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Agriculture in Development: Food Security in an Era of Increased Demand

Introduction

Agriculture is a science dealing with cultivation of crops and livestock keeping. It is among the major economic activities practiced in East Africa, especially Tanzania and is also the back bone of our country. It involves large scale farms as well as small scale.

Large scale farming is practiced in a large area, usually involving more than one hundred hectares. Almost all is devoted to cash crops which are continuously grown depending on seasons. Since they involve a large area, tractors are usually needed. There is no one who can manage to farm a large area with a hand hoe, thus it needs a lot of advanced equipment and modern farming methods, to produce a better, quality product.

Small-scale farming is practiced in small areas with an average farm size of between 0.9 hectares and 3.0 hectares each. About 70% of Tanzania's crops are cultivated by hand hoe, 20% by ox plough and 10% by tractor. Food crops in Tanzania are what dominate agricultural economy for approximately 5 million people. Women in Tanzania constitute the main part of agricultural labor force. Land productivity is affected by application of poor technology, and dependence on unreliable and irregular weather condition. Both crops and livestock are affected by periodical drought due to human activities. The irrigation scheme is what holds the key to stabilizing agricultural production in Tanzania to improve food security, heighten productivity, and increase farmer's income.

Urban family in Tanzania is defined as the family, which buys food from the farm families through different markets. They are mostly being employed from different institutions like school, business, and government. Their quality of life depends on their salaries that are paid from the government institution or by the private sectors. The major factors to improve their income is to try to work hard on doing their work, as well as trying to work on other side jobs in order to satisfy their nutritious food needs and maintain a well balanced diet throughout their life.

Food security is defined as a situation where people can live without hunger and a fear of starvation, while food insecurity is a lack of nutritional needs being met which occur, when a severe famine arises resulting in drought. Till now there has not been an exact definition of food security and how it can be achieved or developed, but according to the World Bank and FAO definitions, it is a process to ensure adequate food supply, year-to-year stability, and economic and social accessibility for a healthy life.

Improving Food Security

Factors for increasing agricultural productiveness and improving food security are conducting scientific research into crop biology, agronomic technology for improving yields, disease and drought resistance crops, and sustainable agricultural systems.

Food availability and stability depends on local production, ability to import, and the efficiency of the distribution system. There have been some problems facing food production in

Tanzania. Tanzania's agriculture depends on rains and every 3 to 5 years (on average) there has been crop failure due to floods and droughts, which affected large parts of the country in 1992-1993 and led to famine. Now farming technology, also leads to food insecurity, hence about 85% of cultivation is still done by hand hoe which leads to low production and inflation, as well as, the small holder farmers cannot afford to buy the fertilizers and other insecticides and herbicides.

In Tanzania there has been groups of people engaged in conducting a scientific research about crop biology and agronomic technologies for improving yields, disease and drought resistance. Sustainable agricultural systems that have been created have caused a lot of positive and negative effects. Let's take an example for a farm family, if they will conduct research about the crop biology so as to improve in production that will lead them to earn more income. The problem is that they cannot afford to provide better crops and control the disease at the same time, due to poverty, and in turn, they will have nothing which leads them to food insecurity. Doing so will result in low agricultural productivity, because the disease and drought resistance were not controlled, and as we know, prevention is better than cure. Not only will there be low production, but also the farm income will be low. They will have to work hard to protect the crops and produce them in a high quantity and high quality, so as to compete with the internal and external market if possible.

For an urban family the research is going very well means that all people can get enough food and the food prices will be low. But due to the poverty and the farm family's low production of food, because of disease and drought, the availability of food will be very low and the disease will continue to strike as a result of the rising food cost. However, it will not be a big problem for food security, but it will be a huge disaster for food insecurity if they can't afford to pay the cost of food due to the rise in prices leading to famine.

The process of conducting research to improve yields, control disease, drought resistance, and sustainable agricultural systems causes my family to not earn sufficient income to produce food. Even through the government is providing money there is not enough to control the diseases and other problems at the same time. This causes food prices to rise and makes my family not to be able to purchase enough food.

However, the government has been trying to provide help as needed but still people are suffering from hunger, malnutrition, and disease. The percentage of the necessary amount of food and income of the family that is attainable is only 30% and the environment is also being degraded. Women in Tanzania are the ones that work hard on the farm, so as to produce more and they are being affected in a negative way. Not only them but also the rural and urban poor are being disadvantaged due to the food prices making the country of Tanzania not develop into a better and advanced state.

From 2005 to the present time the trend, is that people are able to control the disease and drought resistance at the same time. This is because there has been greater use of pesticides and insecticides in those farms, which reduce the amount of disease. There is more production than there was in the past years. Which indicates the situation of being in poverty is changing; also many farm families are improving because of income that they obtain now.

Due to the empowerment and resolution of this factor the amount of food increase in my country makes the income available to my family greater because all workers have been given extra money which is above 20% of which each farmer earn 80,000/=Tsh per month if they preserve the environment in a sustainable fashion. In addition to these small farmers, urban dwellers are benefiting as well. That will also make Tanzania, to a more highly developed

country in the coming 10 years.

The increase in production and yields by small-scale, subsistence, family farmers, affect the status and trends of this factor by producing different kinds of crops that are in a high quality and quantity, without any plant disease, such as, the tobacco mosaic virus and other pests. This will improve the livelihoods of urban families as well. There is a possibility for them to produce many crops but the problem is if they are free from disease or not. This can be cured by protecting them from harmful organisms, which destroy the crops.

Tanzania can largely be considered self sufficient in food except for the ten-year circle of food deficiency. But we remain vulnerable to weather, pests, and environmental degradation. That insufficient food production, in efficient market systems, poor transportation and communication networks contribute a lot to putting our food security at risk. Insufficient food production, un-efficient market systems, poor transportation and communication networks contribute to putting our food security at risk. It is the government role to solve those problems so as to give the small-scale subsistence family farmers the capacity for self-development. As we know the biggest problem with food security in the world is not that global capacity to produce sufficient food, it is about sharing ideas and our resources at large.

Conclusion

Therefore the most sustainable way to insure food security for all people, is the empowerment for self-sufficient food production, processing, storage, and distribution. It is the right time to address the needs of the small-scale farmers and also to increase agriculture production. It's also time for better management of our agriculture resources including land, forest and water. Tanzania is richly endowed with rivers, lakes and ground water, if we will use them properly for our irrigation process, it will also be a good way of preserving them. Improving our marketing system will also contribute in helping the small-scale farmers, and increase their income and production. These practices, coupled together with an advanced transportation system, can insure our food security.

My suggestions for the appropriate roles of corporations, national governments, and other organizations like the United Nations and the World Bank, is invest at the small scale level to help build the base for a higher output future. They should provide more micro-loans to help the small-scale farmers increase their productivity. Increasing productivity at the local level, enables farm families to feed themselves, while still having large excesses to increase the amount of food available in the larger food economy. They should provide funds that are important for conducting research, as well as, helping in controlling the plant disease, being sure there is no great rise of food prices. This will enable some people to afford nutritional food and not just the staples. These factors woven together, under the guidance of determined individuals, can help ensure that food security is maintained in Tanzania in this era of increased demand.

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