

Tanzania's Creative Solutions in response to the Global Food Crisis

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1. Introduction

1.1 Agricultural sector overview

Agriculture is the foundation of the Tanzanian economy accounting for about half of the national income, three quarters of merchandise exports, source of food and provides employment opportunities to about 70% the population. It has forward linkages with non-farm sector through agro-processing, consumption and export; provides raw materials to industries and market for manufactured goods.

Agriculture in Tanzania is dominated by smallholder farmers (peasants) cultivating an average farm sizes of between 0.9 hectares and 3.0 hectares each. About 70% of Tanzania's crop area is cultivated by hand hoe, 20% by ox plough, 10% by tractor and is entirely rain fed agriculture. Food crop production dominates the agriculture economy 5.1 million hectares are cultivated annually, of which 85% is under food crops.

Agricultural GDP has grown at 3.3% per year since 1985, the main food crops at 3.5% and export crops at 5.4% per year. Considering that the overall GDP growth target for halving abject poverty by 2010 (Millennium Development Goal No. 1) is in the range of 6-7%, this performance falls short of the needed growth. The macro economic reforms have and continue to have had significant impact on the Agriculture sector. The economic reforms have lead to the opening up of the sector to private investment in production and processing, input importation and distribution and agricultural marketing. Most of production and processing and marketing functions have been assigned to the private sector.

The Government has retained regulatory and public support functions or facilitation role as such farmers are free to sell their crops to cooperatives or private traders. Due to competition, normal producer prices for food and export crops have increased; farmers can now sell their produce much faster and are no longer confined to a single source for their essential inputs for crops and livestock.

The major constraint facing the agriculture sector is the falling labour and land productivity due to application of poor technology, dependence on unreliable and irregular weather conditions; hence crops and livestock are adversely affected by periodical droughts.

1.2 Potentials in the Agricultural Sector:

Tanzania is well endowed with a variety of farming systems with climatic variations and agro-ecological conditions of which crops can be grown. The major

staples include: maize, sorghum, millet, rice, wheat, pulses (mainly beans), cassava, potatoes, bananas and plantains Whereas export crops are coffee, cotton, cashew nut, tobacco, sisal, pyrethrum, tea, cloves, horticultural crops, flowers, oil seeds and spices.

The major Agro – Ecological Zones (AEZ) includes; Coastal plains, Eastern plateaus and mountain blocks, Southern Highlands, Northern rift valley zone and volcanic highlands, Central plateau Rukwa – Ruaha rift valley, Inland Sedimentary, Ufipa and Western highlands.

2. Agricultural policies and strategies

The general goals of the Agricultural and Livestock policy (1997) congruent with food security have narrated the following policy objectives;

- (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. 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 living 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 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, 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.

These goals provide a framework for instruments which addresses issues related to food security such as:-

Seeds

The Government apart from providing environment for private sector to be engaged in production distribution and import of seeds will now focus on research quality control, certification, training and promotion.

Plant Protection Services

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 agricultural extension services.

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.

2.1 Agricultural Information and Marketing of Inputs and Outputs

The marketing systems of agricultural, livestock commodities and inputs have mostly been liberalized. Government roles are confined to provision of market information, monitoring market performance; improve data collection at national, regional and district levels, coordinate information services within the Ministry and with other agencies as well as analyzing, interpreting and dissemination of such information.

2.2 Cooperative Development Services

The Cooperative development functions include promotion, registration, deregistration of cooperatives, inspection, 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.

3. The National Strategy for Growth and Reduction of Poverty (NSGRP)

This is a second national organizing framework for putting the focus on poverty reduction high on the country's development agenda. The NSGRP is informed by the aspirations of Tanzania's Development Vision (Vision 2025) for high and shared growth, high quality livelihood, peace, stability, unity, good governance, high quality education and international competitiveness. It is committed to the Millennium Development Goals (MDGs), as internationally agreed targets for reducing poverty, hunger, diseases, illiteracy, environmental degradation and discrimination against women by 2015. It strives to widen the space for country's ownership, effective participation of civil society, private sector development, fruitful local and external partnerships in development, commitment to regional and other international initiatives for socio-economic development.

The NSGRP provisions regarding food security are within **Cluster I - Growth and Reduction of Income Poverty**. The prevalence of income poverty is still high in Tanzania as revealed by the Household Budget Survey of 2000/01 where the proportion of the population below the national food poverty line is 18.7% whereas that below the national basic needs poverty line is 35.7%. Comparing these results with those of the Household Budget Survey of 1991/92 there has been a small decline in the proportion of the population below the national poverty lines. Basic needs poverty decreased from 38.6% to 35.7% and food poverty from 21.6% to 18.7%. Poverty remains overwhelmingly in rural areas where about 87% of the poor population lives, being highest among households depending on agriculture. As the population is growing the absolute number of the poor raises concern; there is also a big disparity between urban/rural poverty for both food and basic needs poverty. The HBS 2000/01 results reveal growing income inequality as measured by a rise in the Gini-coefficient from 0.34 in 1991/92 to 0.35 in 2000/01.

The NSGRP also provides for improving food availability and accessibility. The availability of food, both in required quantity and quality is an important aspect of human well-being and its absence is a manifestation of poverty. Food insecure households, whether for lack of stocks or income for purchasing food, are vulnerable to all sorts of ills, with women and children often being more at a disadvantage. Food security is attained through increased per capita production of food crops, having adequate income and ensuring that in times of shocks enough reserves are maintained to minimize vulnerability. At the national level the Strategic Grain Reserve (SGR) is intended to cater for shocks that lead to food insecurity.

Operational targets for this goal are: (i) Increased food crops production from 9 million tons in 2003/04 to 12 million tons in 2010 and (ii) Maintained Strategic Grain Reserve of at least 4 month of national food requirement.

According to the NSGRP, the following strategies will be implemented in order to ensure availability and accessibility of food in both urban and rural areas:

- Providing targeted subsidy to selected food crops, identifying and promoting modern farming technologies especially in rural areas and providing support for increased utilisation of improved technologies for crop and livestock production
- Identifying research activities and promote food storage technologies/ facilities and enhance agro - processing as well as environmentally friendly farming technologies and practices especially for rural areas.
- Improving stock management and monitoring of food situation.
- Undertaking a review of the maize supply chain, management and monitoring of emergency food supplies, including further clarification of regulation and means of enhancing trade.
- Improving road network connectivity to facilitate flow of food crops

4. Food security

The aggregate national food availability in Tanzania is not of plenty, but rather of a critical balance between production and needs. During the year 2007/08 crop production managed to yield 10.78 million tones of food compared to estimated food demand for the 2008/09 at about 10.34 million tones. Similar trend has been exhibited

in the previous farming season 2006/2007 where a total of 10.66 million tones were produced.

Among food crops, cereals are the major crops grown in Tanzania. The area planted with cereals 4,798,071 hectares (61% of total planted area) followed by roots and tubers 14%, pulses 12% and oil seeds 7% (Figure 1).

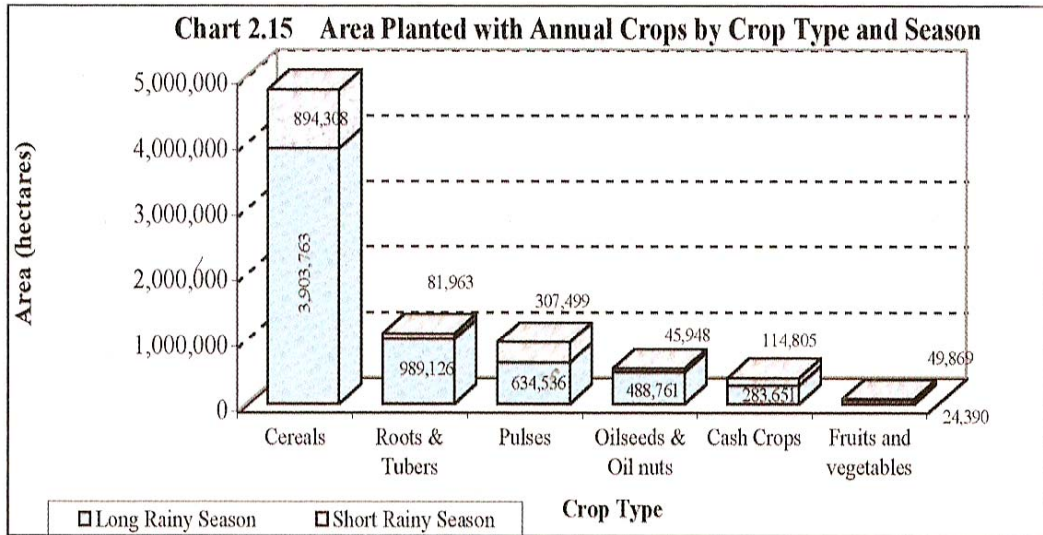


Figure 1 – Area planted with annual crops by crop type and season

Among cereals, maize production is higher than any other cereal in Tanzania with a total production of over 75% of total cereal produced (Figure 2).

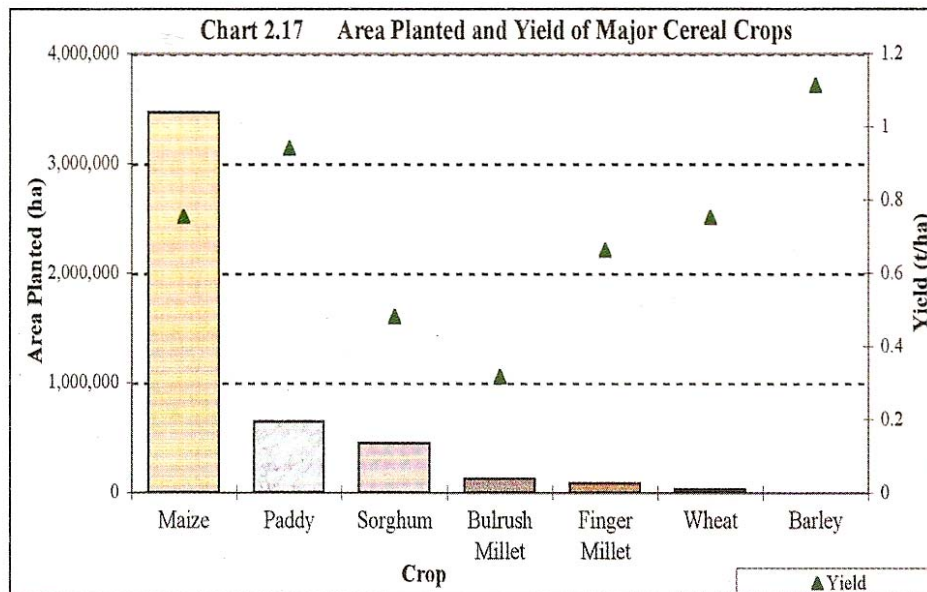


Figure 2 – Area planted and yield of major cereal crops

Tanzania is endowed with enough fertile arable land, good climatic conditions, plenty of water sources (lakes, rivers, seas, wells, springs etc) all across the country. Despite of several parts of Tanzania that get rains twice a year it is only 24% out of about 44 million hectares of the total land area suitable for Agriculture is under cultivation mainly by smallholder farmers. At national level, crop farming is more important than livestock keeping, according to Tanzania Agricultural sample census (2003) nearly 99% (4,858,810) of households are involved in crop production against 36% involved in livestock keeping (Figure 3).

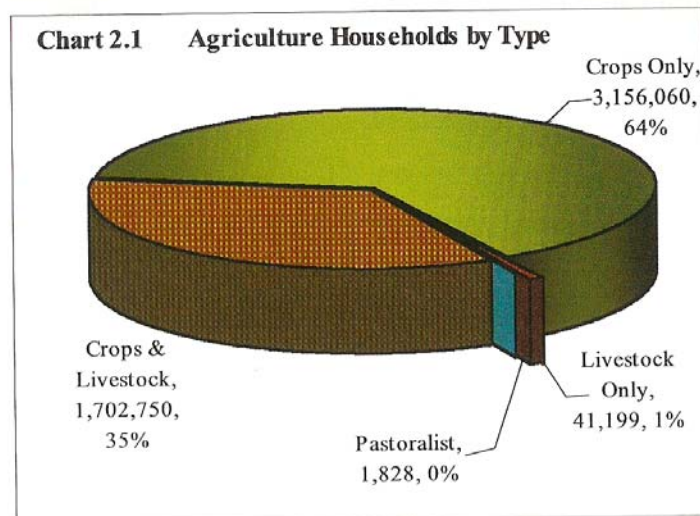


Figure 3- Agricultural household by types

The planted area has been stable for several years in spite of the growing population indicating that land expansion has ceased to be a major source of Agricultural growth. Furthermore, out of 29.4 million hectares with irrigation potential, only 290,000 hectares which is about 1% is currently under irrigation (Figure 4).

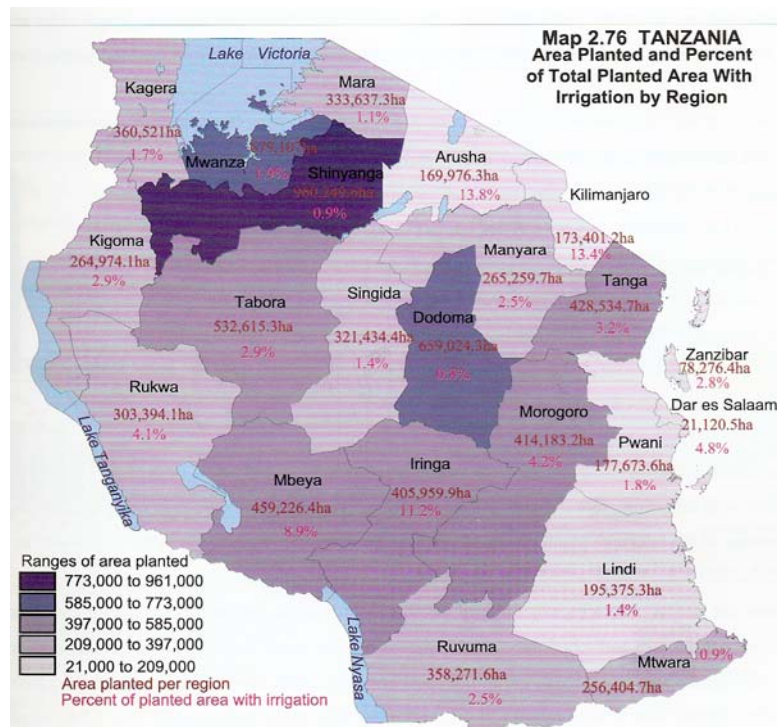


Figure 4 – Area Planted and percent of total area with irrigation by region

Traditional food crops such as maize, rice, sorghum and millet now occupy only 50% of total planted areas, while non-traditional export crops such as oilseeds, pulses, vegetables, roots and tubers have increased their shares. Nevertheless, all these crops are still mainly produced for subsistence and the incentives to produce them for the market are not in place due to inefficient food markets within the country exacerbated by the poor state of transport infrastructure within Tanzania and the undeveloped market information systems regarding prices and needs of other Regions.

Tanzania has about 18.8 million herds of cattle and is the third largest in Africa, yet the livestock sub-sector contributes only about 4.7% to GDP. Most of livestock stocks are of inferior genetic potential thus do not contribute much to the global food security. Furthermore, value addition to animal product is at juvenile stage hence not playing its role in the value chain of beef and milk globally.

Tanzania's most important non-traditional agricultural exports are fish and fish products. Available statistics indicate that in 2006, fish and fish products earned the country 138.6 million USD which is half as much as all traditional agricultural exports; Nile Perch from Lake Victoria constituting about 80% of Tanzania's total fish exports.

5. Conclusion

5.1 Alleviation of food crisis

Over the years food production in the country has failed to meet demand and the country has been importing food and receiving food aid to meet its production shortfalls. Creative solutions which could be used by Tanzania in alleviating global food crisis at

same time improving food availability and accessibility in both urban and rural areas includes;

1. Increasing crop productivity:

One of the most important findings of the 2003 Agricultural census is that a large increase in planted area has been offset by a reduction in productivity resulting in only a comparatively small increase in the quantity of foods produced. The government of Tanzania is striving to improve agricultural extension services and put in place affirmative action on the use and access of fertilizer to farmers.

2. Providing targeted subsidy to inputs for crop and livestock production:

The government of Tanzania has set aside funds to subsidize agricultural input (fertilizers, seeds, acaricides, etc.). This initiative makes those inputs available and affordable to small holders. The outcome of this scheme is increased food productivity.

3. Identifying and promoting irrigation farming especially in rural areas:

Water is the limiting factor in agricultural development in Tanzania and without irrigation any other intervention to increase food production may not realize its full potential. Efforts are being made to increase irrigation schemes to supplement the rain-fed crop production.

4. Providing support for increased utilisation of improved technologies for crop and livestock production. Cultivation by hand is the most common method (56%) of soil preparation of total arable land of Tanzania, followed by oxen plough (32%) and tractor ploughing (4%). Tanzania is working towards reversing this trend and shift from hand hoe to mechanized agriculture. The use of improved seeds to cater the need of the climatic zones is on the increase, where at the moment up to cereal production is using 54% improved seeds. The fact that up to 77% of the annual crop growing households do not use fertilizer transformation from subsistence to profit making is far from reach. The Government of Tanzania has initiated production of organic and inorganic fertilizers within the country. Rock phosphate is now mined, ground, distributed and sold to farmers at a subsidy price. Plans to build a plant to produce fertilizers from natural gases are also underway.

5. Promote food storage technologies/ facilities:

Among the initiatives the government has put in place are; promotion of post-harvest techniques in rural households and promotion of schemes that add value to primary agricultural, fishing, forest products, wild life and livestock products. These technologies are being disseminated country wide through various initiatives.

6. Improving stock management and monitoring of food situation:

During 2007/08 financial year the government established National Food Reserve Agency (NFRA) - which took responsibility of dealing with Strategic

Grain Reserve (SGR). During this period the NFRA bought a total of 23,762 which were added to the national reserve to make a total of 143,747 tones of maize and 7,021 of millet by June 2008. The food under NFRA are distributed for sales or distributed freely to needy household whenever faced with food crisis as a result of crop failure.

6. REFERENCES

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