

**THE UNITED REPUBLIC OF TANZANIA**



**MINISTRY OF AGRICULTURE AND CO-OPERATIVE  
DEVELOPMENT**

**AGRICULTURAL AND  
LIVESTOCK POLICY, 1997**

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# TANZANIA AGRICULTURAL POLICY

## DEFINITIONS

These definitions are provided for the purpose of this document only. The definitions are designed to minimize misinterpretation and increase clarity in the meaning of different terms used in the document.

1. "**Tanzania**" means the Mainland part of the United Republic of Tanzania. This means that the proposed revised agricultural and livestock policy described in this document applies to the Mainland only.
2. "**Policy**" is defined as a set of instruments aimed at reaching specified objectives.
3. "**Strategy**" is the path the Government intends to use to achieve a particular set of objectives.
4. "**Policy instruments**" are unit actions taken by Government to implement a policy e.g. specific tax, law or regulation etc.
5. "**Agriculture**" is defined as that area of human activity involving all aspects of crops and livestock.
6. "**Sector**" is a term in this text used to describe "Agriculture". Each of these terms can stand alone to adequately describe the activity but in most cases they will be used in combination in the form of "Agricultural Sector".
7. "**Sub-sector**" is a term used to describe the major components of the agricultural sector. These are:- The "Crop sub-sector" and "Livestock sub-sector".
8. "**Industry**" is the term used to depict components of the sub-sector such as the "coffee industry" the "wheat industry" or the "beef industry".
9. "**Agricultural Services**" or "Agricultural Support Services" are activities that support agricultural production. These include training, research, extension, plant protection, irrigation, farm power, credit, storage, transport, processing, input delivery system, animal health services etc.
10. "**Extension Service**" is defined as the transfer of agriculture technology from experts to farmers. The word "experts" include farmers who are capable of supplying such services to others.
11. "**Agriculture Technology**" implies knowledge, equipment, inputs and practices embodied in modern agricultural production practice.
12. "**Ministry**" means the Ministry of Agriculture and Cooperatives (MAC) which also means the portfolio looking after the agricultural sector. 'KILIMO' is its synonym.
13. "**Minister for Agriculture and Cooperatives**" means the person duly appointed to be responsible for the sector.
14. "**Government**" means the Union Government that is the United Republic of Tanzania in so far as agricultural sector is concerned.

# AGRICULTURAL POLICY (1997)

## 1.0 INTRODUCTION

### 1.1 Background

In the medium term and long term horizon, Agriculture will, continue to play a central role in Tanzanian's economy. The Government ability to discharge this responsibility cannot be taken for granted. It must constantly review and analyse its sector performance with the view to identifying and removing constraints that prevent it from making maximum contribution. This means that the overall policy guiding the sector must be clearly defined in terms of its overall goal, objectives and strategies. Secondly, the strategies deployed must be effective and flexible so as to accelerate the pace at which objectives and ultimately, the goal of the sector can be achieved. Finally, modifying, adding, deleting and sharpening these strategies are key responsibilities of a Government keen to develop the sector. Key areas of the economy in which the contribution of agriculture is decisive are the country's gross domestic product (GDP), export earnings and employment in which the sector accounts for 60% and 84% respectively. Crucial components of the agricultural sector are food crops, livestock and traditional export crops whose contribution currently stands at respectively 55%, 30% and 8% of the total agricultural GDP. To raise the share of agriculture in the country's GDP, critically depends on the effectiveness of the strategies deployed to engender significant growth in these components of the agricultural sector. Natural factors kept constant, a sector over the policy entailing such strategies is worth pursuing.

### 1.2 Rationale for Policy Review

The rationale behind this policy revision is that the agricultural sector operates in a macro environment and when fundamental changes occur in this environment, configuration of the sector in terms of its development strategies also changes. This necessitates modifications and realignment of strategies in order for the sector to take full advantage of the opportunities created by the new environment. In other words, while the goal and general objectives of the agricultural sector remain the same, strategies deployed to achieve these objectives under the new environment must undergo a complete overhaul. Since the mid-eighties, the Tanzanian economy has undergone gradual fundamental transformation that has redefined the role of the government and the private sector. Under the new environment most of the production, processing and marketing functions have been assigned to the private sector while the government has retained regulatory and public support functions. These macro changes have and continue to have a profound impact on the agricultural sector in which, already agricultural input and output prices have been decontrolled, subsidies have been removed, and monopolies of cooperatives and marketing boards have been eliminated. The performance of the agricultural sector over the last 15 years has also been the subject of concern particularly the period ending in the mid 80s. Export crop production declined between the 1970s and the mid 80s. This trend combined with the decline in the international prices of the traditional export crops caused the real value of Tanzania exports to drop drastically over the period. This also caused the growth rate of total exports to decline at average annual rate of 4.5% per annum while the real value of imports grew at 0.7% annually over the period. Food crops and livestock have not fared well either. Growth rate of the former declined by 0.2% per annum between 1986 and 1991 while the latter registered negative growth rates before the mid 80s. Furthermore, Tanzania is still far from the production levels, which are possible with existing technologies and available resources. Although the agricultural - led economic reforms have reversed these trends, there is a need to provide a new policy framework in which population

and import demand growth rates are reconciled with food, exports crops and livestock growth rates. At institutional level, the Ministry of Agriculture and Cooperatives (MAC) has assumed a new mission in which it sees itself as essentially performing public sector support functions which among others include research, training, extension, policy formulation, information services, sanitary regulations, quality control, protection of environment, creation of optimal market conditions and promotion of agricultural growth. In the new environment, these functions, also known as core functions, are not amenable to privatization although on selective basis some of them might be shifted to the private sector at a later stage. Extension services for dairy, poultry and horticultural crops are expected to be the first to go that route. The privatization of commercial functions is supported by a programme of parastatal divestiture which aims at enhancing investment resources in agricultural enterprises, thereby stimulating productivity and production and ensuring financial sustainability of these enterprises. The proposed policy summarized in this document takes into account these major changes which also form the basis for selecting appropriate and effective strategies for development of the sector. The policy entails a statement of problem followed by policy statements addressing the identified constraint.

## **2.0 THE NEED FOR A NEW AGRICULTURAL AND LIVESTOCK POLICY**

### **2.1 General Background**

There are four major reasons that compel the Government to develop a new agricultural policy. First, there is a need to merge and consolidate into one document the agricultural and livestock policies of 1983. During that period agriculture and livestock were under two separate Ministries. Both areas of the agricultural sector are now under one Ministry - "Ministry of Agriculture and Cooperatives (MAC)" (Agriculture standing for Crops and Livestock). Secondly, the economic scene of the country has drastically changed in the last decade (since 1986). Thirdly, the existence of a new national land policy means that farmers cannot continue to use land for crops and livestock the way they used to do. Finally, agriculture operates in a delicate natural environment, which requires proper management and protection. In the face of these fundamental factors it would be difficult for the agricultural sector to operate with its old traditions and instruments. Outdated traditions and instruments must be discarded while good ones together with new ones must be realigned to adequately address the new and challenging environment brought about by the four fundamental factors. This entails also changing the rules and regulations. These factors are briefly analysed below.

### **2.2 Consolidation of Policy**

Government action to hive off livestock from crops and place them under two separate Ministries in 1980 and the subsequent preparation of two policy documents for crops and livestock in 1983, means that neither document provides a complete picture of Government thinking and actions in the agricultural sector as is set up today. The two Ministries have merged into a single portfolio - Ministry of Agriculture- and the various functions as related to crops and livestock are grouped under single administrative units. Although in certain part of the country; there is a large number of pastoralists, the majority of farmers in Tanzania raise both crops and livestock. An integrated policy embracing both sub-sectors is essential in order to meet the full range of interrelated needs of both mixed farmers and pastoralists. In addition, the increasing competition for land resources between crops and livestock, and the growing need for herdsmen to settle down in specific areas where they can raise food for their own consumption requirements, argue strongly for an integrated and consolidated policy. Further

argument in this respect will be elaborated under environmental consideration section of this document.

## **2.3 Economic Reforms**

The implementation of macro economic reforms and structural adjustment programmes has engendered both positive and negative effects on the agricultural sector. Positive aspects of these programmes include the opening up of the sector for private investment in production and processing, inputs importation and distribution and agricultural marketing. Farmers are now free to sell their crops to cooperatives or private traders and as a result of competition nominal producer prices of both food and export crops have increased significantly. Efficiency of the marketing systems for some crops in some places has meant that farmers have been able to dispose of their crops much faster than in the past. Similarly, farmers are no longer confined to a single source for their fertilizers and other essential inputs; they have several channels through which they can obtain them. However, the withdrawal of government and its parastatals from the provision of agricultural services to farmers has not kept pace with the growth of the private sector participation in terms of its ability to effectively take over these services. Cooperative Unions have also been adversely affected by the economic reform programmes. Debts and stringent financial conditions have driven most of them either into liquidation or reorganization into new forms in which their ability to provide agricultural services to farmers has been severely curtailed. Thus the agricultural sector has been left in somewhat a hostile territory in which farmers see fertilizers and other inputs, but lack of credit facilities blocks their access to these inputs. Produce quality control services are disappearing, thus threatening farmers' returns, consumers interest and Tanzania's position on the world markets. The livestock sub-sector is not fairing well either. Animal health services are falling behind demand, as the supply of veterinary drugs and other essential inputs is weak. Pastoralists, therefore, also feel short-changed in the provision of services under the new environment.

## **2.4 Cross-Sectoral Issues**

### ***2.4.1 The New National Land Policy***

Without land resource, there is no agriculture and when rules for the use of this basic resource change, those of agriculture must follow suit. The overall aim of the new National Land Policy is to promote and ensure a secure land tenure system, to encourage the optimal use of land resource, and to facilitate broad-based social and economic development without upsetting or endangering the ecological balance of the environment. The major theme of the policy is the conversion of land into an economic asset to which all citizens should have equal access. The implication of this philosophy is that vast economic possibilities will be opened to the masses of the rural sector, as there is enough land for every citizen capable of managing and deploying it to productive use. Within the framework of the land policy detailed rules and regulations are provided for the use of this valuable resource and most of them are directed to the agricultural sector as well as those who depend on it for their livelihood. To enable peasants and herdsmen to use land as an economic base, new rules, guidelines and instruments for carrying out agricultural activities must be provided to match the new spirit and content of the new national land policy. In other words, the agricultural policy must be revised to meet the demands of the new land policy and to assist peasants and herdsmen to make optimal use of land through agriculture.

### ***2.4.2 Environmental Issues***

Agriculture is critically dependent on environmental resources such as land, water, forest, air etc. However, the use of these resources can affect directly or indirectly, other natural resources, through dynamic and complex interrelationships existing in the natural systems. This implies that wrong use of land, water and forest in the production of crops and livestock can have a far-reaching effects on the environmental integrity. To avoid such consequences, agricultural sector policies must fit in the overall environmental policy, which is critical in providing guidance for the proper and balanced use of natural resources and in defining sectoral responsibilities for the environmental management. Both the National Agricultural and Livestock Policies of the early 1980s recognized the importance of environment and proposed several measures to arrest degradation of natural resources. But in the intervening years, technology for understanding the impact of human activities on environment has made significant strides, which clearly show that sectoral approach to environmental management is of limited effectiveness. Agricultural policies, besides being internally consistent, must provide a mechanism for linking themselves with those of other sectors in the noble mission of protecting and enhancing environment. For instance the expansion of agricultural production in the best rangelands (due to population and food demand) has resulted in large numbers of livestock to be concentrated on marginal lands with low carrying capacity. This has caused over-grazing and gradual environmental destruction. Furthermore, frequent and uncontrolled bush fires designed to cause generation of pastures and the use of chemicals to control tsetse have also increased the danger of environmental degradation. Urban centres too are threatened with environmental disaster arising from increased livestock keeping. These activities endanger environment as pollution can easily arise from this unregulated livestock production activities. All these problems call for concerted action involving a thorough understanding of the nature and scope of the problems and a comprehensive and sustainable programme to combat them. Present agricultural policies are not exactly amenable to such cross-sectoral linkage in this respect, hence the need for a new policy.

### ***2.4.3 Women in Agriculture***

It is estimated that the ratio of males to females in the agricultural sector is 1:1.5. Women in Tanzania produce about 70% of the food crops and also bear substantial responsibilities for many aspects of export crops and livestock production. However, their access to productive resources (land, water etc.), supportive services (marketing services, credit and labor saving facilities etc.) and income arising from agricultural production is severely limited by social and traditional factors. This in turn has hampered their capability and efficiency in the agricultural sector. While social and legal measures are being taken elsewhere in the government machinery, the Ministry of Agriculture and Cooperatives will endeavour to target its extension, research, training and advocate credit services to rural women in order to enable them to contribute effectively to agricultural production. The strategy will be to strengthen labour saving technologies by encouraging cooperation among women and by supporting their participation in planning and management of development programme.

## **3.0 THE AGRICULTURAL AND LIVESTOCK POLICY**

### **3.1 General Policy Goals**

Although the number and nature of guidelines that constitute an agricultural policy is vast and complex, the ultimate goal is the improvement of the well being of the people whose principal occupation and way of life is based on agriculture. Most of these people are smallholder and



livestock keepers, who do not produce surplus. Therefore the focus of this policy is to commercialize agriculture so as to increase income levels.

### **3.2 Objectives**

Embodied in this general goal are nine general objectives, which are summarized below: -

- (a) To assure basic food security for the nation, and to improve national standards of nutrition by increasing output, quality and availability of food commodities. In order to achieve this objective, production growth rates of food crops and livestock products will have to be at least 4% and 5 % per annum respectively. Food crops production will be increased through productivity and area expansion while livestock growth will be through encouraging the private sector based initiatives in the industry.
- (b) To improve standards of life in the rural areas through increased income generation from agricultural and livestock production, processing and marketing:
- (c) To increase foreign exchange earnings for the nation by encouraging the production and increased exportation of cash crops, livestock products, other agricultural surpluses, including food crops, by-products and residues:
- (d) To produce and supply raw materials, including industrial crops, livestock, by-products and residues for local industries, while also expanding the role of the sector as a market for industrial outputs through the application of improved production, marketing and processing technologies:
- (e) To develop and introduce new technologies which increase the productivity of labour and land;
- (f) To promote integrated and sustainable use and management of natural resources such as land, soil, water and vegetation in order to conserve the environment;
- (g) To develop human resources within the sector in order to increase the productivity of labour and to improve ability, awareness and morale;
- (h) To provide support services to the agricultural sector which cannot be provided efficiently by the private sector;
- (i) To promote specifically the access of women and Youth to land, credit, education and information.

### **3.3 Policy Instruments**

Having defined general goals and objectives, the next step is the choice of appropriate policy instruments that will enable the nation to move towards the stated objectives. By committing itself to market-based economy, Government choice of these instruments is limited and confined to the framework of this new policy. The appropriate instruments are the following: -

- (i) Agricultural research, extension and training;
- (ii) Monitoring and evaluation of agricultural development and identification of new opportunities (products), technologies, markets, etc. and promotion of new production processes;
- (iii) Collection and dissemination of market information in order to integrate the domestic markets and make foreign markets accessible;

- (iv) Facilitate the provision of a good infrastructure, especially transport and storage;
- (v) Control of quality, hygienic and sanitary standards;
- (vi) Control of Vermin, epidemic pests and diseases;
- (vii) Providing an adequate legal and regulatory framework;
- (viii) Natural resources management;
- (ix) Promotion of institutional structures in the agricultural sector;
- (x) Taxes and subsidies.

### ***3.3.1 Services to be provided by the Ministry of Agriculture and Cooperatives***

The Ministry has prepared comprehensive documents concerning its core functions, and guidelines for their implementation. They are summarized in order to indicate what measures has the Ministry taken to realign these strategic instruments towards the stated policy objectives. The focus will be on how the Government deploys these services to support the private sector in promoting growth and commercialization in the agricultural sector.

#### ***A. Agricultural Extension Services***

In this document, agricultural extension service has been defined as the transfer of agricultural technology from experts (including progressive farmers) to farmers, livestock keepers and other stakeholders. The experts are the link between the farmer, livestock keepers and research where agricultural technologies are developed, tested and modified. Generally, the experts have three roles; first and foremost the transfer of readily usable technologies and secondly to simplify technologies which cannot be transferred in the form 'produced by the research institutions and thirdly to get and transfer farmers/livestock keepers problems to research institutions. The research - extension - farmer livestock keeper linkage also provides a framework for planning research and extension activities, developing new technologies arising from research and extension experts, and from indigenous knowledge. This linkage also provides a basis evaluating the impact of research and extension activities on the agricultural livestock sub sector.

The evolution of extension services in Tanzania has a long history. During the 1960s to 1970s, the Government adopted several approaches of extension in delivering agricultural messages to the farming communities. These included targeting settlement schemes and progressive farmers; establishment of farmers training centres, setting up of demonstration plots etc. However, the methodologies and approaches failed to convert the extension services into an instrument of agricultural growth in the country. Factors contributing to this state of affair include:

- (i) Uncoordinated, fragmented, duplication and overlapping messages flowing from extension personnel.
- (ii) Poor supervision of extension personnel and utilization.
- (iii) Some technologies promoted at research station have not been appropriate to farmers.
- (iv) Poor working facilities etc.
- (v) Lack of motivation for extension personnel.

To address these problems since 1989 the Government has al taken major initiatives to rehabilitate and strengthen the extension services under the National Agriculture and Livestock Extension Rehabilitation Project (NALERP), which has enabled the Ministry to evolve a National Agriculture Extension Programme.

### **Policy Statements**

- (i) The extension system will continue to be integrated into a single delivery system using a methodology of training and visit systems and by merging crop and livestock extension services served by one extension agent. However, the system is not expected to be dogmatic but will make a provision for other methods and approaches provider they are relevant, cost effective and sustainable.
- (ii) The government will strengthen field extension services to enhance its effectiveness in direction and management and improve linkages and put in place an effective monitoring and evaluation system.
- (iii) The national extension programme to be promoted by the Ministry will deploy cost effective field-tested approaches and methods for extension programme delivery. The approaches and methods will involve regular visits to contact farmers/livestock keepers and groups, regular training of extension staff, frequent interaction with researchers and use of other methods and approaches appropriate to the target or commodity.
- (iv) The extension services delivery will not be a monopoly of the Government. Private sector participation for collaborative efforts will be promoted and where necessary private sector will be allowed to own and manage extension services for specific enterprises such as beef dairy, poultry, small ruminants, horticulture tobacco and other specific sub-sectors that call for special attention. In areas where private sector owns extension services by providing, funding, planning, monitoring and evaluation, the Government will play a coordinating role.
- (v) Extension service will be demand driven and will address livestock keepers, farmers and other beneficiaries needs. Although the extension services will be directed to all farmers/livestock keepers special attention will be given to women in recognition of their critical role they play in family household management and food production. Therefore targeted messages and other innovative methods for reaching women will be initiated.
- (vi) Farming as an enterprise is currently dominated by adult old farmers and livestock keeper a phenomena which threatens the maintenance of a farming community continuum. Therefore special attention will be given to youth farmers and livestock keepers who are producers of the future and in particular when they are at a receptive stage of development. This stage will be utilized by imparting new technological change into youth through primary and secondary schools and youth organizations.
- (vii) To manage the extension programme the Ministry will aim at allocating competent, confident and well-trained extension agents throughout the country. This will be accomplished through various levels of staff training at institutes, at the periodical training sessions that will conducted regularly. The in service staff will attend retraining or refresher courses which will be conducted regularly order to acquaint them with new technological changes.

- (viii) Equally, the training of farmers and livestock keepers will continue to take place in Farmer Training Centres, Folk Development Colleges, Farmer Training Wings at Ministry of Agriculture Training Institutes (MATIs) and Livestock Training Institutes (LITIs) and at the groups adoption plots. The Government will ensure that training events are made attractive to women and youth who will contribute to sustainability of agricultural development. Additionally, farmers and livestock keepers will receive information through non residential training such as fortnight meetings, visit to research stations, participation in farmers and livestock keepers day "Nane Nane" and Agricultural and Livestock shows.
- (ix) The extension service will have certificate holders serving at the village level. Diploma holders (and in specific cases degree holders) serving at the divisional levels, graduate and or post graduates serving at district and regional levels, post-graduate holders serving in some technical and upper managerial posts. Furthermore, the government will increase the number of subject matter specialists available to extension at below district levels as well as assessment and rationalization of their locations.
- (x) The workload and duties of village extension officer (VEO) will be at ward level serving about 700 farm families. The VEG will not primarily be charged with input distribution, credit handling or enforcing by-law but in that respect will only be a facilitator or link between the farmers and livestock keepers and the respective entities. The VEO will get a back-stopping by supervisors who will monitor technical support, train the VEOs on spot, monitor the technology adoption, assist in solving production problems and review personnel performance. Career structures for extension staff will be developed to encourage high quality individuals to enter the Extension Service and to enable the Ministry of Agriculture and Cooperatives to maintain the best staff. Efficient record keeping and reporting procedures will be established and utilized in order to monitor and evaluate the extension system and this will be Continually adjusted until a sustainable system of extension management is developed.
- (xi) In order to render effective extension recommendations to the livestock keepers and farmers, a strong linkage between extension service and research will be maintained to ensure that technology packages recommended to farmers and livestock keepers will address high priority needs of the beneficiaries, will be research based and verified under farmer and livestock keeper management conditions will be both biologically and economically superior to current practices, will be socially acceptable and will be consistent with national management and environment conservation plan. The Ministry will establish regular coordination and contacts between research and extension with the participants of livestock and crop stakeholders' representatives.
- (xii) The Government will ensure that extension programmes developed are well planned and systematic. The programmes will primarily focus on the needs of the rural population and will be within the context of the national plans. Therefore, the Ministry will provide coordination of all sectoral extension programmes operating on Tanzania mainland to ensure that effective extension services are provided to farm families and to make efficient use of available resources. Coordination will be established and maintained at all levels with

other Ministries as well as non-governmental organizations and the private sector involved in rural development.

- (xiii) The National Extension System will be flexible to accommodate all the above mentioned organizations dealing with extension. However, information sharing and joint decision making will be coordinated by the Ministry of Agriculture and Cooperatives in order to avoid conflicts and duplication of efforts and confusing the frontline extension staff who implement extension activities wholly in the area of their jurisdiction.
- (xiv) The extension services will be district based and focusing on crops and livestock as integral enterprises to farming communities. The thrust is to have the extension services well nested at the lowest level of governance; this means the local community (local government). The transfer of managing extension services from the central government to the local government will be done gradually with considerable amount of careful manpower redeployment and planning. In this regard sustainability and participatory approach will be key areas designed to give effective voice to farmers and livestock keeper in extension activities.
- (xv) The Ministry through extension and cooperative services will encourage and support farmers; livestock keepers, traders and processors to establish groups, associations, and cooperatives for participatory and collective action.
- (xvi) The government through its extension services will promote commercialization of crops and livestock enterprises, this includes appropriate mechanisms for promoting risks minimization through insurance coverage.
- (xvii) The Ministry in collaboration with the Ministry of Health will promote utilization of staples and sub-staples in specific ecological zones and cultures through appropriate post harvest technologies, which minimize the nutritional value and diet being consumed.
- (xviii) The Ministry will promote, establish and monitor programmes within the agriculture sector that aim at improving the nutritional well being of the urban and rural people.
- (xix) The Ministry through extension service will support farm families especially women and youth groups in identifying viable income generating activities.

## ***B. Agricultural Research***

The overall aim of agricultural research is to promote sustainable food security, income generation, employment growth and export enhancement through the development and dissemination of appropriate and environmentally friendly technology packages. Emphasis on environment has been put in the light of concern that some common technologies are undermining long term agricultural and livestock production.

Previously, lack of clear research priorities and fragmentation of research had adversely affected the efficient use of both government and donor funds. This has exacerbated the lack of sustainable research programmes.

The Research system now has been re-organized and a major priority setting exercise for all the agricultural and livestock commodities was done in 1990/91. The outcome of this exercise was

the formulation of the National Agricultural and Livestock Research Master plan (NALRM). A similar exercise for the zonal based research programmes was carried out in 1994/95.

The primary objective of the zonal prioritization exercise was to establish a few, well focused and cost effective zonal priority research areas, which address beneficiaries, needs and have impact. Ranking of these research areas has varied from zone to zone depending on the diversity of commodities and the agricultural practices in the various zones and the problems associated with the farming system in use.

The Research Master plan clearly emphasizes the following: -

- (i) The need to apply appropriate scientific and Technical knowledge to local conditions, especially if modern knowledge is married effectively with the accumulated experience of the local farming and livestock keeping community.
- (ii) Effectively linking research with extension, training, Non-Governmental Organizations (NGOs) and other national institutions involved in agricultural and livestock technology development and transfer.
- (iii) Linking the National Agricultural and Livestock Research System with other institutions/associations in the region and also with International Agricultural Research Centres such as International Livestock Research Institute (ILRI), Southern Africa Centre for Cooperation in Agricultural Research and Training (SACCAR), Swedish Agency for Research Cooperation with Developing Countries (SAREC), International Agricultural Research (ISNAR) etc. as key collaborators through their networking activities.
- (iv) The client-oriented approach for planning and conducting agricultural and livestock research.
- (v) The need for rehabilitating and strengthening the streamlined research network.
- (vi) More private sector involvement independently or jointly in research planning and funding.
- (vii) The need to provide package of incentives in order to attract, motivate and retain competent research staff.
- (viii) Increasing the financial resources allocated to agricultural and livestock research.
- (ix) Strengthening of information and documentation services, information management and technology, publications and dissemination of research information and networking in information services with external internal and external institutions, including national extension services.

### **Policy Statements**

- (i) As we enter the 21st Century and with current pressure on rational use of natural resources, efforts will be made to efficiently utilize the available resources, their by-products and agro-industrial wastes. Research will also pay particular attention to natural and biological methods of pest control which can be applied by farmers and livestock keepers and to the development of improved household storage. Agrochemicals will be assessed for economy, effectiveness, and safety in use and disposal with special concern for problems of environmental pollution.

- (ii) Research will be demand driven (client needs to influence research priorities and programs undertaken from year to year). In order to ensure that the technologies developed are appropriate to farmers and livestock keepers needs, researchers will conduct surveys to assess beneficiary's constraints opportunities, evaluation of technologies under farm management (on farm research) and continuously monitor their performance overtime. The entire agricultural and livestock research will adopt farming systems research approach.
- (iii) In order to utilize the meagre resources available, the research network will be downsized by concentrating research activities in fewer stations and integrating livestock and crop research in the different farming system.
- (iv) In order to increase investments in research and on sustainable basis the government will encourage and enhance the active participation by commodity agencies in research funding and planning. Funds provided through such participation will supplement government and donor resources. It will be important to ensure that such funding will be sourced from the cooperative societies/unions and commodity bodies. Appropriate mechanisms will be established to collect and administer funds through this process. In addition, private sector will be encouraged to participate in funding research and where necessary to own and manage research of particular enterprise. Government funding will be directed mainly to food crop livestock, resource management and engineering research. The government will ensure that there is a balance between research for crops and livestock sub sectors based on their individual contributions to agricultural sector growth and their potentials for innovations. Although livestock and food research will be carried out mainly by the public sector, the government will encourage the private sector as well as the Non-Governmental Organisations (NGOs) where feasible, to participate in research particularly in the areas of testing of drugs, development, of special technologies, seed, processing etc.
- (v) In order to coordinate research activities in the country, the government will establish a statutory National Agricultural Research Council (NARC).
- (vi) The Ministry will ensure that research emphasis is given to exploit the synergy of integration of crop and livestock production in view of advantages of draught, power and manure from animals to crops and provision of fodder and crop residues from the latter for livestock, as well as provision of more diversified diet and income sources at rural households.
- (vii) The Ministry will support the development of fundamental and applied research priorities given to disadvantaged and vulnerable groups, aimed at improving scientific and technological knowledge base against which food nutrition, agriculture and health problems can be analysed and solved.

### ***C. Training***

Training is one of the core services for the sector. Tanzania agricultural and livestock commodities will only compete on overseas markets if the industry becomes more efficient, which will only be possible with improved technical competence among personnel working in the sector. The traditional sector will only be able to feed the nation if the extension and research staff have the competence to bring about the technical improvements needed, which depends upon their training. Similarly farmers and livestock keepers training will increase

literacy and general education levels which will promote adoption of new technologies, practices and techniques and support the improvement of management both at the level of primary agricultural and livestock production as well as in the processing stage of agricultural and livestock products.

The main objective of training will be to supply competent and confident agricultural and livestock personnel to cater for public, private and self-employment in the sector.

### **Policy Statements**

- (i) The Ministry will progressively take necessary steps to bring its human and materials resources into optimal balance as well as training, equipping, mobilizing and remunerating its personnel to improve motivation and performance.
- (ii) In order to facilitate the training institutes to be centres of excellence, the government will collaborate with donor, other local and international training institutes in order to improve the learning environment within the colleges along the lines detailed in the National Agriculture Middle Level Training Master Plan (NAMTraMP).
- (iii) The Government will strengthen the Training Institutes to accommodate the, training needs of extension personnel, farmers and livestock keepers.
- (iv) Agricultural training will not remain a monopoly of the Government but private sector will be encouraged to carry out specialized training.
- (v) As far as possible, the training institutes will become autonomous. Already the governing councils of the training institutes are responsible for self-help funding, which is a major step forward. In future college responsibilities will be increased along the following lines: -
  - (a) Continue to carry out the training activities for which they are currently responsible: certificates, diplomas, retraining and up-grading and in many cases farmers and livestock keepers training.
  - (b) These activities will in future be more and more demand driven, meaning that over time the training institute will arrange training programmes in response to demand from beneficiaries.
  - (c) Training institutes principals, supported by their governing councils, will be responsible for administration. The main elements of this will be raising and controlling the disbursement of finance for the running of the training institutes, publicity and student recruitment, and maintaining the maximum coordination with research, extension and beneficiaries. The Ministry will play a regulatory role.
- (vi) There is already an expressed need to have Diploma holders rather than Certificate holders as front line extension workers at village level. It is anticipated that the diploma holder will be more competent in meeting new technological changes as we enter into the 21st century. To satisfy this need, a diploma course will be re-designed.
- (vii) Efforts to raise the level of student recruitment will be made. Two years will be common, covering crop and livestock production while the third year will cover specialised studies on demand. These will be in such topics as irrigation, dairy, animal health, animal production, and horticulture.



- (viii) In order to strengthen communication between training, farmers, livestock keepers, extension and research the following specific action will be taken:
  - (a) Training- Farmers and Livestock Keepers Linkage. Existing outreach programmes will be strengthened and encouraged to be more involved with local farmer and livestock keepers needs.
  - (b) Training - Extension Linkage. There will be close cooperation with village extension officers. Tutors will be involved with extension planning and review.
  - (c) Training - Research Linkage. Tutors will be involved with research planning and review, especially with the nearby station and will travel to other research stations to review recommendations. Tutors will translate research findings into easily understood language for nearby farming community and students.
- (ix) Efforts will be made to ensure gender balance in recruitment of students and staff to the agricultural colleges.
- (x) Farmers and livestock keepers will receive a new thrust in training especially females. Farmers and livestock keepers will be exposed to oxen and draught animals operations, making and repairing ox-harnessing equipment, tree-crop nursery management, and improvement of traditional irrigation, farm/business management, group leadership and labour saving technologies. Farmer and livestock keepers training needs assessment will be encouraged to identify more areas of training.

#### ***D. Regulatory Services***

In crop and livestock production, marketing and processing, human beings interact with plants, animals, equipment, machinery and inputs. These interactions must comply with established standards in order to protect the interest of all stakeholders who are in one way or other dependent on agriculture and livestock sub-sectors. These standards are enforced by regulations and or legislations and the most appropriate institution to carry out these regulatory services is the Government. However, if need arises the Government may contract some of these functions to other institutions. Where such arrangement is adopted funding of the service will be through related fees.

In its new mission, the Ministry has identified and retained under its jurisdiction all regulatory functions and will establish a legal mechanism for their enforcement.

The following functions fall under this category: -

##### **(1) Seeds**

The performance of the National Seed Industry, for many years has been poor. Only less than 10% of the total national seed requirements per year have ever been made available to the farmers. The poor performance of the seed industry is attributed to:

- (i) Tanzania Seed Company Ltd. (TANSEED) a parastatal which had a monopoly of local production and importation and sale of maize, wheat, and beans certified seeds could not perform these duties efficiently.
- (ii) There has been inadequate seed quality control as well as ineffective application of official regulations.

Due to the above deficiencies of the industry and in recognition of the existence of a relatively large untapped market for improved seeds in Tanzania, the Government liberalised the seed industry in 1990 and private was allowed entry into the production, distribution and marketing of seeds. The Government apart from providing environment for private sector will now focus on research quality control, certification, training and promotion.

### **Policy Statement**

- (i) The Ministry through its National Seed Committee will provide coordination and monitor seed production in Tanzania.
- (ii) The Ministry will ensure a continuous supply of improved seed varieties through research and plant breeding programmes by government, parastatals, universities and the private sector and will support establishment of gene banks.
- (iii) The Ministry will observe plant breeders property rights through enactment of an appropriate legislation for Tanzania.
- (iv) The Ministry will exercise overall responsibility for seed variety evaluation, release control; variety registration and variety maintenance.
- (v) The Ministry will allow the selective use of its varieties developed by public institutions to a seed enterprise in which the government has direct interest.
- (vi) The seed industry will be regulated by Tanzania official certification Agency (TOSCA). This body will be charged with the responsibility of ensuring that seed reaching the farmers is of the prescribed quality.
- (vii) The Ministry will encourage and strengthen seed promotion and extension to ensure the farmers get maximum benefit from varietal improvement (high quality seed suitable for local growing conditions).
- (viii) The Ministry will maintain a judicious and selective seed import policy, which seeks satisfying the domestic seed requirements however seed exports, will be only feasible when the domestic demand has been met.
- (ix) The Ministry will initiate and maintain a strategic seed reserve as a national buffer seed stock to cater for emergency situation. The Ministry will carry this role through subcontracting to seed companies.
- (x) In recognition of the relatively large untapped market for improved seeds in Tanzania and the generally low, key commercial seed operations the government will encourage and facilitate establishment of formal and informal seed production, conditioning and marketing.
- (xi) The Ministry will encourage and support private sector to participate in seed production and distribution. However, the Government will continue producing low volume, low value seeds including pasture and fodder crop seeds, root crops etc.
- (xii) The Ministry will institute regulations in order to enforce quality standards of pasture and fodder crop seeds.

### **(2) Plant Protection Services**

In Tanzania pre-harvest crop losses due to pest infestations are estimated to be in the range of 30-35 percent, and post harvest crop losses due to these organisms amount to a further 10-20 percent. Pre-harvest losses for maize and paddy are estimated at 30 percent. The Ministry will continue to

take measures aimed at improving and strengthening plant protection services so that crop losses, resulting from pests and diseases are minimized. The Plant protection services will include diagnosis, forecasting and preventing pest out-breaks; inspection and phytosanitary services involving quarantine services, pesticide testing, licensing and registration, enforced by the plant protection legislation. The overall principle is that the farm level pest and disease control is the responsibility of the farmer. The Ministry responsibility will be to ensure that plant protection services are ecologically and economically sound by advocating integrated pest management measures to be disseminated to the farmers through the agricultural extension services.

### **Policy Statements**

- (i) The Ministry will continue to control migratory pests and epidemic diseases promote and regulate private sector plant protection services. In this endeavor, the Ministry will continue to cooperate with Zanzibar and neighbouring countries through regional groupings and international organizations whenever necessary.
- (ii) The Ministry will strengthen, its internal units and other institutions dealing with plant protection services in combating pests and diseases.
- (iii) In collaboration with the Ministries responsible for health, environment and natural resources and other relevant institution the Ministry will ensure that agricultural inputs, and outputs will not contribute to the transmission of plants pests and endanger the health of man, animals and the environment.
- (iv) The Ministry will provide improved phytosanitary and plant inspectorate services to prevent both the spread of existing plant diseases and introduction of exotic plant pests through importation of plant materials.
- (v) The Ministry will promote integrated pest management measures through its plant protection and agricultural extension services to provide improved extension messages regarding the safe handling and use of agrochemical and other plant protection inputs.
- (vi) The Ministry will establish supervisory and regulatory instruments to register licence monitor and supervise manufactures, importer, distributors and users of plant protection inputs.

### **(3) Animal Health Services**

The Government recognizes that effective, control of animal diseases is crucial to the achievement of increased animal production in Tanzania. The main objective of animal health services is to diminish the prevalence of animal diseases and mortality of livestock and to protect consumers and livestock against infections, post and diseases.

### **Policy Statements**

- (i) The overall strategic principle is that farm level disease control is the, responsibility of livestock keeper and ho or she should buy the services, drugs, vaccines and inputs from the private sector. The role of government will be limited to the control of epidemic, and infectious diseases, sanitary control and inspection and fighting pests and diseases beyond farm level (e.g. Tsetse Control). Further more, the use of low cost communal methods e.g. Dips managed by users will be promoted. Vaccines and veterinary biological will, however, for the time being continue to be procured and distributed through official channel until such

times that livestock keepers in a local area gain access to private veterinary services and drug supplies. The Government will also retain the roles of controlling quality of vaccines and drugs and where necessary importing bulk drugs e.g. acaricide. In order to improve the health status and productivity of the animal population as well as to protect human health, the Ministry will give special emphasis to the prevention and control of animal diseases.

- (ii) The Ministry will continue to promote private sector import and distribution channels for veterinary products and establishment of an effective regulation and control system for import and marketing of the products.
- (iii) Privatization of veterinary services and drug supply will be gradual, starting in urban and periurban areas where the services can easily be provided by the private sector. The Ministry will continue to take care of regular animal health services in areas where private practices have not yet been set-up this include rehabilitation of livestock development centers and veterinary investigation centers. Care will be taken that the presence of government services does not block the establishment of private practices.
- (iv) The Ministry will continue to promote and expand the establishment of private veterinary practices where they are commercially viable. During the transition period the Government will stimulate and help Government veterinarian to set-up private practice. This will include promotion and establish of self-financed para-veterinarians who will work under guidance and supervision of qualified veterinarian.
- (v) The Ministry will endeavor to Improve its capacity to monitor, diagnose and control all types of livestock diseases with -particular attention on epidemic diseases such as Rinderpest, Contagious Bovine Pleuro-Pneumonia (CBPP), Lumpy Skin Disease, Newcastle Disease and African Swine Fever.
- (vi) The Ministry will formulate an effective animal health programme and source for financial resources for adequate implementation.
- (vii) The Ministry will strengthen field-reporting system and establish a computerized epidemiology unit for monitoring and surveillance of diseases so as to provide a reliable source of information for management decisions and feedback systems in the control and eradication of animal diseases.
- (viii) The Ministry will promote the private sector, through its extension and veterinary services, to establish suitable areas for creation of disease free zones, which will be concentrated to control major livestock diseases which hinder international livestock and meat trade. The Ministry will ensure that haphazard livestock immigration into these areas is minimized in conjunction with the above, the Ministry will encourage and promote individual traders-who would like to invest in livestock export business in terms of know-how, animal export handling infrastructures and domestic/export market information.
- (ix) The Ministry will strengthen Zoo sanitary inspection of livestock and livestock products to check and control introduction of exotic diseases from abroad at major ports and border posts of entry and their spread within the country. This will include strengthening of facilities like Zoo sanitary check centers and points, quarantine facilities, holding grounds, stock routes etc.
- (x) The Ministry will ensure effective, application of the appropriate legislation and compulsory vaccination campaigns where appropriate. The Ministry in collaboration with other relevant national institutions will collaborate to establish

adequate supervisory services for the enforcement of legislations on animal diseases and pharmaceuticals.

- (xi) The Government will prevent and control human diseases transmitted by food of animal origin. Measures to be taken will include inspection of food premises, products quality control, abattoir, hygiene, meat inspection, prevention and control of chemical residues in food including veterinary drug residues and inspection of food imports and exports.

#### **(4) Agricultural Information and Marketing of Inputs and Outputs**

The marketing systems of both agricultural and livestock commodities and inputs have mostly been liberalized. Government roles are confined to provision of market information and monitoring market performance. The Government will improve data collection at national, regional and district levels, coordinate information services within the Ministry and with other agencies and will analyse, interpret and widely disseminate such information. The available data will also be used for continuous policy analysis and development and will timely publish relevant information on inputs and outputs, prices, market situations, regulatory situations and constraints to promote efficient production and marketing. Particular information requirements of export market will also be developed and publicised. The government will continue to improve the supply of agricultural and livestock inputs in line with the general policy of liberalization.

#### **Policy Statements**

- (i) In order to, strengthen the collection and monitoring of information the government will place adequate Statisticians in every district with necessary basic facilities including radio call system, linked computer system, Telephone and Faxes.
- (ii) The Ministry will ensure that data analysed is disseminated regularly through radio programmes, flash reports on regular papers and bulletins to interested parties.
- (iii) The Ministry will establish an effective market information system for inputs, in order to make markets transparent and inform traders, livestock keepers and farmers about supply shortage availability and prices.
- (iv) The Government will continue to encourage and promote private input supply channels, which should fulfill effective demand from farmers and livestock keepers at reasonable prices.
- (v) During the transition period the Ministry will continue to strengthening the input Trust Fund to facilitate availability of soft loans for local distribution of inputs.
- (vi) The Ministry will advocate and promote credit lines from commercial banks, financial institutions and rural savings and credit societies for traders, farmers and livestock keepers to finance, input supply.
- (vii) The Ministry will advocate for application of minimum import tax levels for agricultural inputs.
- (viii) The government will set a licensing and quality control mechanism for input importers and distributors.

### **(5) Cooperative Development Services**

The Cooperative development functions include promotion, registration and deregistration of cooperatives, inspection and mobilization of rural savings and credits. The Government will continue to promote and strengthen Cooperative movement in the sector as important rural institutions to serve farmers and livestock keeper's interests.

Detail policy statements pertaining to the Cooperative sub sector are contained on a separate document titled Cooperative Policy.

### ***E. Technical services***

The technical aspects of agriculture and livestock include irrigation, agricultural mechanization, land use planning, soil and water conservation and range development.

### **(1) Irrigation Development Services**

Of the total 43 million hectares suitable for agricultural production in Tanzania only about 6.3 million ha. are under cultivation. Out of the cultivated land only 150,000 ha. are under irrigation despite, the irrigation potential estimated at a minimum of 1 million ha. The area under irrigation is operated by both the small farmers and Government institutions such National Agriculture and Food Corporation (NAFCO) 12,500 ha under paddy and Sugar Companies under Sugar Development Corporation (12,500 ha. under sugar cane). Crops raised by smallholder on irrigated land include paddy, maize beans and vegetables. Crops and livestock are adversely affected by droughts and irrigation seems to hold the key in stabilizing agricultural and animal production.

Water resources in Tanzania comprise big and small rivers, the lakes and ground water. These resources can be exploited for irrigation and represent a great potential for irrigated agricultural development. Further, water-harvesting technologies are now available and can be used to arrest and conserve run-off water from slopes and ephemeral streams.

The development of irrigation systems is seen as an important aspect of the agricultural development strategy, which can help the nation to achieve the following objectives: -

- (i) Improvement of food security by increasing the production of rice which depends mainly on irrigation and maize through supplementary irrigation on predominantly rain fed fields;
- (ii) Increasing farmer's productivity and income.
- (iii) Production of high value crops such as vegetables, flowers etc.

In view of the above the Ministry has formulated and adopted "National Irrigation Development Plan (NIDP)". The plan comprises a management and decision-making framework based on comprehensive ranking of schemes within each sectoral management unit (river or drainage basin). The (NIDP) concentrates on the following:

Removal of remaining constraints on the sector by means of various programme implementation such as institutional reform, private sector strengthening, cost sharing and recovery, research, data, development of operation and maintenance of schemes.

- Undertaking detailed irrigation master planning studies.
- Implementation of the schemes along the major river basins.

## **Policy Statements**

- (i) The Government will, focus its support on the development of smallholder irrigation schemes in areas of high potential and sufficient demand for irrigation facilities and will encourage the private sector to provide the necessary services in respect to pre-investment studies, scheme design, construction and management of "large scale" schemes using their own resources.
- (ii) The Government will provide assistance at the planning and designing of smallholder irrigation schemes and supervision of construction. Actual construction work will be contracted to private entrepreneurs.
- (iii) The Government will provide information on the issuing of water rights, regulation and monitoring of natural resources exploitation.
- (iv) The Government will give consideration to land conservation and environmental aspects as well as the needs of disadvantaged groups, to gain access to good and services, land resources and credit.
- (v) The Government will encourage the farmers to form Water Users Associations and Irrigation Cooperatives for management of their schemes as step forward towards commercialisation and participation in the market economy.

## **(2) Agricultural Mechanisation**

About 70% of Tanzania's crop area is cultivated by hand hoe, 20% by ox plough and 10% by tractor. Labour augmenting technologies is a key to agricultural development. The government objective for mechanisation will be the promotion of the supply of sufficient farm machinery, equipment and tools to the farming community by the private sector in order to meet demand at reasonable costs.

## **Policy Statements**

- (i) The Government will establish effective information system regarding farm implements, machinery and equipment.
- (ii) The Government will continue to, promote and encourage agro-mechanization, and modernization in the country through extension services vices and provision of regulatory services for farm implements including strengthening machinery-testing services.
- (iii) Private sector will be encouraged to establish and run tractor hire centers.
- (iv) The Ministry of Agriculture and Cooperatives will encourage and support increased, use of draught animals for both cultivation and transport purposes. To promote wide use of draught power the Ministry will strengthen its extension and veterinary services with particular attention being given to both dry season feeding and husbandry of draught animals particularly during periods of high work demand.
- (v) Government will rationalize the Animal Traction Training whereby training of farmers and animals will be harmonized and training will be shifted to the existing Training Institutes, curricula will be improved and adequate facilities will be provided.

- (vi) The Government will encourage the private sector, NGOs and local communities to own and run Ox Training Centers.
- (vii) The Ministry will support the development and adaptation of appropriate farm equipment.
- (viii) Besides cattle, the Ministry realises the important contributions made by other types of draught animals including asses, donkeys, mules, horses, water buffaloes and camels. It will encourage farmers and livestock keepers to use these animals and will prepare a programme to enhance their development through breeding and adaptation for draught purposes.

### **(3) Soil Conservation and Land Use Planning**

Agriculture involves the use of natural resources. High in the agenda is land. Land has to be managed in such a way that agricultural production is sustainable, even in the long term and that negative environmental externalities are avoided or at least kept to a minimum. Nutrients extracted from the soils should be replaced, forests replanted, soil degradation and overgrazing reversed.

#### **Policy Statements**

- (i) To lessen pressure on land, use of fertilizer, animal manure and mulching techniques will be encouraged through extension and training services.
- (ii) The Government will support the development of new permanent settlements by providing social and economic infrastructure and land use zoning.
- (iii) The ministry will promote crop and livestock husbandry practices that conserve natural resources, enhance soil fertility and sustain production.
- (iv) The Ministry will advocate for formulation of natural resources management plans and environmental action plans.
- (v) In preparation of land use plans, the Ministry of Agriculture in collaboration with other relevant institutions will assess land potential in the basis of data available.
- (vi) In pastoral rangelands, land capability and carrying capacity in various areas will be determined to prevent land degradation, soil erosion, depletion of water resources, and encroachment of forests.

### **(4) Range Management**

Range Management Services include: -

- (a) Rangeland resource inventory.
- (b) Demarcation of grazing lands for pastoralists.
- (c) Range development which consist of;
  - Pasture improvement
  - Water development and conservation
  - Rangelands utilization and Range land conservation



### **Major Issues**

- (i) Lack of update ecological information on range land resources potential;
- (ii) Seasonal availability and poor quality of forage on rangelands;
- (iii) Poor rangelands management use, conservation;
- (iv) Inadequate, seasonal and poorly developed water resources;
- (v) Poor conservation of water catchments areas;
- (vi) Poor water use management and maintenance;
- (vii) Lack of guaranteed security land tenure in pastoral rangelands;
- (viii) Lack of innovative options for meeting the needs of mobile and sedentary pastoralists.

### **Policy Statements**

- (i) The Ministry will study and establish ecological information to enable assessment of the available range lands resources and mapping.  
  
Based on the available information the Ministry will recommend better range management practices including proper carrying capacities, water distribution, etc.
- (ii) The Ministry will carry out research in all aspects of pasture production, conservation and utilization.
- (iii) The Ministry will test improved pasture species to determine productivity and recommend use to improve the quality and quantity of forage and rangelands.
- (iv) The Ministry in collaboration With the Ministry of Water, Donors, NGOs and beneficiaries will facilitate and support development of low cost and sustainable range and water - development and conservation of water catchments areas.
- (v) The Ministry through extension services will advise and train traditional livestock keepers on water use management and maintenance.
- (vi) The Government will endeavor to promote integrated and sustainable use of rangelands resources such as land, soil, water and vegetation in order to conserve the environment.

### **(5) Policy Formulation and Management**

The Ministry has retained Policy formulation and management as one of its core functions. According to the new mission the private sector will be the major players in development of the sector. The Government will provide support services and enabling environment through its policies, legislations, regulations, and information.

In order to effectively carry out this important function the Ministry will undertake efforts to enhance its capacity in sector policy analysis and monitoring, evaluation and impact assessments. This requires constant review of the policies, harmonisation of the various policies, monitoring and coordinating their implementation progress. Key requirements for achieving success in the area of policy formulation and management are an effective management information system and analytical capability supported by financial and material resources.

## Policy Statements

- (i) The Ministry will utilize the information gained through monitoring evaluation and impact assessments for policy development, review and refinement.
- (ii) The Ministry will responsibly articulate the sector priorities within the National Policy framework, macro-policy decisions into sector specific special actions and monitor the impact of sector policy reforms and rural development.
- (iii) The Ministry will advocate both within the government and towards other relevant stakeholders for their interests and to identify long-term view of their needs for enhancement and conservation of natural resources. The major areas of advocacy include; Credit availability to meet the needs of farmers and livestock business, land tenure rights, water development and management, conservation and use of natural resources, development of transport and communication facilities for rural areas, youth employment in agriculture and livestock sub sectors and women access to training, credit, land and low cost and environmentally friendly technologies.
- (iv) The Ministry will advocate for credit availability to meet the needs of farmers and livestock business. Besides the commercial banks, which should be strengthened and encouraged to support the agriculture sector, the Government will institute additional initiatives designed to promote rural financial institutions to be owned and run by farmers and NGO's. Rural Credit and savings schemes and other formal and informal lending schemes will receive special attention in effort to promote agricultural growth, agricultural trade and rural agro-processing activities.
- (v) The Ministry will advocate and encourage financial institutions to establish insurance schemes for agricultural activities.
- (vi) The Ministry will advocate for reduction of numbers and levels of taxes and levies to agricultural and livestock products and inputs in order to enhance competitiveness and incentives in the industry.
- (vii) The Ministry will continue to involve the private sector in policy formulation and review and shall device and develop mechanisms of creating sustainable partnership with the private sector so as to bring about transparency and collaboration on continuous basis. The mechanisms will include periodical meetings, workshops and institutionalising policy advisory and coordinating committee, which will include participation of representatives of stakeholders.
- (viii) The Ministry will strive to establish adequate and sustainable market information for crops and livestock inputs and outputs at all levels.
- (ix) The Ministry will review relevant acts and regulations so as to remove legal obstacles and streamline procedures and make them transparent to all stakeholders.
- (x) The Ministry will take the lead in facilitating the formation and growth of democratic producer and marketing organisations, which together with individual businessmen and private companies will endeavor to serve the farming and livestock keeping communities to the best of their ability. This includes encouragement and support for the formation of subsectoral associations such as beef, dairy, poultry, piggery, cashew, cotton, coffee associations.

### **3.2 Cross Sectoral Services**

The agricultural sector is inextricably intertwined with the rest of the economy. Measures to improve performance in the sector have implications for a macro-economy and other sectors.

The Ministry of Agriculture and Cooperatives will strive to strengthen linkage and coordination with other Ministries which deal with issues which directly or indirectly affect sector development. Areas of priority include: -

#### ***A. Land***

The agricultural sector is the main user of land resources in the country. The sector is characterised mainly by smallholder farmers. About 3.8 million smallholder farmers are in rural areas cultivating about 4,180,000 hectares. In order to modernize and develop agriculture it is of paramount importance that land tenure system assures smallholder farmers and livestock keepers' access and ownership of land.

The Ministry will advocate and support the implementation of new land policy, which stipulate that: -

#### ***Land Tenure***

##### **Policy Statements**

- (i) All land in Tanzania is public land vested in the President as trustee on behalf of all citizens.
- (ii) Land has value.
- (iii) The new tenure system is a dual system, which recognizes both customary and statutory rights of occupancy as equal in law.
- (iv) Right of occupancy shall include all rights over land acquired through direct grants, relevant customary procedures and alienation by legally designated allocating authorities.
- (v) A right of occupancy as a title to the use and occupation of land shall be confirmed by a certificate of Title for the statutory right of occupancy. Customary right of occupancy will be confirmed by *Hati ya Ardhi ya Mila* which will be issued by the village council and registered at the corresponding district land registry.

#### ***Access to Land***

##### **Policy Statements**

- (i) All citizens shall have equal and equitable access to land
- (ii) In order to enhance and guarantee women's access to land and security of tenure, women will be entitled to acquire land in their own right not only through purchase but also through allocation.

## ***Land Utilization***

### **Policy Statements**

- (i) Special areas for various investments will be identified and set aside for allocation to investors by the Government.
- (ii) Land will be allocated to investors according to their ability to develop it and that interests of citizens over their land shall be safeguarded.
- (iii) Land ceilings will be fixed by Government on the basis of use, location, feasibility study and the proven ability of the applicant to develop the said parcels of land.

## ***Village Titling***

### **Policy Statement**

Individuals should be allowed to obtain individual titles within areas not designated for communal uses, land conservation and other specific village or community projects. Villagers through their village assemblies will therefore be allowed to survey such lands and get separate certificate of village land.

## ***Urban Agriculture***

Agriculture is not a principal function of towns but when properly organized urban agriculture has the potential to provide employment, income and is a supplementary source of food supply.

### **Policy Statement**

The Government will continue to regulate the conduct of urban agriculture and will ensure that it does not disrupt planned urban development.

## ***Village land Use Planning***

### **Policy Statements**

Village land use planning process will be simplified for speedy execution. Village land use planning will be based on the following criteria: -

- (i) Local land use plans will be developed by District Councils in collaboration with village councils.
- (ii) Land use planning will be done in a participatory manner to involve beneficiaries. Planning will be preceded by studies to determine existing land tenure, land use patterns and land capability.
- (iii) Village land use plans will be used as a tool for implementing policies for better land use and management. Furthermore, village land use plans will

provide a basis for guiding extension service package including techniques in agriculture, livestock, wildlife fisheries and environmental conservation.

### ***Agriculture Land Use***

There are growing conflicts between agriculture other land uses as both human and animal populations increase. This has resulted in encroachment 1 woodland, wildlife and rangelands.

#### ***Policy Statements***

- (i) Multiple land use techniques will be encouraged in areas of conflicting land use.
- (ii) Community involvement in resources management, land use planning and conflict resolution will be necessary.
- (iii) Agricultural land will be identified, set aside for agricultural use and protected against encroachment by pastoralists.

### ***Rangelands and Livestock Keeping***

There are growing social conflicts, environmental concerns and land use conflicts due to haphazard alienation of rangelands for large-scale agriculture. The extensive alienations frequently disown pastoralists of their grazing lands.

#### ***Policy Statements***

- (i) Security of tenure for pastoralists in pastoral lands areas well be guaranteed by appropriate measures including gazetting to protect grazing land from encroachment.
- (ii) Certificates of village land will be issued to protect common property regimes.
- (iii) Underutilized or neglected former pastureland well be reclaimed and restored to pastoralists, when not en conflict with national interests.
- (iv) When any activities other than pastorales cease en rangelands (e.g. abandoned ranch) that land will revert to its original land use.
- (v) Shifting agriculture and nomadism will bediscouraged.
- (vi) Incentive to proper pastoral land stewardship, including the provision of infrastructure like water supply and cattle dips through cost sharing schemes well be provided and modern trans-humatic pastoralism will he encouraged. Cattle movement will be regulated *through* coordinated planning and the provision of stock routes and other mechanisms.
- (vii) Pastoralists and Agriculturalists/peasants will be educated on good land management and utilization.

### ***B. Industry***

The agriculture and livestock sub sectors are expected to supply.

- Sufficient quantities of food to industrial labour force.

- Raw materials for industries.
- Earn foreign exchange necessary for financing industrial investment and operations through agricultural products exports.
- Increase the income of the rural population, which in turn expand the internal market for industrial goods.
- The industrial sector on the other hand is expected to:
- Supply inputs, which increase the productivity in the agriculture and livestock, sub sectors.
- Facilitates the process of primary products (add value) before export.

### ***Policy Statements***

- (i) The Ministry in collaboration with the Ministry of Trade and Industries will strive to strengthen the mutual interdependence between the two sectors.
- (ii) The Government will establish economic management tools to stimulate adequate degree of processing agricultural products before being exported.
- (iii) The Government will establish mechanism to ensure that domestic industries get access to agricultural raw materials.

### ***C. Infrastructure (Road and Railways)***

Agricultural growth is dependent on the costs of transport, a key ingredient of farm level prices for both produce and inputs.

### ***Policy Statements***

- (i) The Government will facilitate and support expansion of rural transport network and rehabilitation of existing transport network so as to reduce transport costs.
- (ii) Government will facilitate and support investments in other infrastructure for crops and livestock production, marketing and processing. It will also encourage private sector investments and ownership in processing facilities.

### ***D. Environmental Issues***

Agriculture involves the management of natural resources in the production of commercial goods. It is crucial for the long-term future of the country that Tanzanian's natural resources (soils, water, forests, wildlife) be managed so that agricultural production is sustainable and negative externalities are kept to a minimum. In close collaboration with the National Environmental Council, the Ministry will promote prudent resource management and conservation.

### ***E. Agriculture***

### ***Policy Statements***

- (i) The Government will promote intensification and diversification of agricultural production.

- (ii) The Ministry will improve crop husbandry through soil erosion control and soil fertility improvement.
- (iii) The Government will implement measures, which will minimize encroachment in public lands including forests, woodlands, wetlands and pasture.
- (iv) The Ministry will strengthen agro-chemical monitoring and registration.
- (v) The Ministry will promote agro-forestry and organic farming.
- (vi) The Ministry will encourage control of agricultural run-offs of agrochemicals to minimize pollution of both surface and ground water.
- (vii) The Ministry will introduce mechanisms to improve water use efficiency in irrigation including control of water logging and salinisation.
- (viii) The Ministry will intensify plant genetic conservation programmes

## ***F. Livestock***

### ***Policy Statements***

- (i) The Ministry will promote application of environmentally friendly tsetse fly eradication methods.
- (ii) The Ministry will carry out rationalization of grazing systems-to mitigate overstocking.
- (iii) The Government will develop mechanisms for, resolving conflicts among different interests! (Wildlife protection, forestry, pastoralism and agriculture).

## **4.0 AGRICULTURAL PARASTATALS DIVESTITURE**

The overall objective of the divestiture policy which is being executed by the Parastatal Sector Reform Commission (PSRC) as regards Agricultural parastatals is to increase efficiency, productivity, quality of goods, and services through capital injection, new and improved management and technology.

The following are the drawbacks to the parastatal divestiture process: -

- (a) The majority of the MAC parastatals are insolvent. This problem cause less attractiveness to investors and inability to pay, retrenchment benefits to workers.
- (b) Workers have actively slowed down the divestiture process until issue of terminal' benefits and assets/business valuation are clarified in their favour.
- (c) There is no practical strategy in place to involve indigenous people in ownership of the parastatals being divested.
- (d) The majority indigenous Tanzanians have no capital or access to credit to allow them to participate in the divestiture process.
- (e) There are inadequate legal safeguards to guarantee continuity of divested interest.
- (f) There is no policy to protect local expertise in the divested parastatals.
- (g) There is no policy Guideline to guarantee continuation of agriculture and agribased industries in the divested MAC parastatals.

### ***Policy Statements***

In order to facilitate accelerated but sustainable divestiture process the following policies will be pursued:

- (i) MAC will advocate for divestiture of production and commercial oriented parastatals.
- (ii) Since MAC parastatals are land based: attaching value to the land asset, promotion of employment and wider participation of people including those surrounding the enterprises being divested, will be considered.
- (iii) The government will continue to invest in strategic areas which have failed to attract investors.

## **5.0 FINANCING OF AGRICULTURAL AND LIVESTOCK SERVICES**

In order for the Ministry to effectively and efficiently execute its core responsibilities, adequate and timely availability of funding is required. Despite the importance of agriculture and livestock sub sectors to food security, poverty alleviation and national economy at large, funding for key public agricultural and livestock services has been declining in real terms for a decade. Information available indicates that central government expenditure on agriculture and natural resources has remained below 2 percent of Gross Domestic Products (GDP). This is far below compared to other countries. For example other governments spent an average of 11.6 percent of agricultural GDP between 1984 and 1988 where as Tanzania spent only 2.7 percent. This is clearly inadequate especially in the light of the importance of agriculture in the economy.

### ***Policy Statement***

- (i) The Ministry will advocate for increased government spending to the sector commensurate to its share contribution to the Gross Domestic Product.
- (ii) The Ministry will advocate for adequate allocation of resources to its core services.
- (iii) The Ministry will advocate for a policy that savings resulting from rationalization of its functions and services be retained by the Ministry to strengthen priority core functions as well as to improve government contribution to other charges.

## **6.0 SUB SECTORS POLICY STATEMENTS**

### ***6.1 General Background***

This section focus on the main two sub-sectors namely the Crop and Livestock. For each sub-sector, there will be a general statement on its status followed by general policy statements. Further a similar treatment of each industry in terms of specific problems affecting the industry followed by specific policy statements addressing these problems is elaborated.



The crop sub-sector is broken down into three major categories, namely the food crops, export crops and nontraditional crops. The livestock sub-sector will also be divided into three components, which include, beef, dairy and small stock industries.

## ***6.2 Crop Sub-Sector Policies***

### ***6.2.1 Traditional Export General Issues***

Traditional Export Crops include' Coffee, Cotton, Cashewnuts, Tobacco, Tea, Sisal and Pyrethrum. The production of these crops shows no clear trend and annual fluctuations are largely influenced by climatic circumstances, incidence of pests and diseases, and short-term price variations. With only a very small share of the international market (except sisal and pyrethrum), increased production of these commodities in the country would not affect exports prices. In the medium term, these prices are expected to remain at a level sufficient to support the financial viability of the production 'of these crops in Tanzania. The development of new technologies and its delivery systems will be a key area of focus in order to remove identified constrains, and increase productivity and profitability of these crops. These efforts will be guided by the following general policy statements.

#### ***General Policy Statements***

- (i) The Government will continue to maintain market exchange rate in order to, eliminate distortions, and thereby give realistic increase returns to producers;
- (ii) To bring competitiveness in the above policy, the Ministry will on continuous basis review and advise on the impact of taxes and levies on the traditional export crops.
- (iii) The Government will expand and improve efficiency in marketing and processing services by inviting and encouraging more private sector participation;
- (iv) The Government will continue with its efforts to lower production costs in order to increase profitability of these crops through enhanced and expanded technical services and removal or minimize duty on inputs and equipment.
- (v) The Government will institute measures to revamp applied research and specialized extension services for the cash crops;
- (vi) The Ministry will continue to advise the Government to direct investments in agricultural sector in order to improve production, efficiency in production, market penetration, and participation;
- (vii) The Government will strengthen quality control services for these crops;
- (viii) The Ministry will advocate for the government to continue to restructure public, monopoly companies, which offer services to the agricultural sector with the view of making them more efficient in rendering their services at competitive charges.
- (ix) The Ministry through 'its Cooperative Development Division, will encourage, and facilitate the establishment of Rural Savings and Credit Societies, establishment of Cooperative Banks and other formal lending institutions in order to make input credit facilities available to crop growers;
- (x) The Government will concentrate on rural roads linking farmers with the processing and

- (xi) The latter with railheads and ports.
- (xii) The Government will continue to encourage more competition. The Crop Boards will be assigned to regulatory functions leaving commercial activities to the Cooperative Unions and the private sector, while the Government itself retaining policy formulation and monitoring, and the provision of information to
- (xiii) All participants in the crop industries.
- (xiv) Regarding research and extension services, Government policy will be to provide
- (xv) Mechanism for a strong linkage between them and the beneficiaries and to institute a measure that will provide funds from the industry to finance these services.
- (xvi) On the marketing front, the Government through respective Crop Boards will ensure an organised and transparent primary procurement.

### **A. Coffee Issues**

Although area under coffee has more than doubled during the past 20 years, total production has essentially remained stagnant at about 50,000 per year. Production in the traditional coffee growing areas has declined due to reduced production in public estates, old age of trees, low input use, increased incidence of diseases and low returns to producers in the face of escalating cost of production. However, this decline in production has been compensated by expansion in new areas where most of the area expansion has taken place.

### ***Policy Statements***

- (i) The Government will strengthen research services in order to develop new cultivars which combine high yield and resistance to diseases to replace the current old trees in the all coffee growing areas and supply seedlings for expansion in the South. In this respect, private sector participation will be invited and encouraged, particularly in the production of planting materials;
- (ii) In order to co-finance coffee research, the Government will institute a levy on coffee auction sales to finance coffee research and seedling production programme;
- (iii) The Government will divest the nationalized estates in the traditional coffee growing areas in order to increase production and productivity;
- (iv) The Government will license the establishment of coffee factories and encourage cooperatives to spread ownership of existing factories to private operators (private investment) in order to ensure that they are properly maintained and operate efficiently;
- (v) The Government will encourage private sector, farmers associations and cooperative to invest in proper primary processing methods in order to improve quality of the crop. This will also involve reviving and spreading central coffee and mini pulperies in all arabica coffee growing areas.
- (vi) The regulatory functions for the industry will be carried by the Tanzania Coffee Board (TCB).

## **B. Cotton**

### **ISSUES**

Although in recent years cotton production has been on the upward trend, yield per hectare is low, at 0.4 tonnes as opposed to 0.6 - 2.0 tonnes in other African countries. Lack of better varieties and non-use of fertilizer and inadequate application of pesticides are cited as the major constraints to increased productivity. The potential for increased production to a sustainable level of 300,000mt, of seed cotton lies primarily in intensification, which will allow for increased production per unit of resources deployed (land and labour). To address these problems and others affecting the cotton industry, the following policy measures will be taken:

### ***Policy Statements***

- (i) Traditional cotton growing areas in Lake Zone, Tabora, Morogoro, Singida and Coast regions have depleted soil fertility and disturbed the ecosystem balance. Government thrust will be to rehabilitate and restore soil fertility through strengthened „research and extension services, which will deliver appropriate technological package in order to increase productivity. The Government will encourage the production and expansion of the crop in new areas of Coast, Morogoro, Kigoma and Mbeya regions.
- (ii) The Government will facilitate ' the establishment of a network of rural input stockists to avail the necessary pesticides and fertilizers to farmers and shall promote Integrated Pest Management (IPM);
- (iii) Parallel to the above efforts the Government will source funds from industry to finance cotton research in order to develop better seed varieties with better quality lint, oil content, disease resistant etc.
- (iv) The industry will be regulated by Tanzania Lint and Seed Board, which among other duties will institute strict regulatory measures to enforce seed quality and disease control.
- (v) The Government will encourage private sector establishment of new ginneries and rehabilitation of existing ginneries and oil mills. However, in view of disease constraint the Government will establish the optimum ginning capacity locations.

## **C. Cashewnuts**

### ***Issues***

Measures taken to liberalize the markets of both output and inputs have produced extremely encouraging results. Production has dramatically increased from 16,500 tonnes in 1986/87 to 80,000 tonnes (1995/96). However, major threats to the recovery of this crop are effective operating capacity factories, quality control, organization of primary procurement and multiplicity of levies. Although total rated capacity of existing factories is over 100,000 tonnes of raw nuts per annum, effectively only about 30,000 tonnes of raw 'nuts can be processed. Besides continuing with the liberalization process, the overall Government policy stance will be as follows:

### ***Policy Statements***

- (i) On cashewnut processing, Government policy will be to finalize the process of facilitating private sector participation in ownership, rehabilitation, operations and management of existing processing factories and set an annual mechanism which will favour the processing of a greater proportion of the crop in these factories;
- (ii) The Government would also like to see the development of labour - intensive small scale processing methods in order to complement large scale factories and to improve the quality of nuts. To this end the government will initiate a study to determine the feasibility of such methods which in India have proved to be very effective in increasing quality of kernels and creation of jobs in rural areas, particularly for women;
- (iii) The Government will encourage and assist to strengthen private sector initiative to import and distribute cashewnut inputs, encourage rural stockists of cashewnut inputs and strengthen the input credit system already initiated by the Government. Rural Savings and Credit' and other lending forms will also be encouraged in order to improve the availability of input credit facilities to both stockists and producers:
- (iv) Prolonged sulphur spraying may have a negative effect on soils. Government shall promote monitoring mechanism in order to protect the environment from its long-term effects.
- (v) The industry will be regulated by the Cashew Board of Tanzania.

### **D. Tobacco**

Major issues in the tobacco industry are low level of technology application on the crop and adverse environmental effect of the industry. As the crop continue to be expanded (e.g. 16,000 ton in 1990/91 visa a vis 30,000 tons in 1995/96) these issues become more pronounced.

### ***Policy Statements***

- (i) The Government will acquire financial resources to fund a research programme which will endeavour to develop the right varieties, carry soil analysis, evolve agronomic packages, farming systems and search for alternative curing techniques using better methods that minimized dependence on wood fuel;
- (ii) To protect environment, the Government will work with the local authorities and communities to ensure that in tobacco growing areas farmers are compelled to establish woodlots to replace depleted natural woodlots;
- (iii) The Government will implement market liberalization for both output and inputs, by stimulating more competition and transparency in the marketing of tobacco and the distribution of inputs.
- (iv) The industry will be regulated by Tanzania Tobacco Board.

## **E. Tea**

### ***Issues***

Tea is one of cash crops in Tanzania whose production has maintained an upward trend in the past five years. It was 18,000 tonnes in 1990/91, 19,500 tonnes in 1991/92, 21,000 tonnes in 1992/93, 22,200 tonnes in 1993/94 and 23,000 tonnes in 1994/95. The bulk of the crop is produced by large-scale estates, which are increasing in number as a result of the general policy of opening up the agricultural sector to private investment. Constraints affecting production are mainly found in smallholder farms and on the Tea Authority estates. Low application of modern production technology, liquidity and management problems have forced the Authority's factories to operate at 68 % as opposed to 83 % in the private sector in 1994/95 season. Poor feeder roads and inadequate transport equipment, have also combined to inhibit production of tea at both farm and factory level. In view of this, Government policy stance will be as follows:

### ***Policy Statements***

- (i) To strengthen and direct extension services to smallholder tea production will be one of Government policy tenets designed to make available and encourage the use of modern production technology;
- (ii) To complement the above policy efforts, the Government will permit private tea companies to buy green leaves from small producers and encourage them to supply inputs on credit under growers' contract arrangements;
- (iii) To improve processing efficiency, the Government will encourage private investors to acquire ownership; and management of Tea Authority's factories under already established mechanism;
- (iv) To fit with the present trend, the Tanzania Tea Authority will be converted into a Crop Board with a mandate to regulate the industry;
- (v) The Ministry will advocate for the strengthening and maintenance of feeder roads, particularly those traversing areas operated by smallholders.

## **F. Sisal**

### ***Issues***

The sisal industry is facing problems at both production as well as on the world market. The annual production was on average about 34,000 tonnes, during 1989/90 to 1991/92 and 28,000 tonnes during 1992/93 - 1994/95. Export prices which have stabilized at a low level in real terms since 1985, are not expected to increase.

Labour shortages, poor condition of the machinery (decorticating), shortages of transport equipment and liquidity, particularly on Tanzania Sisal Authority's estates, are some of the major problems affecting the industry. At intermediary level, production of sisal products is hampered by low capacity utilization of the factories (about 30%) due to short of fiber, poor management and badly maintained machines.

On the world market the demand for fiber and sisal products have also remained limited and prices have stabilized at a low level partly as a result of the collapse of the East European market and the Brazilian policy of dumping low grade fiber. The survival of the industry

will therefore depend on policy initiatives that will allow the industry to make effective use of the traditional market outlets (fiber and traditional products) and, the development of new products. Fiber production strategy will have to match this new policy stance.

### ***Policy Statements***

- (i) Government policy of separating commercial and regulatory functions in its parastatals will be extended to the Tanzania Sisal Authority. A Sisal Board will be formed and will perform a regulatory role.
- (ii) In view of the above efforts, the Government will divest all estates and mills owned by the Authority to private sector buyers in order to improve efficiency and to reduce cost of production of both fiber and its products;
- (iii) The Government will strengthen research on alternative uses of sisal (biogas generation, animal feed, paper and pulp, organic fertiliser, medicinal products etc) and to support pilot operations for these alternative uses;
- (iv) Appropriate levy on sisal will be charged to be used for research and information center. In this respect, the Government will negotiate with Sisal Association of Tanzania (SAT) on the management and funding of the Mlingano Sisal Research Institute and on setting up an information center at the institute;

### **G. Pyrethrum**

#### ***Issues***

The pyrethrum industry is in a situation in which both increase and decline in production threaten its viability. Its major feature has been its low production for a long time. ; Production increased from 1,700 tonnes in 1990/91 to 2,400 tonnes in 1991/92 but declined to 2,000 tonnes in 1992/93, 466 tonnes in 1993/94 and 1,600 tonnes in 1994/95.

Stiff competition from other crops in terms of prices and labour requirement, research to develop appropriate technical packages for farmers (improved seeds, planting materials and better crop husbandry), and restrictive and inefficient marketing channel are factors held responsible for the decline in production for the last three decades.

At international market level, pyrethrum extract is facing a narrow market with a limited demand for which increased supply will simply drive down prices to unacceptable level. The challenge is how to stabilize production at a level commensurate with demand both at home and on the world market where Tanzania has a market share of 11 %. In addition to this problem, the existing extraction plants are dismally inefficient with frequent breakdowns resulting in low capacity utilization (30%) and low average recovery rate (77 %) over the past 10 years. In view of this, the following policy proposals are deemed appropriate to address these constraints.

### ***Policy Statements***

- (i) The Government will develop technical packages such as clones with high pyrethrum content, for farmers in order to enable them to achieve higher yield in terms dried flowers per hectare and pyrethrin content. Research programmes will endeavour to develop improved quality of seeds and seedlings, and

extension services will be geared to impart better drying and storage techniques, and to encourage farmers to use more fertilizer.

- (ii) On marketing, reduction of marketing and processing costs so as to pass on to producers a greater share of the export price, will be a key policy tenet in effort to increase production of dried flowers. In pursuit of this policy objective, marketing of pyrethrum flowers will be entirely liberalized, thereby phasing out the Pyrethrum Board from marketing functions and assigning it to industry regulation and promotion;
- (iii) Moving into a direction of exporting more finished products is one of the strategic policy decisions worth taking the risk to make. The Government, in collaboration with private investors, will undertake a feasibility study to determine the possibility of setting up an extract refinery. A starting point in this area will be for the Government to invite the private sector to participate in pyrethrum processing at Mafinga Factory and marketing of the products with the aim of attracting capital and expertise to the pyrethrum industry.

### ***6.2.2 Non-Traditional Export Crops***

#### **General Issues**

In the agricultural sector non traditional exports; Ire (hose crops whose exports depends on the availability of surpluses these include oilseeds, pulses horticultural items, spices, livestock, sugar, cardamoms, cocoa beans and the major staples. However, in this section only oilseeds, pulses, horticultural crops and spices will be cited. Major staples and sugar will appear under food crops while the livestock will he covered under the livestock sub sector.

Emphasis to develop these crops for export arises from Government desire to diversify sources of foreign exchange earnings to augument the traditional ones. Earnings from these traditional export crops seem to have hit a barrier whose removal would require a dramatic technological breakthrough change in production and equally revolutionary improvement of world prices of these crops. These events are unlikely to occur even on the long time horizon.

However, the non-traditional export crops face formidable constraints which include poor production organization, lack of appropriate technology (transport, storage, processing and packaging) for ha: -idling them after production and disorganized marketing system. As result of these problems, quality control and stability in supply are difficult to achieve, thus leading to their low contribution to foreign exchange earnings. Policy strategy is therefore, required to eliminate or minimise the effects of these constraints before these items can be expected to play an effective role in foreign exchange earnings.

#### ***General Policy Statements***

- (i) Private sector initiatives are critical for the development of these crops into dependable sources of foreign exchange earnings. Government responsibility will therefore, include the creation of an environment that will facilitate the private sector to invest in these crops through:
- (ii) Establishment of a good marketing system;
- (iii) Carrying out market surveys to identify products with export potential;

- (iv) Some of these crops, particularly perishables, require an efficient system of transport and telecommunication. The Ministry will advocate for the enhancement of these critical support services.
- (v) Further measures to promote export will include streamlining legal and administrative obstacles.
- (vi) The Ministry shall establish a mechanism for quality control.

### **A. Fruits, Vegetables and Flowers**

#### ***Issues***

Tanzania's climatic growing conditions can accommodate the production of a wide range of fruits, vegetables and flowers. The most important fruits include pineapples, passion fruits, citrus fruits, mangoes, peaches, pears and bananas. Vegetables include tomatoes, spinach cabbages, okra etc. Flowers include many tropical varieties and some temperate types. While some of them can be produced throughout the year, the majority of these products are highly seasonal. Most of them are consumed at farm level, leaving the domestic market with gluts and severe scarcity during on and off seasons respectively.

The external market of fruits and vegetables presents good opportunities in the neighbouring countries, Middle East and Europe. While exports to the neighbouring countries and Middle East can be shipped throughout the year, penetration of the European markets is confined mainly to off-season (during winter). During this period Tanzania has to compete with the rest of Africa, South America, Asia, Australia and New Zealand.

At home the development of these items faces the following challenges:

- (i) Poor production organization (inadequate supply of seeds and inputs, and poor research and extension services);
- (ii) Poor marketing system resulting in quality deterioration and huge post-harvest losses;
- (iii) Inadequate storage, packing technology and processing facilities which in turn create gluts and severe shortages of these items;
- (iv) Poor roads, particularly feeder roads, and inadequate and inappropriate transport equipment.
- (v) Poor quality control system and packaging materials.

The obstacles on the export front are even more challenging. To gain access to the export markets, the country needs to tackle the following constraints: -

- (i) To meet stringent product specifications, which include uniform size, colour, variety and other characteristics, which constitute the desired quality, demanded by extremely discriminating consumers;
- (ii) To meet market requirements, which implies that supply must be regular and dependable;



- (iii) To meet shipping schedule, meaning that road transport must be efficient and dependable, and that availability of air or ship cargo space must be adequate and regular;
- (iv) Export procedures must be fast and efficient.

In order to remove these obstacles and pave the way towards the desired objectives, the Government will put in place the following policy.

### **Policy Statements**

- (i) To enhance production of high yielding and disease resistant varieties of these items, the Government will give high priority to the strengthening of research, extension and small scale irrigation;
- (ii) The Government will assist the private sector to organize domestic as well as export markets for these crops. Government responsibilities will be in the areas of quality control, advocating for acquisition by the private sector of capital for storage, packaging and transport facilities, transportation networks and providing market information services.
- (iii) For export of fresh fruits, vegetables and flowers, the Government will support a programme of breeding, distribution and production jointly between the private sector and Government, of varieties, which are popular on the external markets.
- (iv) The Government will continue to streamline export procedures in order to encourage the private sector to export greater quantities of the popular varieties to overseas markets.
- (v) The Government will facilitate negotiations with both regional and overseas airlines for increased cargo space to accommodate Tanzania's produce.

### **B. Oilseeds Issues**

These crops include industrial and edible oilseeds. Castor seeds fall under the first category (industrial) and the second group consists of sunflowers, groundnuts, sesame, copra, cottonseeds and soya beans. While the production of cottonseeds depends on the size of seed cotton crop, the other oilseeds have shown erratic trend in their production. Major factors that have influenced the production situation are poor producer prices and the collapse of the domestic and export marketing systems.

Research and extension services have been weak in supporting this industry with the result that improved seeds and good crop husbandry have not reached producers thereby occasioning low productivity and production. In order to reverse the trend and allow the industry to play an effective role in foreign exchange earnings, the private sector holds the key and Government attention must be directed to how it can assist the sector to accelerate growth of the industry.

### ***Policy Statements***

- (i) The Government will strengthen research and extension services in order to avail improved seeds, good crop husbandry and inputs for the production of the crops and to emphasise the importance of these seeds to industry and human nutrition.

- (ii) To facilitate the formation of traders' associations with the view to setting up a marketing system that can effectively serve producers of these crops.
- (iii) The Government will arrange to provide quality control service for these crops in order to improve their competitiveness on the world markets.
- (iv) The Government will set up an information system with the view to linking up producers and traders in an effort to enable both to take advantage of opportunities presented by the market.

### **C. Pulses**

#### ***Issues***

This group of crops consists of cowpeas, pigeon peas, green beans, common beans, yellow grams and lentils. Some of these crops are important food items in both rural and urban areas.

Inadequate support services in terms of research, extension and modern inputs have combined to depress yields and total production. Disorganized domestic and export marketing system, coupled with insufficient information to link domestic market with the export markets have acted against producers and traders, particularly those operating at primary procurement level. A policy designed to develop these crops for domestic use and export must address these issues adequately.

#### ***Policy Statements***

- (i) The Government will position itself to provide efficient support services to these crops so as to first and foremost stimulate production. Research into better yielding varieties and effective technological packages will be given priority in this respect.
- (ii) The Government, in collaboration with traders, will endeavour to establish a proper marketing system for these crops in order to facilitate primary procurement, transportation, processing and export with the ultimate aim of maximizing returns to producers, traders and the nation.
- (iii) The Government will put in place a system of collecting and disseminating information on these crops in order to ensure trading operations are carried out competitively and equitably.

### **D. Spices Issues**

Spices like black sweet and hot pepper, chillies, ginger, onions, coriander, garlic onions, hermeric, cinnamon, vanilla, are important crops for both the domestic and export markets. Production of these will also enable traders to export the crop when market conditions are most favourable;

For cardamom, the Government will encourage and assist the private sector in developing appropriate methods of drying the crop so that it satisfies export market specifications, thereby fetching better prices.

## **E. Cocoa Beans**

### ***Issues***

The major global issues at present are over-supply of the commodity and the collapse of the international marketing arrangements for the crop. On the other hand it is quite clear that this crop is a good small-scale foreign exchange earner (nearly \$4 million in 1992) surpassing many other non-traditional exports. In places where it is grown - especially Kyela in Mbeya region, Tanga and Morogoro regions, it is also an important source of income to smallholder cocoa producers.

### ***Policy Statement***

As an important source of income for smallholders, the Government will use its extension service to promote the crop, while the cooperatives and the private sector will be encouraged to continue with the marketing of the crop.

## **F. Dates, Kapok and Oil palm**

Dates are drought resistant tree crop which can be grown in Dodoma, Singida and Tabora but its demand in Tanzania is limited. Kapok has two products of use - seeds can be crashed to produce edible oil while the lint can be used in making mattresses. The crop is grown in Korogwe district, Tanga region and some parts of Coast, Morogoro and Shinyanga regions. Its importance has declined due to availability of other edible oilseeds and lint.

### ***Policy Statements***

- (i) The Government will undertake a series of studies to determine, the viability of these three crops before a strategy to develop production is considered.
- (ii) In the meantime the Government will strengthen extension services for oil palm in order to maintain the production of the crop in Kigoma, Mbeya, Ruvuma and Morogoro Regions.

## ***6.2.3 Food Crops***

### **General Issues**

In this section three categories of food crops will be discussed. These categories include the major staples (maize, rice and wheat), drought resistant crops (sorghum, millet and cassava) and other sub staples which comprise Irish potatoes, sweet potatoes, bananas and plantains. Sugar will also be included in this section.

The primary aim of food crops production is to satisfy domestic demand. This means that the estimated 40% of the population, which lives in food deficit regions, must be elevated to a level where their minimum food requirements are met. It also implies that the other 40% of the population (children, pregnant and lactating mothers) which faces moderate to worse malnutrition must be rescued from the situation. Finally, those who at any time, will drop out of the market on the account of inadequate purchasing power must be assured of basic food security. To meet these challenges, production of food crops will have to register an annual growth rate of at least 4%.

The secondary objective of food crop production is to facilitate the entrance of some of these crops into the export market on a regular basis. Indeed in recent years, rice, maize, sorghum, millet, cassava and beans have qualified to enter the list of non - traditional export crops, thereby earning the country a substantial amount of foreign exchange. This objective is more important for Ruvuma, Iringa, Mbeya and Rukwa regions which are located at a great distance from the main domestic markets but closer to lucrative markets across the borders. Neighbouring Countries should therefore, be the target of this policy initiative. However, there are hurdles to be surmounted in the path towards these objectives.

#### **A. Major Staple Food Crops Issues**

Market liberalization has drastically changed production environment of these crops especially of maize. The withdrawal of fertilizer subsidies, the collapse of seasonal credit delivery and of input delivery systems have combined to make production of these crops both difficult and costly. The economic reform programmes have also created new marketing which will have an impact on the long-term viability of these crops.

#### ***Policy Statements***

- (i) Revival of credit and input delivery systems are critical for sustainable production of these crops. Having liberalized the marketing systems for both outputs and inputs, the Government will create an environment in which the private sector will take the lead in carrying out functions related to credit and input delivery. Government encouragement will be directed to the formation of credit and savings societies, Cooperative Banks, NGOs and other informal and formal lending institutions. Similarly procurement and distribution of input will be undertaken by the private sector.
- (ii) The system of improved seed production and distribution is deficient leading to high prices, smaller coverage and often poor quality. A new system is being established in which Government will encourage both local and international large and small scale on farm commercial seed production schemes on private basis. The bulking of public varieties at breeder seed level, especially for potential lines will be the responsibility of the Ministry until an appropriate Plant Breeder Rights (PBR) legislation is developed. A licensing system of Government varieties to private sector will be provided under the new Act. Finally, Government will pay special attention to formation of growers' and traders associations, which will be facilitating the bulking, and distribution of the improved seeds in their respective zones.
- (iii) Research into suitable varieties and extension services to promote the use of such varieties and fertilizer will be strengthened;
- (iv) Capacity to acquire the necessary inputs and logistic ability to use such inputs to control pests and vermin will be built within the Government machinery as well as in the private sector in order to reduce crop losses at all levels. Storage system, particularly at farm and intermediary levels will be developed, spread and strengthened.
- (v) On the marketing front, besides strengthening competition, procurement will be organized in order to promote quality control, advocacy for rationalization of levies, and facilitate the collection and dissemination of market information. Cross border trade in food grains will be legalized, facilitated and encouraged;

- (vi) The grain-milling sector will be reviewed and given support to match the changing consumption pattern, especially in the urban centers. The Government will take measures to ensure milled products conform with quality prescribed by the Bureau of Standards. Secondly the Government will encourage millers to establish a direct relationship with producers through agents in order to facilitate credit and input delivery under contract farming arrangements;
- (vii) Women in the rural areas are playing a critical role in food production, transportation, processing and distribution. The Government will create an environment which will make them more effective in these responsibilities by accessing them to land, credit, inputs and labour-saving technologies;
- (viii) The Food Security Department will be strengthened in order to enable it to manage Strategic Grain Reserve (SGR) efficiently, advise the Government on food Security matters and on import/export policy and procedures. In this respect, the Department will be equipped to determine whether or not any of these three grains needs to be exported or imported taking into consideration the effect of either decision on domestic production.

### **B. The Drought Resistant Crops Issues**

For sorghum and millet there is evidence to indicate that research institutions have developed good quality varieties but problems of seed distribution, extension service, marketing outlets and processing have driven production and utilization of these crops back to subsistence level. Production of cassava has also reverted to subsistence consumption. At that level they play a crucial role in maintaining food security for millions of rural families. However, official actions of delivering maize to drought-prone areas when the need arises threaten the viability of these crops as recipients are given to believe that maize is a superior grain to which their productive resources must be directed. The tendency in many areas facing drought is therefore, to try to grow maize against adverse climatic conditions. Given proper support, these crops can contribute significantly to food security in both rural and urban areas and also enter the non-traditional export crop category in which the country could earn additional foreign exchange.

### ***Policy Statements***

- (i) The Government will take steps to ensure that supportive services are concentrated on drought-prone areas in order to stimulate production of these crops. Distribution of seeds, control of pests and vermin and extension services to promote the use of available technologies will be given special attention. Experience has shown that there is a need for maintaining strategic seed reserve (SSR) to cover for disaster situation. A modality will be put in place to establish a mechanism that will facilitate establishment of SSR.
- (ii) The Government will assist the private sector to develop a strong marketing system for these crops. Collection and dissemination of information on availability, demand, prices and quality requirements will be a key responsibility of the Government.
- (iii) The Government will encourage the private sector to install processing facilities in both production and consuming areas in order to promote commercial consumption of these crops;
- (iv) The Government will ensure that when famine relief is required in drought-prone areas, as far as possible, only drought-resistant crops will be delivered to the victims

in order to encourage the production and utilization of these crops in these areas;

- (v) The Government will assume the role of providing farmers and traders with export marketing information in order to promote the production and export of these crops.
- (vi) Research into more processed products and their utilization will be initiated in order to promote domestic and export consumption of these crops

### **C. Other Sub-staples Issues**

Of these crops, Irish potatoes, bananas and plantains are important in the diets of both rural areas and urban centers. Sweet potatoes are seasonal in production and are important in certain parts of Tanzania during the growing period. Research into better yielding varieties, disease and pest control, storage and processing technologies is limited with the consequence that utilization of these crops is confined to specific areas.

#### ***Policy Statements***

- (i) Research will concentrate on producing better yielding varieties so as to increase production; of products preferred by the market.
- (ii) Better storage technologies will be developed in order to maintain quality and spread supplies throughout the year;
- (iii) Processing to convert these crops into a wide range of products in order to expand utilization will be encouraged by Government.
- (iv) The Government shall encourage and support the establishment of market centers for these crops and in collaboration with the private sector establish marketing conduct for the commodity group.

### **D. Sugar**

#### ***Issues***

While annual domestic consumption is estimated at about 300,000 tons (1996) and installed plant capacity is 230,000 tons per annum, actual sugar production averages 120,000 tons per annum. Per capital sugar consumption is thus about 10Kg which is 25% of the level in developing countries. Installed capacity is 76% of the demand while actual production is about 40% of actual demand.

As a result of this situation three issues arise. The first is immediate need to rehabilitate facilities and increase production, the second is to expand production to meet and sustain an increasing sugar demand and the third is the need to import large quantities of sugar in the interim period to bridge the gap between production and demand without adversely affecting local sugar production and expansion.

#### ***Policy Statements***

- (i) The government will encourage the private sector to participate in the ownership and management of the existing public estates with the aim of

rehabilitating the estates so that the existing facilities produce sugar at full capacity (230,000 tons per year).

- (ii) While existing facilities shifts their production capacity to full utilization, the Government will put in place a system that will allow private traders to import the commodity to supplement domestic production.
- (iii) iii) The Sugar Development Corporation will be restructured to remain regulatory institution of the industry.
- (iv) (IV) The Government will create an environment in which new private estates and small scale processing plants are facilitated. Emphasis will be directed to Mtwara, Ruvuma (Tunduru district) and Morogoro regions, which offer possibilities for the new direction.

### **6.3 LIVESTOCK SUB-SECTOR POLICIES**

#### ***A. General Issues***

Tanzania is endowed with 88.6 million hectares of land suitable for agricultural production, including 60 million hectares of rangelands ideal for livestock grazing. However, of the total rangelands, 60% is tsetse infected, leaving a balance of only 40% available for livestock keeping. The carrying capacity of the rangelands is estimated at 20 million animal units but currently there are only 16 million animal units. There is therefore, ample potential for expansion of the livestock industry.

The actual situation of the livestock population at present is revealed by the 1994/95 National Simple Census of Livestock. According to the Census, Tanzania has about 15.6 million cattle, 10.7 million goats, 3.5 million sheep and 27 million chickens. Other livestock include 201,789 pigs, 134,186 donkeys, 4807 buffalo, 47,851 rabbits, 43,159 guinea fowls and 1.2 million geese. About 90% of the national cattle herd is of indigenous breed, namely the Tanzania Short-Horn Zebu. The indigenous variety is owned by the traditional herders. Out of the 3.8 million farming households some 106,000 practice pastoralism and another 268,000 are engaged in agro-pastoralism. About 98% of the livestock are under these two systems. Only 303,704 of the total cattle population of 15.6 million head are of improved type. About 212,299 (1.4%) are improved dairy cattle and 91,045 (0.6%) are improved beef cattle. Over 90% of the improved dairy cattle are mainly found in six regions of Kilimanjaro, Arusha, Kagera, Dodoma, Tanga and Mbeya. The improved beef cattle are mainly found in Kilimanjaro, Arusha, Kagera and Tanga.

The livestock sector can be categorized into two major production systems; i.e. extensive and intensive livestock production systems. The intensive production system, though limited in size, has been receiving more emphasis in investment and improvement because of its "visible contribution" to the market oriented economy. On the other hand, pastoralism (nomadic, semi-nomadic) is practised by mainly vulnerable pastoralists and has been viewed as inefficient due to lack of understanding of the economics of its low-cost, labour intensive nature based on natural seasonally available forage requiring mobility. The "inefficiency label" is based on the perceived weakness i.e. poor animal husbandry, lack of modernization, irrational behaviour to accumulate stock beyond the carrying capacity, and lack of market orientation.

Since mid-eighties Tanzanian economy has been undergoing gradual fundamental transformations towards a market-based economy. The macro-policy reforms have necessitated a redefinition of the roles of the public and private sectors in the livestock development. One of the

reasons for having the new policy is to get all the various entities involved in the sub sector to pull together and in the right direction. The major players that shape the livestock services sector are: stock owners (commercial livestock farmers, sedentary or mixed farm producers, pastoralists, small backyard raisers), producer/traders/processors representatives, veterinarians, veterinary para-professionals, livestock officers and economists, animal scientists and researchers, consumers, the governmental and non-governmental organizations, donors and private entrepreneurs providing specialized services to the sector.

As the majority of livestock products come from the traditional sub sector, small improvements in productivity per livestock unit will result in large increases in production. The long, term objective is therefore to bring about a change in traditional producers attitudes and practices thereby increasing productivity to the level where it evolves into the: modern sub-sector. To meet the rapid rise in demand for livestock products emphasis will be given to improvements in the traditional sector as well as expansion of the private commercial sub-sector.

### ***B. Importance of Livestock in the Economy***

The sub-sector is an integral part of Tanzanians economy. According to 1994/95 Agriculture Census results, the sub-sector contributes about 18% of the national GDP of which beef, dairy and other livestock provide 40%, 30% and 10% respectively. The sub-sector as a whole contributes about 30% to the agricultural GDP. However, there are other benefits of the livestock sub-sector. It provides food which is consumed in the form of meat, (246,000t) milk, (600m litres) milk products and eggs (320,000t) annually. Further, 40% of the 3,871,277 agricultural households in Tanzania are involved in crops and livestock production whereas 0.4% is keeping livestock only. The animals are a source of manure, hides and skins. Livestock are a potential source of draught power (800,000) for cultivation and transport. In fact, intensive agriculture is more sustainable when livestock enterprises are integrated into the production system. Finally, livestock provide alternative savings to banks with reasonable protection from inflation.

#### ***6.3.1 Major Constraints to Livestock Development***

Despite the large livestock population and vast rangelands resources, the sub-sector's contribution to agricultural GDP and sub-sector's national GDP are relatively low. Similarly, per capita consumption of livestock products in Tanzania is equally low (meat: 7kg, milk: 20 litres, eggs: 1 per capita and year). Major constraints that prevent the sub-sector from realizing its full potentials can be summarized as follows:

- (i) Inadequate and poor nutrition. There exists annual and seasonal variations of forage supply and quality for grazing animals. Over- stocking and poor range management practices cause seasonal shortage of good quality grass. Lack of control on the burning of rangelands and pastures is very detrimental to livestock nutrition. Fodder production is constrained by inadequate suitable pasture seeds and machinery. Concentrate feeds and minerals are in short supply. The availability and quality of crop residues and agro-industrial byproducts to supplement feeding is seasonal and/or limited. Animals that are dependent on milled feeds face shortages of good quality feeds. Formal animal feed testing and labelling regulation are absent and livestock producers have no nutritional information required for proper livestock management and cost effective feeding options. There is lack of specialized fattening operations with own access to feed which would promote stratification of the industry and livestock exports.



- (ii) High prevalence of diseases East Coast Fever, Heart water, Anaplasmosis, Babesiosis, Trypanosomiasis and Helminthiasis are the most important. Animal diseases do lower production levels, present a hazard to human health, render the use of otherwise suitable areas impractical for livestock keeping and prevent access to potential export markets. The perceived risk also constraints upgrading to more productive stock and the adoption of more intensive production systems. Inadequate funding and declining morale have rendered disease control activities ineffective. There is an absence of disease free areas in Tanzania to supply disease free stock for export.
- (iii) Inadequate and poor animal health infrastructure and services. The general deterioration of infrastructures and lack of necessary chemicals, reagents, equipment and other inputs has resulted to ineffective disease control and surveillance. Consequently the staff morale has plummeted.
- (iv) Inadequate seasonal and poorly developed water resources. Poorly distributed or inadequate watering points lead to poor livestock distribution, overgrazing and range degradation. Lack of financial resources, technology, water construction and harvesting equipment are major problems.
- (v) Low genetic potential of the indigenous livestock for meat and milk production. There is a general shortage of improved livestock to enhance production and productivity.
- (vi) Lack of guaranteed security land tenure and appropriate mechanism for land acquisition. In the communally grazed range areas, land resources ownership rights is still uncertain and increasing social conflicts between livestock owners and crop farmers are evident. This does not provide incentives for rational rangeland management and discourages investments in improved pastures and water supplies. Increased extension of crop cultivation in the best rangelands has resulted to concentration of large numbers of animals on the marginal lands causing overgrazing and environmental degradation.
- (vii) Inadequate and weak extension and research services Development and dissemination of appropriate and sustainable technologies aimed at increasing livestock productivity in different agroecological zones and farming systems is still weak. Provision of livestock extension services is generally frustrated by the shortage of necessary infrastructures, competent field staff, funding and poor research - extension-farmer linkages. Although livestock research initiatives in Tanzania have a long history they have made very little impact on the development of the traditional livestock sub-sector.
- (viii) Inadequate supply of appropriate inputs. Essential inputs such as veterinary drugs, vaccines, acaricide, land development equipments and implements, pasture seeds, fodder planting materials, commercial feeds and improved livestock have a limited supply.
- (ix) Weak baseline information on livestock including production, processing, marketing and animal health resulting to inadequate flow of information to producers, traders, processors, planners, or researchers and Government.
- (x) Poor and inadequate marketing and processing infrastructures.
- (xi) Lack of comprehensive livestock insurance to minimize risks and acceptance of insured livestock as good security for loans.
- (xii) Lack of sustainable rural credit facilities and institutional linkages of credit schemes.

- (xiii) Inadequate participation of the private sector in, policy formulation and reviews, research, extension and training services.
- (xiv) Inadequate participation of the private sector in owning and running livestock marketing and processing facilities.
- (xv) Lack of institutional set-up and mechanism (Dairy and Meat Boards) to oversee the development of the livestock industry including promotion, regulation and coordination of the sub-sector.
- (xvi) Inadequate use and control-of natural rangeland resources.
- (xvii) Lack of appropriate national pastoral policies and programmes.
- (xviii) Inadequate social and economic services in pastoral areas.
- (xix) Inadequate training of livestock keepers, and extensionists who lack in agri-business management capabilities.
- (xx) Inadequate establishment of Association, NGOs and Cooperatives for livestock producers, traders and processors to mobilize and combine resources for development and enhance their voice on issues affecting them.
- (xxi) Gender-related problems in which women will carry out up to 70%, of the actual work on the farm, but have relatively low access to land credit, education and gender friendly-labour-saving technologies and membership to rural institutions.
- (xxii) Lack of integrated and sustainable resource use combining crop, animal husbandry, wildlife exploitation, fishing and forestry as and where appropriate to conserve the environment.

To attain a meaningful development of the livestock industry these constraints have to be eliminated.

Policy statements which address these constraints are presented in the relevant sub-sectors of beef, dairy, small ruminants, poultry, piggery, rabbits and wild game.

### ***6.3.2 Detailed sub-sector Policy Statements***

The detailed policies pertaining to the development of beef industry, dairy industry, small ruminants (goats, sheep) poultry, piggery, rabbits and game are as follows:

#### **6.3.2.1 Beef Industry**

##### **Issues**

Besides income, food, power, manure, exports of hides and skins which at present are produced at a low level, the potential to increase production and productivity in the industry is brightened by the following factors: -

- (i) Ample land resource base.
- (ii) Large beef cattle herd which can be increased by controlling tsetse and expanding grazing land.

However, there are a number of constraints that limit the development of the industry.

Major constraints include the following: -

- (i) Inadequate nutrition caused by annual and seasonal variations of forage supply and quality.
- (ii) Limited availability of water for livestock in the range lands.
- (iii) Animal diseases which lead to morbidity and high mortality rates. There are poor institutional arrangements to enforce laws and regulations as well as reporting mechanism for diseases.
- (iv) Lack of legal protection of- pastoral grazing lands against alienation.
- (v) Low productivity of local animal breeds largely dominated by Short Horn Zebu with low growth, calving rates and other determinants.
- (vi) Input supplies are limited particularly in the availability of improved beef ' cattle, pasture seeds, heavy equipment, drugs and vaccines;
- (vii) Existing extension system does not address the specific problems of pastoralists. About 20 only of the livestock-keeping households do receive advice from extension, agents.
- (viii) Lack of research especially in integrated system (livestock/crop);
- (ix) Low genetic potential of the Tanzania Shorthorn Zebus for meat production.
- (x) Poor organization and inefficient livestock marketing system arising from poor standards of marketing facilities.
- (xi) Underdeveloped meat processing facilities resulting from inadequate and poorly equipped abattoirs.
- (xii) Widespread tsetse infestation which exacerbates overgrazing and' environmental degradation of available land.
- (xiii) Lack of livestock keeper organization for natural resources management, input procurement, livestock marketing infrastructure etc.
- (xiv) In adequate investment levels.
- (xv) Gender issues as they relate to livestock production.
- (xvi) Inadequate land policy for range resource management and conservation. Overstocking and over-grazing have contributed to declining grazing resources and low, cattle productivity.
- (xvii) Social -economic constraints. Traditional livestock keeping is still largely based on non-commercial objectives.

The main objective of the Government is to increase production and productivity in order to enable the nation to achieve a per capita consumption of beef of 4.83kg per annum by the year 2005. Beef production will have to increase by 39% by that year. The achievement of this objective will also enhance farmers' income, production of hides and exports of both live animals and other products.

Taking into consideration the need for maintaining a balanced ecosystem and recognizing the fact that the 'capacity to develop the beef industry towards the above objectives rest with the private sector, Government role will entail the creation of an atmosphere in which cattle producers and traders have respectively adequate access to environmental resources and other supportive services in the production, processing and marketing of cattle and beef products.

The immediate objectives in the pastoral sector are to improve marketing infrastructure, income diversification, recognition and empowerment of pastoral institutions, encourage pastoral communities to identify their own problems and take necessary actions,' and the review of the Land Ordinance Cap, 113 so as to extend the definition of deemed rights to include traditional/pastoral uses of land.

Long-term objectives include the improvement of the socio-economic and cultural welfare of pastoralists, improvement and management of natural resources by pastoralists, development of sound participatory and sustainable pastoral/agro-pastoral, institutions, formulation of pastoral policy that incorporate pastoral issues sufficiently in other national policies and recognition and sustenance of traditional customary land, rights of pastoralists.

### ***Policy Statements***

- (i) The government will endeavour to bring about the understanding of the goals and objectives of the pastoral communities and integrate them in the national goals and objectives;
- (ii) The Government will recognize and respect the rights of pastoral communities to their traditional grazing lands and will promote communal initiatives for better management and integrated exploitation of rangelands resources.
- (iii) All acts and regulations pertaining to pastoral land use and tenure will be reviewed to bring them in line with the National Land Policy of 1995.
- (iv) The government will promote community based natural resources management and control among livestock keepers and farmers through participatory land use planning;
- (v) The government recognizes the need for increased investment in social and economic infrastructure in pastoral lands and 'therefore it will strive to facilitate provision of resources for the establishment of key infrastructures, such as roads, railways, schools, marketing infrastructure, water and health centres;
- (vi) The Government will promote community based management of livestock infrastructures such as grazing hinds, dips and range development; so as to improve the conditions and quality of the animals;
- (vii) The government will work with pastoral communities, NGOs and private sector to provide appropriate support' services and delivery systems;
- (viii) The government will encourage the pastoral communities to form savings and credit, institutions such as savings' and credit societies, trust funds and rural banks. In addition, financial institutions will be encouraged to work with pastoral communities - to develop an appropriate credit systems;
- (ix) The government, through its extension and the cooperative services will facilitate and promote the establishment of livestock associations in the pastoral areas to enhance' their bargaining and purchasing power in the supply of inputs, organizing the marketing of products and dissemination of new technology.
- (x) The free movement of pastoralists with their cattle from overstocked-to under stocked land areas if it is not regulated will bring about land ownership and land-use conflicts with settled communities. It can also cause land degradation in areas through which they pass. The policy is that although the government encourages livestock owners in overgrazed areas to move to lower stocked areas it

will facilitate and coordinate discussions with the local communities in the under stocked areas so as to agree on modalities of the new settlements which will involve government support in land use planning, grazing and water rights, establishment of necessary basic infrastructures in the new areas including construction or rehabilitation of livestock marketing facilities. The government will support setting aside for rehabilitation and land conservation of severely degraded areas whereby all agricultural activities including livestock grazing are excluded for a number of years. The Ministry of Agriculture and Cooperatives will support destocking of heavily eroded and degraded areas and their rehabilitation through soil conservation measures including encouraging tree planting and promotion of investment in biogas production.

- (xi) The Ministry will undertake the development and application of environmentally friendly tsetse fly eradication methods.
- (xii) The Ministry will initiate adequate measures to increase productivity of the traditional cattle through research designed to mainly improve feed technology and control of economically important diseases.
- (xiii) The Ministry will embark on accelerated crossbreeding of Tanzania Shorthorn Zebu (TSZ) with selected exotic beef breeds (Boran, Charolais, Angus, Chianina etc) under improved husbandry so as to upgrade the genetic potential and 'to increase beef production and carter for the export market needs. It will encourage and advise on proper breeding and selection, better feeding regimes and sound management so as to improve the production parameters and carcass weights of the traditional cattle.
- (xiv) While retaining the role of controlling and monitoring quality of pasture seeds, the Government will facilitate the participation of the private sector in the production and distribution of pasture seeds and fodder planting materials.
- (xv) The Government will pay special attention and institute specific measures to ensure that livestock have access to adequate water supply. In this regard' the Government will promote and support *construction* of charcos and or dams to harvest rainwater which has proved to be a viable alternative way of water distribution.
- (xvi) The Government will embark upon a programme which will involve the private sector for the improvement of marketing processing infrastructures and for the development of entrepreneurial capacity among the livestock traders.
- (xvii) The processing, preservation and marketing system of hides and skins is unsatisfactory and Government desire is to organize it so that it is competitive, efficient and transparent. Quality control services will be strengthened and an information system will be established to assist farmers and traders in their operations.
- (xviii) Government will streamline cross-border trade procedures and will simplify and publicize them in order to enhance transparency. The Government will also monitor and evaluate cross-border trade.
- (xix) Government will continue to maintain and operate border and secondary livestock markets, stock routes and holding grounds on cost recovery basis where 'private institutions are yet to develop, while at the same time facilitating entry and take-over by private entrepreneurs.

- (xx) Ministry will dissuade District Councils from retaining monopolies of organizing livestock marketing, and through its extension and cooperative services encourage livestock keepers and traders to set up and manage livestock markets:

## **Export of Livestock and Meat**

### ***Issues***

If Tanzania has to emerge as a substantial and sustained exporter of livestock and meat to earn increased foreign exchange number of constraints need to be overcome, namely;

- (i) Lack of large volumes of relatively consistent and quality animals
- (ii) Lack of identified import markets as potential outlets for Tanzanian livestock and meat.
- (iii) Excessive local transport costs for livestock.
- (iv) Inadequate animal feed resources in the traditional pastoral system.
- (v) Difficult communications and inadequate infrastructures to facilitate market process.
- (vi) Incidences of major diseases in Tanzania together with problems of disease control and the absence of disease free areas:
- (vii) Poor management of livestock including problems of communal land grazing supplies of feed and forage as well as lack of a specialized fattening industry operations by producers and traders with access to suitable resources.
- (viii) Low marketed off-take.
- (ix) Lack of facilities at the point of export.
- (x) Lack of suitable processing and cold stores which severely restrict prospects of exporting chilled/frozen meat and processed products.
- (xi) Lack of suitable holding/quarantine facilities within close proximity to the livestock supply centers, ports and airports.
- (xii) Ineffective veterinary services in the, area of disease monitoring, control and eradication in order to improve the animal health status of Tanzanian livestock.
- (xiii) Lack of documentation and procedures covering the needs of importing countries.
- (xiv) Lack of market information and business expertise covering exportation of livestock and meat.
- (xv) Lack of specialized sea, livestock carriers and ships with refrigerated containers required for chilled and frozen meat.
- (xvi) Very limited air transport capacity and lack of cargo planes, and lack of flights with specialized containers for carrying chilled/frozen meat.
- (xvii) Inability to provide adequate supplies of feed and water.
- (xviii) Lack of working capital from banks to finance purchases of livestock with favourable interest rates.

- (xix) Lack of improved breeds for higher export quality stock.
- (xx) Lack of livestock and meat market research to get a precise impact of market potential.
- (xxi) Potential importers not brought to Tanzania to assess for themselves the types of products available.
- (xxii) Very limited livestock transport facilities in Tanzania.

### ***Policy Statements***

- (i) The Government recognizes the potential of the livestock resources in the country which can be utilized to earn substantial additional foreign exchange. The Government will therefore encourage the private sector to embark on a medium-term export of livestock surpluses and meat in chilled/frozen form.
- (ii) The Government will undertake collection, dissemination and exchange of market information covering potential import markets.
- (iii) The Government will facilitate provision of specialized livestock and meat export trade expertise to assist the private sector.
- (iv) The Government will continue to organize in collaboration with other relevant institutions seminars for private traders to disseminate information on export market potential, prices, requirements and procedures.
- (v) The Government will support and facilitate the provision of low interest credit facilities for livestock and meat exporters.
- (vi) The Government will strengthen livestock breeding, research, extension services and animal disease control so as to enable traditional livestock keepers to improve standards of animal management which will contribute to improved livestock production, productivity and quality for the needs of the export market.
- (vii) Government will promote and give support to the private sector to establish livestock processing facilities and cold stores.
- (viii) The Government will educate export livestock traders on selection of export quality animals. Traders will be educated on the need to maximize the volumes handled in order to spread the fixed costs.
- (ix) Government will streamline export documentations to ensure that bureaucracy and unnecessary delays are Minimized or eliminated.
- (x) Government will support joint venture/companies with the importing countries to facilitate provision expertise, capital and markets.

### **6.3.2.2 Dairy Industry**

#### ***Issues***

Milk production has not kept pace with population growth and the consequence is that, although total production has increased from roughly 300 million in 1970/71 to 600 million litres in 1994/95, per capita consumption has slightly declined from 22 to 20 litres over the same period. Tanzania's per capita milk consumption is below those of Africa (35 litres), Kenya (44 litres) and the world (105 litres). Nearly 70% .of the milk is produced by

minimally supported traditional small producers in the rural areas where the bulk of the commodity is being consumed with small surpluses filtering into growing urban centers. Dairy farms contribute only 30% to the total, milk production, of which 140 million litres are produced by smallholder dairy farms while large scale dairy farms deliver 30 million litres annually. Total cattle population under these two commercial systems is estimated 4t 212,299 of up - graded dairy cows. In the medium term, the dairy industry should be geared to satisfy domestic demand and eliminate dairy products imports which are estimated to be equivalent to 15 million litres annually.

The dairy industry has - the potential of creating employment for: both rural and urban areas and of providing food and cash income to households involved in keeping dairy cattle throughout the year. Dairy cattle kept under zero grazing management also contribute manure for improvement of soil fertility and the production of biogas as fuel source. Other potentials of the dairy cattle include:

- (i) Abundant land resources and good climate that can support grass and fodder for the industry;
- (ii) A growing market for dairy products due to rapid population growth (at present growing at about 3%) annually.
- (iii) However, for the dairy to realize its full potential, the following constraints will have to be removed or minimized:
- (iv) Poor nutrition arising from inadequate feeds and water. Water availability and quality are poor and seasonal while the production of fodder is inadequate and suffers seasonal quality variations.
- (v) Prevalence of diseases and parasites are a major constraint to the dairy industry development. Major diseases include tick-borne diseases, trypanosomiasis through tsetse and major epizootic diseases. Diagnostic and quarantine services, supply of drugs and vaccines, and equipment are inadequate to combat epizootic diseases.
- (vi) Weak extension services resulting from the absence of sustained organization and supervision, inadequate infrastructure and logistic support, poor extension packages, inadequate funding of the services and weak farmer-extension-research linkages.
- (vii) Inadequate supply of dairy stocks which require a strategy to enhance heifer breeding through the use of top quality bulls or artificial insemination.
- (viii) Inadequate livestock production and breeding research to develop dairy cattle suitable for different agro ecological zones.
- (ix) Low production and productivity.
- (x) Non-availability of rural credit services for smallholder dairy farmers.
- (xi) Milk marketing is disorganized and suffers from lack of milk collection and cooling facilities and poor feeder roads for milk transportation.
- (xii) Poor milk processing facilities whereby the existing plants are inadequate and inefficient.

The medium term objective of the Government is to satisfy domestic milk demand estimated at 26 litres per person per annum by the year 2000. To achieve this target the present herd of 212,299 improve dairy cattle will have to be increased to about 500,000 by that year. This target, if achieved will also eliminate dairy products imports which are estimated to be



equivalent to 15 million litres annually. The ultimate aim is to achieve exportable surpluses of dairy products. This will depend on the degree of success in removing the above constraints.

The following policy statements are designed to address these constraints in order to allow the industry to realize its potential and objectives.

### ***Policy Statements***

- (i) Taking smallholder producer (traditional and commercial) as focus, the Government will create an environment in which the producer will be able to expand the size and increase the productivity of his grade herd through;
  - (a) Extension Services whereby, farmers will be organized in groups and associations and will be facilitated to undertake activities including distribution of heifers (heifer-in-trust), inputs, management -of grazing lands and dips.
  - (b) Encouraging the use of artificial insemination services.
- (ii) The Government will put in place a plan for making surveillance and cost-effective controls of epidemic and infectious diseases and for enforcement of regulations on stock movements.
- (iii) In order to support to the key players in the dairy industry, the Government will strengthen research, extension services and information system. Research programmes on dairy cattle will 'aim at providing solutions to constraints to milk production which include, poor nutrition, low genetic potential for milk production and diseases. Extension system will be geared to extend the results of these research initiatives to the key players of the industry.
- (iv) The promotion of milk production is of limited value if the commodity does not reach the consumer in the required form and quality. 'To address this issue adequately, the Government will take a three-pronged approach: -
  - (a) To facilitate the establishment of a strong marketing system in order to allow a smooth flow of raw milk to processing factories and on to consumers. The focus will be to facilitate the establishment of milk collection/cooling systems for fresh milk collection in the rural areas and on the improvement of rural feeder roads.
  - (b) To assist the private sector to participate in the ownership and management of the existing government milk processing factories, and to establish new ones in order to diversify dairy products that can meet the full range of consumer requirements.
  - (c) To institute and enforce rules and regulations designed to maintain the quality of fresh milk and dairy products.
- (v) The Ministry will encourage and support extensive dairy cattle breeding. The main dairy breeds to be used to upgrade the indigenous cattle will be Friesian, Jersey, Ayrshire, Sahiwa, Mpwapwa breed and their crosses.
- (vi) Ministry will encourage and support use of Artificial Insemination (A.I) wherever possible to improve the genetic potential of livestock. The Ministry will continue with production of semen until when private sector will be identified to take over this important activity. However field insemination services

will be left to the private Veterinarians, Para-Vets and Insemination Technicians who will undertake it on commercial basis. Ministry will control the quality of both locally produced and imported semen. Ministry will ensure that imported semen come from proven sires of high genetic merit.

- (vii) The Government will allow imports of dairy cattle to supplement the supply of grade cattle from the local crossbreeding programme. However, imports will be restricted to cattle from proven herds, and will only be approved subject to compliance with animal health requirements.

### **6.3.2.3 Small Ruminant Industry**

#### **Issues**

Small ruminants include sheep and goats which are largely of local breeds. Sheep and goats contribute a significant proportion of the animal protein consumed in the country. Small ruminants are mainly raised under subsistence system and play a critical role in meeting nutritional requirements in the rural areas.

Sheep and goats have the advantages over cattle of being more prolific, early maturing, more resistant to tsetse challenge, have relatively low maintenance costs, can more efficiently utilize crop, agro-industrial and household residues and having smaller carcasses which reduces the problem of storage. However, small ruminants are susceptible to diseases especially internal parasites.

Sheep and goat meat account for about 12% of the national meat supplies which is about 40,000t per year. Consumption of goat meat and mutton is about 1.2 kg per capita per year.

Small ruminants in Tanzania have the potential of playing a bigger role in the, nutrition, rural income generation and the economy of the country as a whole. Small ruminants have the potential of improving soil fertility through their manure hence increasing crop yields. Sheep and goats have a good, export market potential.

Specific problems which hold back the development of small ruminants include:

- (i) Poor nutrition in terms of quantity and quality;
- (ii) Inadequate water availability in arid and semiarid regions;
- (iii) Diseases, especially parasitic infections, eg. Helminthiasis;
- (iv) Low genetic potential;
- (v) Weak research to address the problems of the industry;
- (vi) Weak extension Services;
- (vii) Poor management system;
- (viii) Poor marketing system.

The objectives of the small ruminant industry is:

- (i) To enhance the subsistence food security and incomes of producers, particularly those in the traditional sector;
- (ii) To promote sustainable livestock production;

- (iii) To meet domestic demand for mutton and goat meat;
- (iv) To promote the exports of surpluses (live goat, sheep, mutton, meat);

Achievement of the objectives of the industry will largely depend on effectiveness of the government policy interventions in removing the constraints.

### ***Policy Statements***

- (i) Ministry will continue with the evaluation of the indigenous and exotic breeds.
- (ii) Ministry will adequately equip specific livestock research stations to develop research for small ruminants.
- (iii) Ministry will study the small ruminant management systems with particular attention being focused on housing, grazing management and the rearing of young stock.
- (iv) The Ministry will undertake physiological studies, including the nutritive values of forages and mineral requirements.
- (v) The Ministry will continue with disease studies on parasites affecting goats and sheep and improve disease control measures, with greater emphasis being placed on the dissemination of research results to extension workers and livestock keepers.
- (vi) The Ministry will promote and support efforts to integrate goats and sheep into other agricultural activities such as cropping, cattle ranching and range management.
- (vii) Government will strengthen small ruminants extension services to raise husbandry standards and to ensure that breeding programmes are executed and evaluated properly.
- (viii) In view of the need to promote the production of wool, the Ministry will encourage wool sheep in high altitudes areas and the private sector will be encouraged to establish commercial wool sheep farms.
- (ix) Government will encourage and support dairy goat farming in selected areas of high and semi intensive goat concentration.
- (x) Development programme for small ruminant will be prepared and will concentrate on the provision of upgraded animals, specialist extension services, nutrition, disease control, research services, inputs supply, marketing and processing.

### **6.3.2.4 Poultry Issues**

The poultry industry in Tanzania is divided into two distinct categories.

- (i) Traditional Poultry Production
- (ii) Commercial Poultry Production

The traditional Poultry Sector is the largest, contributing about 70% of the flock supplying 100% of poultry meat and eggs consumed in rural and 20% in urban areas.

The poultry kept in the traditional sector offers the potential for a relatively quick increase in productivity. However, the following constraints affect the sector: -

- (i) Low productivity. This is due to low genetic potential, disease and poor management.
- (ii) Poultry diseases in particular Newcastle disease, Fowl Typhoid, Infectious Coryza etc. cause heavy mortality and reduced production.
- (iii) Poor quality, poultry feeds greatly limit their productivity and adversely affect the quality and quantity of day old chicks.
- (iv) Poor Extension Services.
- (v) Inadequate research services. There is no major research programme being undertaken to develop the sector.
- (vi) Lack of organised marketing and processing. There is no organised marketing and slaughtering of poultry.

Commercial poultry production is still in its infancy and is mostly practiced in urban and peri-urban, areas where they are totally confined. - The private sector, is taking over parastatal organisations such, as National Poultry Company (NAPOCO) and establishment of integrated large-scale poultry production, such as Interchick; Kibo, Polo Italia etc. is growing.

The main objective of the poultry industry is to encourage small, medium and large scale private producers in order to increase; production -of poultry, meat and eggs to satisfy domestic demand, reduce import requirement and promote sustainable poultry production.

### ***Policy Statements***

- (i) Government priority will be given - to the development of the traditional flocks, to exploit their potential for alleviating poverty, enhancing the incomes of women and improving family nutrition.
- (ii) Government will encourage private commercial poultry production in areas with attractive markets. However, smallholder commercial: poultry units will be encouraged in areas with adequate input supplies, marketing facilities and support services.
- (iii) Government will promote local production of day -old chicks.
- (iv) Government will facilitate establishment of new hatcheries in areas where they do not exist and rehabilitation of existing ones so as to enhance hatchery production capacities and reduce imports of day-old chicks.
- (v) Government encourages, where appropriate, the establishment of Grand parent stock production facilities to enhance parent stock production in the country. Government will register and regulate Grandparent stock, parent stockbreeders and commercial hatcheries.
- (vi) Government will exert strict control over the breeding and hatchery facilities to ensure, that disease control measures and operational standards are adhered to.
- (vii) The control of Newcastle Disease by vaccination will continue. The programme to vaccinate all day-old parent stock and day-old commercial pullets against Markets disease will be intensified and strict quarantine measures will be applied around infected area.
- (viii) To improve the productivity of poultry in the traditional sector Rhode Island Red breeding stock will be encouraged in the rural areas to upgrade indigenous poultry.

- (ix) Government will encourage the establishment of poultry processing plants by private entrepreneurs.
- (x) Government will encourage the establishment of Poultry Farmers Association;
- (xi) Government will privatize all public hatcheries and farms.
- (xii) Besides enforcing hatchery regulations, Government will provide animal health extension services and monitoring of disease outbreaks.

#### **6.3.2.5 Piggery**

##### ***Issues***

Pork production is at present very limited to few areas of the country and the few numbers in the North and South West to make significant contribution to meat consumption. Pigs have however, great potential to increase meat production due to their high prolificacy, rapid growth rate and Short generation interval. In addition to their meat production, pigs also provide a valuable source of lard for cooking purpose and manure for increased soil fertility.

The major constraints to increased pig production is the poor nutrition, inbreeding due to limited breeding stock, religious taboos, lack of efficient pig extension and research services, diseases such as African Swine Fever outbreaks, and poor husbandry practices.

##### ***Policy Statements***

- (i) Government will encourage crossbreeding and selection so as to avoid inbreeding. A limited number of breeding stocks will be imported.
- (ii) The Ministry will improve extension and animal health services by intensifying training programme for poultry farmers and extension staff.
- (iii) Government will encourage building of more slaughter slabs and houses in major pig production and consuming areas to facilitate the increase in numbers of marketed pigs and enhance slaughter hygienic and sanitary
- (iv) Government will promote improvements in the supply of animal feeds by the private sector to the piggery industry.
- (v) Government will improve research in pig breeding, animal health, production systems, nutrition and utilization of locally available feeds stuffs.
- (vi) Government will facilitate mobilization of savings and credit facilities to promote commercial pig production by small holders.

#### **6.3.2.6 Rabbits**

##### ***Issues***

Rabbits fanning is still underdeveloped in Tanzania. However, it can play a role in increasing meat supplies in areas with high population densities.

### ***Policy Statement***

Government will facilitate through extension services, to improve rabbit husbandry methods with particular emphasis placed on housing, feeding and disease control.

### **6.3.2.7 Game**

#### ***Issues***

In many areas of the country there is abundant game population which has not been adequately utilized to contribute more towards the welfare of the rural communities and the national economy at large. Game cropping within sustainable limits and ranching of suitable species in a controlled environment can play a useful role to supplement protein requirements of the rural and urban communities as well as to promote sport hunting, game viewing and trophies.

#### ***Policy Statements***

- (i) The Government will encourage harvesting of free - ranging animals over a limited time in order to contribute toward rural and urban protein requirements and development of local and national economy. The Government will encourage, community - based conservation schemes to crop wildlife within sustainable limits with recognition of other competing forms of wildlife utilisation in a particular area.
- (ii) Game ranchers and farmers operating on privately owned or leased land will be encouraged to utilize state owned wildlife for specific purposes and retain the revenue from such operations. The, development of wildlife farms which could run both livestock and wildlife on extensive or intensive systems of containment will be guided by regulations specific to each type of industry.
- (iii) Government will encourage potential investors to seek land tenure arrangements compatible with proposed ranching and farming operations. It will ensure that wildlife ranchers and farmers become eligible for same benefits and incentives that the agricultural farming and livestock industry receive from Government.
- (iv) The Ministry of Agriculture and Cooperatives through its livestock services would monitor the public health and marketing implications.
- (v) Government will encourage game ranching by evaluation of game farming operations in other countries and by the establishment of pilot project to test, breeding, feeding and' management systems under commercial conditions.
- (vi) Government will develop more effective methods of preserving game meat to enable a greater proportion to be marketed.