue to add more duties.

To some degree this constraint is a legacy from the colonial period and the dichotomy between export and food crops and estates versus smallholdings. Under the colonial system the extension service was largely regulatory and used orders as their primary compliance tools. The government's focus was almost exclusively on export crops, some of which were produced by cheap local labor on estates by large non-African farmers. Purchased inputs were used almost entirely on export crops and distributed by merchants. Organized marketing channels were also largely concerned with cash/export crops. Similarly, the agricultural research network such as existed was concerned primarily with export crops.

Since independence, demands on the system have been modified and particularly since 1968 the system itself has been rapidly changing. Now the infrastructure and institutional networks are being called on to service thousands of small farmers concerned more with food crops than cash crops, utilizing only small quantities of inputs and marketing miniscule amounts. The situation is made more difficult because while expanding and re-directing services the infrastructure system itself is also undergoing change. Decentralization to the Regions is a declared policy. State parastatals have now assumed more responsibility for various activities. The cooperative movement is being charged with a greater role in agricultural development. These changes are supposed to give the small farmer better access to services within the context of the overall rural structure. However, the infrastructure and institutions are still not able to cope with farmer requirements.

It is reported that the creditability of the extension service with smallholders is particularly low. Part of the system's ineffectiveness stems from the lack of specified extension recommendations (reflecting poor training or limited research), a white collar mentality,

and the failure to make the extension service a component of an integrated support system including agricultural inputs, credit, marketing services, etc. The only aspect of extension functioning fairly well is that directly under the control of Crop Authorities. Nor does the extension service involve in any form, the majority of smallholders. Admittedly, it would be unrealistic, given manpower and financial resources, to expect the system to immediately mount nation-wide campaigns and engage farmer-producers in meaningful programs but this would be a long-run target based on the expansion of well designed and successful smaller efforts. To date the experience gained in successful export cash crop efforts does not appear to have been effectively utilized for food crops.

Transportation for agriculture is a particular problem in certain parts of Tanzania and almost everywhere during the rainy season. As a nation, Tanzania has about 33,400 kilometers of roads, of which 2,600 kilometers are paved, compared to 43,000 kilometers of classified and 125,000 kms. of unclassified roads in smaller Kenya. All-weather roads in Tanzania amount to about 10 percent of the total or 3,400 kilometers. Kenya has about 15,000 kms. of all-weather roads. Thus the farmers in many areas of Tanzania face a situation of inaccessibility due to lack of roads and/or roads which cannot be utilized during parts of the year. The poor condition of many roads also works further against the smallholders in certain areas because transport costs rise dramatically as the standard of the road declines. Also, government policies are thought to be a disadvantage to private truckers and have reduced the availability of transport in rural Tanzania.

While Tanzania has been spending sizeable amounts on road building most has gone for higher standard roads. Additional farm-to-market and feeder roads are an absolute necessity in many areas if modern inputs are to be brought in and produce out. Construction of such roads needs to receive continuing emphasis by both TanGov and donors. Storage likewise will become an increasing problem as more food is produced and handled for market.

#### G. Traditional Agriculture and Cultural System

This constraint has to do with attitudes and the cultural pull which influence people to act and perform as they do. Reference is made to the heritage of traditional farmers which we touched on

in the opening statement of this assessment. Their methods may provide a sense of security within the narrow margins on which people are accustomed to surviving, but opportunities usually cease there.

As with crop farmers the same is true for the livestock sub-sector. For untold generations the herds have been plagued with disease, parasites, drought, poor nutrition, predators, tribal war/theft and the like. The small calf crops mean that the number of animals that reach maturity is little more than adequate to maintain the basic breeding requirements and a subsistence livelihood for the owner's family. A whole herd may have been decimated during drought years. Given this environment it is little wonder that cattle growers may be reluctant to sell.

While we do not wish to over-emphasize the traditional system as a constraint, when tradition and poverty join hands, production potential is seldom realized.

#### H. Inadequacy of Energy and Farm Power

The lack of energy and farm power in most smallholder farming is one of the prime constraints in Tanzanian agriculture. Energy and power generated by human muscle with the aid of hand tools are insufficient for good husbandry. Higher performance of appropriate technology by way of ox teams or, failing this, by some form of combustion power will be necessary to increase acreage per farm and in performing better tillage. Determining the optimum mix of labor and appropriate technology so as to preserve high farm employment is critical to development. <sup>30/</sup>

#### I. Lack of Adequate Farm Management

One of the obvious constraints in smallholder agriculture is good management. Expatriates who operated large estates and plantations are departing, larger African farms are few and smallholders have not customarily related their operations to the world outside the shamba nor to modern management practices. We could go even further to say that lack of African participation in general business during the colonial period also accounts for the very serious management shortages in the institutions and parastatals which service agriculture, and the committees that guide the development of ujamaa villages are without sound management.

<sup>30/</sup> The lack of mechanical skills significantly raises the costs of operating anything mechanically. Even places to get hand tools sharpened or repaired seems to be a problem. This whole void needs careful review in Tanzania.

We are aware of course that management requirements vary between crops and one of the ways to overcome management weaknesses is to emphasize crops requiring little sophisticated management. Tree crops like robusta coffee and cashews produce reasonable well under smallholder care. Tea and cotton on the other hand require better management and these have not done well in peasant hands. One of the challenges for agricultural manpower training is to produce managers for the villages and larger farms and to teach practicing farmers rudimentary management principles.

#### IV. TANZANIA'S APPROACH TO AGRICULTURAL DEVELOPMENT

##### A. General

The broad outline of Tanzania's development strategy is discussed in the DAP Overview. The overall goal of development is the elimination of poverty, ignorance and disease. The Tanzanians reason that the country will be basically rural for a long time to come and since the vast majority of the population lives and works in rural areas this is the place to improve the quality of life. Thus there is a distinct rural bias in Tanzania's development model and the top priority of each Regional planning exercise is to prepare an "Integrated Rural Development Plan".

The prime target group for development in rural Tanzania is clearly the small farmers, i.e., the peasants as indicated in most government literature. They comprise roughly 90 percent of the country's population.

Ideologically the approach to development is based on the country's brand of socialism. Its prime instruments for mobilizing the population and attacking development problems are government and its organs in close coordination with the Party (TANU), whose designated members frequently function as ideologists/overseers as well as implementors of programs. The escape from poverty through increased production and the achievement of social equity are key policy objectives and in Tanzania are posed as being complementary. Reduced to the simplest terms the objective is for all people in Tanzania to be able to obtain food and clothing, medical care and sanitation, functional education and acceptable housing. The Tanzanian leadership tends to measure success in terms of service deliveries rather than private per capita income.

Agricultural development as recorded in the current Second Five Year Plan (now ending) picked up the basic tone of the development model. Increasing output was a matter of paramount importance, but it was to be pursued as part of an effort to improve rural life in general and within a framework of crop priorities based on production possibilities, market prospects and a desire for increased self-reliance and sufficiency. Among the foodgrains, those earmarked for rapid increases were rice and wheat, while maize, sorghum and millet, and beans were crops, "for which a medium growth rate is

required." The means to achieve the projected growth rates were price and tax policies, extension advice and political exhortation, public investment, provision of needed inputs, research and other services, processing, storage, transport and the like. The core of the rural structure was the ujamaa villages which, through several stages of internal development, would become registered farming cooperatives. Beyond the villages a network of service cooperatives and parastatals would connect the village to markets and finance.

In terms of funding the Ministry of Agriculture and its related organizations were designated to receive 23 percent of the development expenditure under the Second Five Year Plan. <sup>31/</sup> This figure was exceeded only by the allocation to the Ministry of Communications and Works with 33 percent. The Plan reveals however, that cash crops were given considerably more attention than food crops.

#### B. The Third Five Year Plan

Since the Third Five Year Plan will not be issued until mid-1975 its guidance is not available. Meanwhile requests have gone out to a number of donor nations and organizations to assist particular Regions with the formation of their development plans. This is in recognition of the fact that local planning has been delegated to the Regions. In addition the IBRD is being requested to assist the Prime Minister's Office to assimilate, evaluate and coordinate the twenty regional plans before submitting them to the National Planning Commission. Strategy thrusts and the exact selection of priorities within agriculture are unknown to us since the planning activity is still in process, but some known requirements emerge from the very nature of existing problems and bits and pieces of government thinking are beginning to be made available to the public.

Certainly in view of the current food crisis the Third Plan can be expected to place higher priority on food production. Preliminary indicators show this to be so and the recommended aim is self-sufficiency in basic goods by 1980. Food tonnages to be produced annually during the Plan period are: 300,000 metric tons (MT) of rice; 1,300,000 to 1,500,000 (MT) of maize; 420,000 (MT) of millet and sorghum; 120,000 (MT) of wheat and between 220,000-

<sup>31/</sup> It should be noted that this targeted percentage has never been achieved. Actual allocations have been around 10 percent.

250,000 (MT) of sugar. This planned average would mean about a 75 percent increase in food production over the better years of the 1960s for example. There are indications that food producer prices will be watched closely and will be announced in advance. It is also being recommended that a Corporation or Authority be established to deal solely with food crops as is now commonly found with cash export crops.

It will be of genuine interest to see what kinds of production effort the TanGov intends to organize to implement its emphasis on food production. There are some indications that preliminary plans already are being developed to highlight maize production by progressively concentrating on fixed area units (10,000 to 15,000 farmers each) and to organize production campaigns beginning during the 1975 growing season. However, further development of these plans must be awaited.

Because export crops are the prime earners of foreign exchange, it is expected that ongoing programs will be expanded as resources are available. Cotton, tobacco, and oilseeds will probably receive first claim on available resources while current efforts in coffee, tea, sisal and cashews also may be enlarged if resources can be mustered. Lesser crops like soybeans and groundnuts may be expanded particularly if a donor would offer support.

In the livestock area there appears to be considerable opportunities to increase production for both domestic consumption and export. Certainly the TanGov will want to maintain the momentum provided by the IDA Phase II Loan and AID inputs. Poultry production may also be expanded.

In all areas of agriculture it appears likely that production under the Third Five Year Plan will receive greater emphasis than it did under the Second. Social and income equity will not be de-emphasized (at least not publically) but more attention will be on expanding the supply of goods and services available for domestic consumption as well as export.

Undoubtedly, significantly more resources will have to be allocated to the agricultural sector. Greater production emphasis cannot escape the effects of inflation which is looming as one of the most critical problems that TanGov has to face. The shift of responsibilities to the regions could mean better administration of the Plan's implementation. We expect also that dependence on parastatals and government institutions will continue and that these organizations will be supported to the fullest extent given the availability of funds.

### C. Issues and Indicators in Agricultural Development

Without any doubt problems facing agricultural planners on the eve of Tanzania's Third Five Year Plan differ greatly from those associated with the Second Plan. Worldwide inflation and the oil and current food crises are sufficient in themselves to put a new urgency into both planning and execution of Tanzania's agricultural programs. It is the basis of such urgency that food production has become top priority.

There are of course attendant aspects of Tanzania's agricultural development program in which we also have an intense interest. Reference is made to decisions that are still pending or need to be clarified, or to elements of development where time has been insufficient to render a verdict. Some of these which could affect our own program are set out for discussion.

An important decision still to be determined, for example, is what the farm units in Tanzania are finally to look like. We presume that villagization will continue as a Tanzanian objective. But farm units conceivable could range all the way from block farms of contiguous family operated plots as is now practiced in some Ngonia villages, to kibbutz type communal units as is found in Israel, or a combination of communal farms and family operated plots as is found in other ujamaa villages in Tanzania. The decision in this regard will determine farm size and type and consequently the appropriateness of mechanical equipment and relevant operational and managerial decisions. The importance of such a decision is easy to comprehend.

Another decision of importance to agricultural development is clarification about the pace and the conditions under which new villages are to be formed. Until 1974 the forming of villages had, for the most part, been voluntary and gradual. Up to January, 1974 only 18 percent of the farmers were in ujamaa villages, and many of these simply stayed in the villages they always had lived in and who came to be called "ujamaa villagers" upon their agreement to abide by the development rules. During mid-1974 however, villagization was vigorously accelerated by TANU and with some degree of coercion. Massive movements of rural people cannot help but be disruptive. A majority of the new villages had not been made ready to receive the new people and lack of transport and communications rule out the provision of services that were promised. Such actions could destroy the self-reliance so frequently talked about by TanGov. More important in the short-run such inopportune movement of farmers could delay plantings (and consequently production) that must coincide with the next rainy season.

An illustrative example of where time has been insufficient for a definitive conclusion to be reached, is the status of women in Tanzania's rural development. The President himself has taken particular note of the inequality of women in Tanzania. He says:

"It is true that women in traditional society were regarded as having a place in the community which was not only different, but was also to some extent inferior. It is impossible to deny that the women did, and still do, more than their fair share of the work in the field and in the home. By virtue of their sex they suffered from inequalities which had nothing to do with their contribution to the family welfare....." 32/

The relative position of Tanzania's women is no reflection of an official bar to opportunity because of their sex. In fact, some women have attained considerable status. All over the country more girls are in school than ever before and more and more women are attending college and finding employment as officers at ministries and parastatals. A few women are also in the professions. The United Women of Tanzania (U.W.T.), perhaps the largest formal body, has government and TANU support. Notwithstanding these marginal gains for women, customary inequality between the sexes continues to exist and since 93 percent of Tanzania's population is in rural areas, women's inequality is mainly confined there. This exacerbates the problem because it is harder to reach.

But even in rural areas some change is taking place. Women, as a matter of course, are included in farmer training courses organized by government and in literacy classes sponsored by TANU. It is fairly clear, however, that until the poverty of traditional farming is broken only limited progress can be expected for women as a special group.

As a summary comment on Tanzania's approach to agricultural development, it can be said that the country has entered into a most difficult period. While mistakes have been made and will continue to be made there are nonetheless encouraging signs on

32/ Julius K. Nyerere, op. cit. p. 101

which significant agricultural development can be built. For example, cashews and tobacco output is doing well and Tanzania's export crops are the most highly diversified found in Africa. Services including health facilities and new schools are increasing throughout rural Tanzania as are facilities for better drinking water. In recent weeks we have had cause to study the distribution of drought related relief supplies. While there were problems and frustrations, the food was reaching its destinations and serving its purpose without, so far as we could tell, graft and corruption. The decentralization of development planning (and much execution) to the Regions, districts and villages is TanGov's way of reaching the rural poor and should be applauded. The recent importance given price incentives as encouragement to production is also reassuring. There is an attempt to involve the general rural population. This "high participation" is certainly in the right direction. So in spite of an array of most difficult problems and pending decisions, one can be encouraged by Tanzania's agricultural potential and the valuable contribution that a conscientious donor can make to it.

## V. FOREIGN ASSISTANCE IN TANZANIA

### A. General

Notwithstanding emphasis on self-reliance, TanGov is very receptive to foreign assistance. Each year the United Nations Development Program lists the donors and the kinds of assistance being provided Tanzania. The list breaks down into Economic Assistance, Capital Assistance and Volunteers. Under economic assistance the range is from agriculture, fisheries and forestry to transport and communications and includes education and training, economic and social planning, health, industry, international trade, labor, management and employment, science and technology, social services and a few other odds and ends. <sup>33/</sup>

The volume of technical and capital assistance to Tanzania has risen in recent years. In 1971/72 outside development expenditure accounted for 47.6 percent of total development expenditure while in 1973/74 the proportion from foreign sources accounted for 60 percent and stood at \$115 million (excluding the TanZam Railroad) of which \$65 million were loans and \$50 million were grants. Meanwhile the further softening of terms also has been significant. As early as 1971/72 Norway turned solely to grant assistance and by 1974 Sweden, the largest single country donor to Tanzania at more than \$30 million per annum, also had shifted entirely to grants. Most of the World Bank loans are IDA type.

Under foreign technical assistance agriculture/forestry and fisheries account for the largest slice at 27 percent followed by education at 13 percent. <sup>34/</sup> Areas under technical assistance for agriculture are: training, planning, crop development (wheat/

<sup>33/</sup> UNDP (Dar es Salaam) Publication, Development Assistance to Tanzania, as of December 31, 1973.

<sup>34/</sup> Countries and organizations providing assistance in agriculture to Tanzania are: Australia, Bulgaria, Canada, China, Denmark, East Germany, Finland, Ford Foundation, Hungary, IBRD, India, Italy, Japan, Netherlands, Nordic Countries, Norway, Sweden, U.K., UNDP/FAO, UNDP/ILO, USA, USSR, West Germany and Yugoslavia.

cashews/tobacco; livestock and pasture), dairying, veterinary medicine, forestry, fisheries, cooperative development, wild-life development, agricultural engineering, grain storage, cold storage, livestock development, agricultural research, seed multiplication, agricultural economics, credit, marketing, horticulture, and census taking. Capital assistance in agriculture includes specialty loans (for cashews, tobacco, tea, cotton, livestock and regional development) from IBRD, and loans or grants from Nordic countries and aid to the Tanzania Rural Development Bank (TRDB) for on-lending to farmers.

Several facts should be noted about agricultural assistance in Tanzania. For example, nearly all foreign technicians including our own, have mainly been posted in the Ministry of Agriculture, in one of the parastatals servicing agriculture, or in association with a government facility such as a training center or research station. Foreigners have had little or no association with Tanzania's farmers or grassroots and village level production. Concentration of foreign resources at the institutional level probably reflects the difficulty of assisting smallholder agriculture until a basic infrastructure, adequately manned, is well on the way to being established. In any case, bringing foreign expertise into food crop production is becoming an urgent need and is currently being addressed by planning bodies. Second, on quite a different matter it seems that the general neglect of women in agricultural development is just as noticeable among donors as it is with the Tanzanians themselves. AID and other donors could benefit women most at this time through training in and outside Tanzania. Women, of course, will be the trainees under our Maternal and Child Health project, and it is hoped that they will figure prominently among trainees in our Agriculture Manpower and Farmer Training and Production projects.

Critical gaps are found in Tanzania's agricultural development which foreign assistance has not yet filled. Referring back to constraints listed in Section III of this paper we find that only minimal attention is being paid to weather and ecological factors notwithstanding areas of heavy and increasing soil erosion and increasing loss of soil fertility and carrying capacity because of overcropping or overgrazing. Natural resource deterioration and increasing ecological fragility will continue in the absence of drought planning and a long-term plan for the conservation of natural resources. With regard to agricultural manpower, practically all donors to agricultural development take manpower training into account, nonetheless the general training effort is insufficient to meet the growing need for manpower. Certain areas of manpower training have been almost totally neglected. Hardly any technical

training has been designed for farmers themselves. Curiously their participation in development has been neglected. Practical training for mechanics and even drivers falls far short of needs, and in support skills like financial control and management there seems to be a chronic shortage of accountants and auditors. More important, courses in management training for Directors and other high ranking employees of the agricultural parastatals and co-operatives are not currently available. Management performance is correspondingly inadequate to the country's requirements. As for other constraints, only the Canadians, Nordic countries and the U.S. are assisting in food research, and the scale of need in this field far exceeds the resources currently being made available. Food crops research will definitely require expansion to include studies in production economics, marketing of food crops, and production expansion of critical crops like vegetable oils. Foreign assistance is heavier in livestock than it is in food crops. Finally assistance in the design and construction of rural roads and transport and farm engineering and power requirements are all critically needed.

Before moving on it should be noted that TanGov's resources are allocated to all the constraints that we have listed and more. In many areas of agricultural development the concomitant support required from foreign sources is minor, while in others it is substantial indeed.

## B. USAID's Approaches

### 1. Present Strategy

From 1961 to the present the AID strategy in agriculture, along with that of other donors, has been largely one of helping develop human and physical infrastructure and institutions, i.e. "production preparatory or institutional development" stance. Given the situation at independence, and the continuing deficiencies in the Tanzanian economy in precisely the institutional/manpower areas where AID has been and is involved, such a strategy seems to have been soundly conceived and appropriate. Furthermore it reflected TanGov concerns and priorities. As a result, the AID-supported projects are being well funded by the Tanzanian Government in spite of overall tight budget restrictions. These projects are:

- Agricultural Credit (to small food producers)
- Agricultural Manpower Training
- Agricultural Marketing
- Agricultural Research (food crops)
- Farmer Production and Training

Livestock Marketing  
Masai Range Development  
Seed Multiplication  
Maternal and Child Health  
Tsetse Fly Research (centrally funded by TAB)  
Tsetse Fly Clearance (under loan)

This strategy has involved no major confrontations with Tanzanian policies because, nearly without exception, the projects supported have been policy neutral. With the benefit of a historical perspective, a judgment is that such a "production preparatory strategy" was probably the best approach for this period given the available AID resources, and U.S.-Tanzanian political relationships.

## 2. Strategy Options

The question is whether this posture is the one to continue. In many respects the preparatory or institutional development strategy remains valid. The continuing weaknesses of the research network have been cited as an example. AID's Agricultural Research project faces this problem head-on and promises a substantial impact. The livestock industry is not carrying a share of agricultural development in proportion to the natural resources base it feeds upon for a number of reasons. The Masai Range Development project is experimenting with solutions to some of the cattle control problems, while the Livestock Marketing project is to help establish a network which will facilitate a larger cattle offtake. This work is far from completed. The Tsetse Clearance project and the Tsetse Research project are addressing in different manners the serious constraint imposed by the tsetse fly on development and utilization of large areas and of course should go on. The Manpower Development effort aims at partially relieving the critical manpower constraint which is a theme of every project and development activity, while helping make the extension service more relevant. Similarly the assistance (in Agricultural Marketing) to the National Milling Corporation recognizes the marketing problem. The financial and technical assistance to the Tanzania Rural Development Bank acknowledges that agricultural credit is a requisite to the transformation of traditional agriculture. Improved seeds via the network being established under the Seed Multiplication project are of vital importance to any production oriented effort.

In fact all of AID's present projects are clearly addressing development bottlenecks recognized by the TanGov as important. Moreover AID's program accomodates rather than conflicts with the assistance from other donors. Some of the projects are just getting underway. Thus the next few years could be a period when expansion or fine-tuning of existing projects and continuation with institutional development would be the most valid strategy. Perhaps this could be supplemented by new infrastructure efforts in areas such as cooperative development, high level management training, cooperative training, and by adding imaginative training options under our Agricultural Manpower project.

Alternatively AID could embark on an accelerated food production program. Low production is the current problem and U.S. agriculture is well known for its ability to produce. Logically AID assistance by way of technical expertise and capital combined with Tanzanian administration, land and labor could result in successful production efforts, diminish the food import requirement and perhaps increase exports and have positive effect on nutrition. This production emphasis could be accomplished by dropping several current projects and re-orientating other projects to the maximum extent possible toward production. The production program could be launched by selecting an area or crops for concentration, or through some combination of these.

The idea of a production-directed program has appeal. We need hardly repeat that Tanzania is both an RLDC and MSA country. Production emphasis is completely consistent with AID's guidelines and is representative of Secretary Kissinger's April 15, 1974 address before the World Food Conference in Rome where he pledged U.S. priority efforts to helping developing nations substantially raise their agricultural production. If significant increases in food production could be accomplished through small Tanzanian farmers the equity concerns of the TanGov, and AID's concern for the targeted rural poor also would be met. Moreover, in general terms at least, program output would be measurable.

However, any sudden re-orientation of the AID program to production would have to recognize the constraints (as mentioned in Section III) and more specifically the uncertainties. A sudden shift to production at the total expense of continuing institutional development would require more and in some cases different sorts of resources to those which we have on-board. Tanzanian infrastructure is still weak and without large scale additional help from outside, would not be able to

provide the reliable support that such a production campaign would require. Agricultural research results for food crops are just beginning to come forward and little has yet been designed for effective transmittal to small farmers. The U.S. ability to work with thousands of Tanzanian participating producers would have to be tested. Input deliveries and marketing of food crops are still very weak links in the production chain. There still is uncertainty about the effects of production incentives. All of these factors would have to be considered.

For these and other reasons it appears that for AID, a deliberate shift toward production emphasis rather than a sudden plunge would be more suitable as a strategy base. What we require is a posture that will permit us to experiment with certain technological and economic factors, and to test possible replicable ideas while not abandoning prematurely our current efforts to build infrastructure. The strategy that AID adopts would have to key with and be timed in accordance with TanGov's and other donor's efforts in the area of food production. We have chosen to call the strategy we have in mind a "Transitional Production Strategy". It implies building an implementational bridge between the infrastructure that we and others have created, and the actual production unit in which we should be getting more involved. Already there are certain AID-supported projects or project elements which fit this categorization. The Seed Multiplication project is only a step or two removed from actual production. The Masai Range Development project has production elements, and the Agricultural Research project is beginning a village outreach activity with cooperation from agricultural extension personnel, to see if a viable method for reaching and involving small farmers can be developed.

### C. Strategy Application

#### 1. The Interim Period

No doubt should be left about the implications of the transitional production strategy as we conceive it, nor of the program which this DAP is proposing. Considering the severity of Tanzania's problems and needs, only the transfer of substantial resources will register an impact. Our strategy implies therefore a significantly expanded agricultural program in Tanzania. Secondly, while AID's total program in Tanzania has been modest (being smaller than that of the IBRD and six other bilateral donors), the U.S. is nonetheless more heavily concentrated in production and marketing of foodcrops than any other donor, and our participation in livestock is exceeded only by IBRD. From this vantage point our expertise can be strategic to Tanzanian agricultural development and we are in a good position to offer valuable guidance and assistance in the food field.

Fortunately the issuance of the DAP will coincide with the Third Five Year Development Plan, and like TanGov, our strategy as proposed covers a five year span. The most critical resource constraints in Tanzania at the moment are foreign exchange and local currency shortages and the most urgent actions are related to riding out current food shortages and avoiding famine in the country. The IBRD gives the 1975 BOP deficit to be on the order of \$150 million. Notwithstanding the critical foreign exchange and local currency constraints TanGov wishes to, and is indeed obliged to move forward with an interim food production campaign beginning in CY 75. This indicates the dimensions of TanGov requirements as it works toward its Third Five Year Development Plan to be issued July 1, 1975.

In view of these requirements AID will try to accommodate them to the extent possible while awaiting the new Plan. The remainder of FY 75 will therefore be spent rounding out ongoing technical assistance projects. There will be a slight expansion of our direct hire technical support staff and all approved contract projects should be fully staffed by the end of the fiscal year. In addition food aid and R&R assistance will be implemented. Perhaps most important is a \$10 million agricultural sector loan now in the process of formulation. Beginning in FY 76 AID's attention will turn increasingly to the transition from sole attention to institutional and infrastructure support to the strengthening of links between the infrastructure and production problems, but it will be mid-FY 76 before the new program elements can be finalized. Nonetheless, a conceptualization and implications of our strategy can be advanced.

As program options were discussed above, we cannot rationally abandon our present program in crops or livestock. Rather it is necessary to continue (and in some areas to intensify activities) so as to forge links between the infrastructure and the expanded production that TanGov and we seek. Continuing support to our ongoing program recognizes that some of our projects are just getting started and should be permitted to make their contribution to the body of infrastructure being developed. Equally important we note that in the production process there are one or two critical infrastructure gaps still to be filled.

One such gap touched upon throughout this paper is training in management, both general and financial, as it applies to agricultural parastatals. As noted in our discussions under production constraints, parastatals are the business and service arms of agriculture and with farmers themselves are responsible for its success. In this regard poor management and weak financial controls (e.g. lack of effective audits) continue as a critical bottleneck which tends to strangle other activities. We therefore are exploring avenues leading either to a special training project (to pick up key, but perhaps non-project related training) or alternatively a linkage of specialized training with our Agricultural Manpower project. The exact approach in this regard will await results of a survey of management training being carried out by TanGov. This survey expected to be completed in early FY 76 will determine management training requirements and general approaches. Its goal is to achieve self-sufficiency in management manpower by 1985. TanGov recognizes U.S. leadership in management and has expressed great satisfaction with the limited number of high caliber personnel who were fortunate enough to receive U.S. management training in the past. To determine training priorities, consultants, hopefully with East African experience may have to be sought.

Besides strengthening infrastructure it is clear that in TanGov's Third Five Year Development Plan food production is to have high priority. Therefore critical questions about linking the infrastructure to production will require rather urgent attention. For example, will the extension service (which in the past has been relatively ineffective) continue to function along its present lines and methods? Can production outreach programs directly from food research stations be made effective as an extension tool? AID's agricultural research program with an assist from the extension service is experimenting in this regard. Has training for farmers been thought through sufficiently and does training of middle level agriculture manpower receive the imagination it requires in view of Tanzania's present agricultural problems? Who is to undertake basic economic research of small farms or village production units? Technicians with considerable experience in Tanzania's food production insist that the organization of food crop buying is haphazard and is a major bottleneck which tends to nullify price incentives. How significant is this allegation? Are there remaining bottlenecks in the seed certification program and if so are they being removed? To what extent and under what conditions will Tanzanian farmers become full participants in the agricultural development process? Answers to questions like these are required. Thus the forging of linkages between the infrastructure and production is one pillar on which our transitional production strategy is based.

The other pillar of our strategy is to add on to our present program structure a major new project in food crop production. It will be proposed for FY 77 and will require a substantial contribution of technical assistance, and of greater importance, a significantly expanded input of capital assistance which should be looked at in terms of a process of successive tranches of capital inputs through the entire DAP period.

## 2. The Longer Term DAP Period

Reference to the IBRD and the University of Missouri agricultural sector studies (see Appendix) will indicate the scale of operations being proposed for food production. If TanGov organizes its food production program along the lines suggested, maize production efforts alone could require \$10 million of foreign capital assistance per year and increases in the programs for all main food crops (grain and legumes) could require in excess of \$100 million capital assistance during the Third Plan.

To bring our proposed program into sharper perspective it is anticipated that negotiations on the FY 75 agricultural sector loan will have been completed in January 75 and that funds will be ready for disbursement by May FY 75. In late FY 75 therefore serious discussions should begin on the second tranche of the agricultural sector loan also anticipated to be \$10 million. The primary difference between the first and second tranches is that of anticipated disbursement time. The first tranche will be clearly earmarked for most rapid disbursement to purchase local currency and fill gaps in association with an interim (1975) food production program which is currently being planned. The second tranche, on the other hand, will fit into a regular project design to support a thought-out food production campaign as part of the Third Plan. Its rate of disbursement could be somewhat slower than the first. The capital assistance program as envisaged will require a continuation of production support in FY 77 with a third tranche of agricultural sector lending on the order of \$15 million. We anticipate that this will be followed by further inputs in FY 78-79. Events toward the end of the Third Plan would determine the exact capital requirement.

From each sector loan funds will be committed for strategic inputs and other project support costs including technician houses if project elements of this kind become limiting factors to overall success of the program. Moreover, as Tanzania's Third Plan (and the DAP) run its course, funds from the agricultural sector loans could also be applied to rural roads and other related bottlenecks to rural development.

Thus as we look forward toward 1980 it is probable that TanGov assisted by IBRD and other donors like ourselves will have established a Food Crops Authority similar to the Livestock Development Authority in which AID is already deeply engaged. With such an Authority looking after the welfare of food crops it could be expected that production, pricing, training, handling and marketing of food will be receiving more attention than has ever been true in the past. Meat and livestock products probably will continue to be beyond the income reach of most Tanzanians. This suggests that increased emphasis should be put on small animals like chickens and goats to complement the present emphasis on beef (cattle) which currently is receiving all of AID's technical assistance to livestock. More diversification of livestock would not only augment food supplies but would be significant to improving nutrition. USAID therefore proposes to leave the option open for initiating a small animal project in FY 78. Over the DAP period, and certainly by FY 80, our development stance will have shifted to support of projects which in turn serve as inputs or support to food production. Small irrigation facilities, village stores, rural roads, input deliveries and storage, food crop marketing, and perhaps poultry production at the village level are the kind of activities we have in mind. In addition we envisage an expansion of our food production project, either by going into new regions or sub-regions, or in support of additional food crops. This build-up in production coordinated with sector loans will bring small farmers and livestock producers in closer touch with us, and the application of new projects will coincide with the phaseout of certain of our present activities.

In a longer term context (it could start in FY 77) it is expected that satellite photography and on-ground studies may have involved us in ecological programs dealing with natural resource capabilities and the consequences of population pressure on Tanzanian agricultural resources. This would be a follow-on to indications that these resources are becoming increasingly fragile. Thus there are a number of sub-sector options open to us which will be explored in the next year.

Finally, the correctness of a transitional production strategy and success of the program being proposed will depend most heavily on cooperation and the complementarity of viewpoints, and the coordination of action among the several participants in Tanzania's agricultural development. TanGov itself will, of course, have to set the pace and give overall guidance to its own development programs. We have pointed out that project support received so far from TanGov has been excellent.

It is realized however that the government is presently handicapped by severe foreign exchange and budgetary constraints. Donors must take these problems into account.

A related problem is the role that donors can play in Tanzania's development in terms of influence. There is always a possibility and indeed the temptation to try to influence policies and decisions in view of contributions being made. While Tanzanians are open to suggestions and are decidedly pragmatic on many issues, they have their own model for development and it is a considered judgment that even large donors would get nowhere with roughshod approaches to influencing actions contrary to TanGov's program. Success in this regard of a medium-size donor like ourselves would be even more remote, thus any approach other than establishing a dialogue based on mutual interests and respect would, in our opinion, prove to be counter-productive.

Our relationships with other donors are good, with frequent exchanges of ideas; though admittedly there is insufficient coordination of donor agricultural programs. USAID itself is capable of carrying out the kind of program outlined in this DAP. It is realized, however, that fullest support from the country team and from AID/W is required and that only personnel of the highest quality and dedication can meet the requirements which our program indicates. Lastly, we cannot emphasize too strongly that the FY 73 Foreign Assistance Act and ideas on development by our highest U.S. officials as translated into field terms--into DAP terms--will require an increasing allocation of AID resources to Tanzania. But more important we will require AID/W confidence and a consistency of support. One critical aspect of this DAP exercise to us is, hopefully, to get a firm policy commitment on a level of resources input to Tanzania. While we realize the implications of annual budgeting, unless support consistency can be forthcoming from AID we would question the value of beginning a serious dialogue which implies an expanding program with the Tanzanian Government. Given these considerations we feel confident that we can make a major contribution to agricultural development.

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## APPENDIX I

### A REVIEW OF AGRICULTURAL SECTOR MATERIALS

- I. Bengt Nekby et. al. Tanzania Agriculture and Rural Development Sector Study, (yellow copy), East Africa Projects Department of IBRD, Washington, D.C. June 1, 1974 <sup>1/</sup>

This report, compiled from a field study in 1973, focuses mainly on smallholder farming in Tanzania with particular attention to food production, cash crops, and livestock.

#### Nature of the Problem

The report notes that the average per capita income in Tanzania is less than \$100 per annum while 93 percent of the population lives in rural areas. The average household income of farmers is only a fraction that of urban households. During the period now under study (1968-72) agricultural production at a 2.4 percent increase did not keep pace with population growth of 2.7 percent, and mainly because of drought has further declined since 1972. This decline which triggered large food imports together with the high cost of oil has had a serious impact on the economy. Tanzania thus continues to face widespread rural poverty as well as serious agricultural production problems.

This rather bleak situation arises despite the fact that more land is available for production and at current low yields, potential increases in productivity per acre are considerable. The challenge then, according to the Bank, is to measure up more nearly to the production potential (both increased acreage and increased yields) for cash crops, food crops and livestock with special attention on cotton, maize, and beef. While the Bank's program would shift short-term emphasis from what it calls social and egalitarian goals to production goals it still would be targeted to uplift the mass of the rural poor.

#### Constraints

The study does not provide a specific listing of constraints to smallholder production, rather it makes critical reviews of ongoing government policies, programs and activities and recommends changes. From this approach it can be deduced that major constraints proposed by the Bank are:

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<sup>1/</sup> Only the yellow cover report is on hand. We presume that the green and grey (final) reports will not be essentially different since no more field visits are being conducted.

- a. Defects in current price policy which: curtail production incentives, do not bring adjustments in light of export price parities and lack uniformity given transport costs. Moreover, administered prices are decided arbitrarily without sufficient analysis.
- b. Disincentives growing from changes in the rural sector to ujamaazation. Villagization emphasis is excessive and should be slowed down. Too rapid villagization increases dependence on government rather than creating self-reliance, and is disrupting production and penalizing the better farmers.
- c. Slow and faulty manpower development as shown by vacancies and poor quality staff.
- d. Shortages and poor performance by institutions and infrastructure. These deficiencies are seen in administration, marketing, management and weaknesses in credit, transport, input distribution, and co-operatives; and poor coordination between research, extension services, cooperatives and parastatals.
- e. Poor resource allocation between cash crops and food crops, and between production and social services.

#### Strategy for Agricultural Development

The strategy recommended by the initial June 1974 Bank report has been modified slightly by material as of September, 1974. Taken together the Bank proposes that the Government of Tanzania (presumably with donor support) implement strong agricultural production programs in sequences. The first step called the extensive phase, recommended to commence in 1976, would enhance ongoing agricultural activities by market improvement, sponsor major input distribution (especially fertilizers) and test and demonstrate new techniques. Two core activities would be initiated under the Agricultural Support Program. They are (1) a National Maize Project, and (2) National Agricultural Development Project (NADP). The maize project would be designed to reap rapid benefits within five years at a capital cost of about \$21,500,000, while the later project would attempt to improve general farming (food, cash crops and livestock) over a twenty year period. Districts as currently laid out would be too large to manage so the Bank proposes that units of 10,000 families become the development units under the program. It is estimated that by progressively adding 10,000 family units national coverage could be reached in 10 years.

The extensive phase would blend into a second step of the program, the intensive phase. The idea in this phase is to improve the entire agricultural base by supplementing present services, applying innovations and introducing new techniques and rapidly promoting the integration of crop and animal production. Rotational practices, ox cultivation and soil conservation measures would have been routinized as part of the intensive program. New areas would be opened up for settlement and over 20-25 years extensive agriculture would be supplanted. This would lead to a third phase (comprehensive) where increased inputs and improved managerial capacity would be continued and priority development goals could again return to the provision of social services as well as production. The implication is not that Tanzania would have to wait 20-25 years for development to begin. Rather by that time it could be well on the way to achieving its agricultural development objectives.

Recommendations:

1. General

- a. Announce price policy changes that will increase domestic prices to encourage production, keep local production atuned to export parity prices, and compensate for increasing transport costs. (Note that this recommendation was carried out October 31, 1974).
- b. Modify government policy on rural structure (ujamaa village formation) to a more gradual pace and encourage "good" farmers within the villages.
- c. Improve agricultural institutions toward better coordination between and among parastatals, regional and district bodies, cooperatives and other structures.
- d. Review allocation of available resources making sure that agriculture gets a fair share, and assist regions and districts to implement programs. Shift emphasis from social services to productive programs.

2. Crop Production

- a. Provide land use planning, research, extension and inputs for a strong crop development campaign.
- b. Encourage large-scale crop production as well as assistance to smallholders.

3. Livestock Production

- a. Expand veterinary services.
- b. Provide stock routes and other marketing facilities.
- c. Upgrade local dairy stock and dairying.
- d. Promote egg and broiler production in villages.
- e. Work on quality control and standardize feed mixtures.

4. Manpower Development

- a. Expand training facilities, give clear job descriptions, allow delegation of authority, promote staff development and fill vacancies promptly with competent people.
  - b. Hold on to non-citizens in the Ministry of Agriculture if they are required.
5. Rural small-scale industries should be encouraged.
6. Studies designed to provide information for policy decisions, and general research studies are essential.

Scale of Operation

In oral discussions IBRD officials indicated that their program as recommended would require about 170 expatriate technicians. Expenditure would be reflected in the Third Five Year Plan with total expenditure of TShs. 2,588/- million for an average of TShs. 515/- million per year. This is almost five times the average Second Plan rate of expenditure.

Comments

In emphasizing the development of smallholder agriculture in Tanzania, the report also targets the rural poor. The constraints are acutely relevant to the agricultural problems here, and in addition to food crops and livestock the study recognizes, and rightly so, that Tanzania is heavily dependent upon agriculture for foreign exchange earnings and recommends increase of export crops. The gradual approach from extensive to intensive to comprehensive production correctly reflects resource limitations. We especially would endorse a national maize project as having very high priority.

In fact an overall agricultural program of the scale implied would be necessary to put Tanzania on a firm road to agricultural development, nor does the 20-25 years time frame appear to us to be excessive. In response to a large scale program as suggested by the study, the very problematic position of TanGov in foreign exchange and local costs constraints should of course enter into donor assistance plans. The implication is that a larger proportion of project support costs may have to be borne by donors, at least in the short-run.

II. Melvin Blase, et. al. The Tanzanian Food Problem, A Study  
Prepared by the College of Agriculture,  
University of Missouri, Columbia,  
Missouri, U.S.A. October 1974

### The Problem

This study consisting of ten chapters, a statistical appendix, and recommended projects, received contributions from eight university professors. It defines Tanzania's "number one problem" as its inability to provide its people adequate food. With this kind of problem the country has three options: (1) increase food production and improve marketing, (2) increase imports and (3) decrease population. Option one is the only practical alternative.

The principle foods dealt with in the study are maize, rice, wheat, sorghum and millet, and oilseeds (primarily soyabeans). As seen by the report, Tanzania's core objective should be to improve human nutrition and it is the difference between the actual and the desired nutritional levels on which the study makes its case. Presumably nutrition can be improved with food grain crops which will require a production growth rate of 5.5 percent between now and 1980 in order for the present human nutrition level to be maintained and begin to "close the nutrition gap."

### The Agricultural Resource Base

The report looks at such natural resources as land, moisture and soil; physical inputs like fertilizer, seed, farm equipment, transportation and markets; human inputs such as manpower and management, and motivations and price incentives. It concludes:

"Since Tanzania has the natural resource base which permits expansion in the cultivated land area and increases in per acre yields, growth in production is constrained by lack of other crucial resources especially trained

manpower. Without this resource, the country is inevitably "locked into" traditional, primitive technology in the production of food crops. Until that technological bottleneck is broken a shortage of human energy will constrain the growth of the traditional hoe economy.

New technology requires technically trained manpower. When implemented, such technology allows the use of other sources of energy, which in turn, makes human energy more productive. In short the key to initially unlocking this syndrome of difficulties lies in trained manpower."<sup>2/</sup>

As for marketing, organization and lack of transport facilities loom as a major bottleneck. The study identified the critical importance of price policies but noted that major price increases in foodgrains were announced in April 1974, and presumably is willing to test the impact of these increases on production before strongly recommending additional ones.<sup>3/</sup>

#### Constraints

The study notes that a country can take two routes to increased farm production. It can increase acreage assuming the land base will permit it, or it can increase yields per acre (or both). In Tanzania at key periods of the cropping season there is a labor shortage which in turn limits the ability to expand acreage, given present mechanical technology. Yield increases are therefore advocated in the short-run. But constraints to yield increases are many. The cultural heritage of the smallholder confers economic and psychic constraints on him. He is faced with production constraints having to do with lack of inputs, technology, information and ineffective knowledge, adaptive research, capital, credit, and others. Marketing constraints are seen in poor marketing organization especially weak cooperatives, low prices of the past, lack of good management, lack of transport. And finally there are manpower constraints. The study then breaks constraints down into long-term and short-term, depending on whether action to alleviate them are likely to have significant results before or after 1980. The short-term and long-term constraints are categorized as:

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<sup>2/</sup> Ibid. p. 15 Chapter III.

<sup>3/</sup> As of October 31 a new increase in prices to farmers was announced by TanGov.

- a. constraints for which remedial activities are urgently needed
- b. constraints for which remedial actions are essential but not so urgent as category one
- c. constraints for which remedial actions are desirable but not essential

### Strategy

The report introduces four possible strategy alternatives to alleviate the constraints and then selects its recommended strategy, which is actually a combination of two of the four alternative strategies. The four strategies are as follows:

1. The "Food-First" Strategy

This strategy is based on the consideration that solution of the nutrition problem is so urgent that government policies must focus on reallocating resources to food production. This implies that programs must be initiated now to overcome all the short-term and long-term constraints.

2. Long-Run National Self-Sufficiency and Regional Specialization Strategy

This strategy recognizes that the time required for many aspects of the food crop problem limits the rate that resources can be efficiently absorbed into the food crop sub-sector. Basically, it takes into consideration that:

- a. Natural resource endowments vary widely throughout Tanzania, and
- b. economic development requires regional specialization. The programs designed to implement this strategy would be variations of those described in Strategy 1, but would differ in the magnitude, time-phasing, and regions in which the development resources would be focused according to productivity potential, but extending to all regions within a 20 year period. The major thrust of the programs would be the provision of a package of agronomic practices with subsidized inputs accompanied by an education program in selected regions.

3. Income Distribution Strategy Minimizing Regional Variations

In contrast to the above, this strategy would be designed to reduce the differences in per capita incomes (measured in nutritional terms) among regions. The initial focus would be on low income regions.

4. Income Distribution Strategy, Emphasizing Small Farms and Ujamaa Villages

This strategy would concentrate on improving income distribution, like 3, but for small holders and ujamaa villages rather than whole regions. In many respects this is similar to 3 because ujamaa villages tend to be in the lower income regions.

The strategy recommended by the study is referred to as the Priority Regional - Crop Strategy and is a 10-year plan. This strategy is recommended based on the conclusion that food is Tanzania's most pressing problem and that closing the nutrition gap should be the first priority. In this respect it is similar to the first alternative (above) but is modified to reflect the fact that the shortage of human capital, in terms of trained manpower, limits the absorptive capacity of the sub-sector to the point of requiring carefully time-phased activities.

The recommended strategy thus incorporates the urgency of the Food-First Strategy with the regional and time-phased focus of the Long-Run, Regional Specialization Strategy.

Recommendations

The key component of the Priority Regional - Crop Strategy is an integrated production program which incorporates support programs designed to assist cooperatives, government agencies and educational institutions.

The basic program and its major components are as follows:

1. Integrated Production Program (IPP)
  - a. Extension/education programs designed to improve agronomic practices and promote use of input packages;
  - b. input supply and credit programs;

- c. concentrate initial programs on maize;
  - d. initiate programs in two new regions per year.
2. Coordinated Marketing Improvement Program (CMIP) focused on cooperatives:
- a. Inputs must be available on timely basis;
  - b. provide economic incentives.
3. Food Crop Support Program (FCSP):
- a. Research institutions conduct time-phased agronomic research;
  - b. seed production;
  - c. nutrition program;
  - d. credit;
  - e. food crops information system;
  - f. personnel policies.
4. Food Expertise Emphasis Program (FEEP) for educational institutions:
- a. Primary and secondary education;
  - b. college level training.

Cost of Implementing this Strategy and Recommendations

It is estimated that to carry out the recommendations of the study will require 90 technicians plus \$7 million in capital resources per year from external sources for ten years.

Comments

The Missouri study puts nutrition at the center of their food production rationale but never quite makes a good case for it. The idea to concentrate first on maize, the most popular crop, does little to strengthen the case for nutrition. In any event the fact that Tanzania is now heavily engaged in food imports combined with ruinous oil prices and depleted foreign exchange are sufficient grounds for launching a food production campaign.

Secondly, the study moves immediately to advocate internal production of Tanzania's food without consideration of the comparative advantage of increasing export crops with the view of importing more food. We agree with the study on this point because of the preponderance of smallholders, their preference for maize and their expertise in producing the crop, but simply point out that only the slightest mention was made of the trade-off between food crops and cash export crops in the report.

One finds no argument with the selection of constraints. They are rather obvious in Tanzania's agricultural situation and probably would be chosen by any serious agriculture study. The detailed recommendations in the report seems to be all-involving and indeed if it were possible to carry them out, all the constraints both short- and long-term would be removed and food production would be well on the way to solution. The single crop focus (maize) in selected regions under the recommended Priority Regional Crop Strategy seems commendable, but even this would require external assistance on the scale of 90 technicians and \$70 million over a ten-year period.

As indicated in our comments on the IBRD sector study the scale of the programs being proposed must always be clearly kept in mind, and since inflation is an element always to be considered \$70 million would probably be too low to conduct the maize program that the study has in mind. In any case project support would have to be borne mainly by donors, and coordination among the donors in the production campaign would be a continuing factor to consider.

Lastly we note that the Missouri study team has pulled together 12 recommended projects to be supportive in conjunction with its Priority Region-Crop Strategy. These projects are:

1. Regional Data Compilation Project
2. Extension Effectiveness Project
3. Seed Multiplication Project

4. Training Farm Managers, with Emphasis on Ujamaa Villages
5. TANU Agricultural Development
6. An Investigation of Alternative Sources of Energy
7. Food Crop Information System Improvement
8. Feasibility Study of Input and Product Marketing with Regard to the Food Crop Subsector
9. Price Analysis Assistance
10. Food Crop Short-Term Training
11. Feasibility Analysis for Expansion of College of Agriculture
12. Feasibility Study of a Public Administration Institution

Again we have no disagreement with the projects as listed. All of the work indicated needs to be done and rather urgently. In fact we are in the process of implementing variations of some of the recommended projects. We note however, that all of the recommended projects, except one, consist of short-term studies. Considering what happens in LDCs (or rather what fails to happen), our preference would be a sequence where TanGov approves a production campaign such as that recommended under Missouri's Priority Region-Crop Strategy, then any short-term studies or other information requirements would be decided on the basis of need and timeliness. It is indeed likely that such short-term studies could utilize the services of Tanzanian scientists or expatriates who are already in Tanzania, but when necessary they could be complemented by personnel from outside.

IBRD Report No. 453a - TA, Appraisal of Kigoma Rural Development Project, Agriculture and Rural Development, Washington, D.C. July 15, 1974 <sup>4/</sup>

We cite this World Bank project because it is designed to improve production, income and living standards of some 250,000 (half) rural people in Kigoma region. The Tanzanian Regional Development Director and his staff would have overall responsibility with

<sup>4/</sup> Kigoma with an annual per capita income of \$20.00 is perhaps the poorest of Tanzania's 20 regions. A principal objective is to double per capita over a five year period.

assistance from the Bank. To be provided are simple improvements in agricultural practices and inputs to 135 newly-established and existing ujamaa villages. The major crops to be assisted are maize, beans, cotton and groundnuts. To the producers of these crops the project will provide marketing and credit, extension and research, and social services. Specifically, sub-projects are clearing bush land of tsetse, establishing access roads, loans to creditworthy primary societies and to cooperative unions for needed inputs and infrastructure, expansion of rural training centers, and standby consultant services.

IBRD will provide staff to help plan, develop and evaluate projects. This activity would be financed through a \$10 million IDA credit over an eight year period.

The project is very interesting because of its objective of focusing both on production and social services. Its target is the poorest of the rural poor. Crops would be farmed in the villages on the basis of "block" farms (not communal farms) wherein each family will have their own identifiable farm, nonetheless the farms will be sufficiently contiguous so as to accommodate certain inputs and services which would be hard to deliver at each small and scattered farmstead.

IMF Publication, Recent Economic Developments in Tanzania, SM/74/138, a document of the International Monetary Fund, June 11, 1974

This is an IMF in-house document. It provides background information on income and production, employment, wages and prices, public finance, money and banking and balance of payments, with supporting tables on each subject area. The coverage of sub-topics such as agricultural production 1972-73; livestock, fishing and forestry, and agricultural policy and institutions are especially informative, though mainly descriptive.

One of the real problems that we face in attempting studies and reports in a country like Tanzania is the significant difference that one finds in statistics being issued by reputable organizations. From experience when we review IMF, World Bank and local statistical issues we find that figures for export crops are fairly consistent but those for food crops, including growth rates may vary significantly.