

**Opening Speech by Hon. Fredrick T. Sumaye Prime Minister for Tanzania (MP) on the first General meeting and Scientific Conference of the Southern and Eastern African Society of Agricultural Engineers**

Mr. Chairman, Southern and Eastern African Society of Agricultural Engineers,  
Hon. Njelu Kasaka, Deputy Minister of Agriculture and Cooperatives,  
Mr. Chairman Tanzania Society of Agricultural Engineers,  
The Regional Commissioner of Arusha,  
Members of SEASAE,  
Invited guests,  
Ladies and gentlemen.

I am very pleased to be with you this morning during the opening of the first General meeting and Scientific Conference of the Southern and Eastern African Society of Agricultural Engineers. For those of you who are not members of the Tanzania Society of Agricultural Engineers, I wish to introduce myself as an active member of the Tanzania Society of Agricultural Engineers in my personal capacity. I therefore take a lot of pride at the opportunity of opening this Conference.

May I now welcome all of you particularly those who have come from outside Tanzania to our country. I hope you will enjoy your stay with us. As for ourselves, definitely we are so delighted to be with you. I hope you will be able to get some time off your busy schedules to visit some of our renowned natural attractions like the Kilimanjaro, beautiful national parks and game parks. I wish also to welcome everybody to Arusha and particularly to our meeting and Scientific Conference. You will also enjoy, I am sure, the warm hospitality of the people of Arusha, not to mention the conducive weather for your meeting. I wish you every success in your deliberations.

Mr. Chairman, I am aware that the countries of Southern and Eastern Africa each had its own Society of Agricultural Engineers. These country societies have formed one big Society, SEASAE, so that they can collaborate more effectively and professionally and by so doing they become technically stronger. I therefore wish to congratulate all of you for the courageous steps you took to establish this regional society. May I also congratulate the first office bearers of SEASAE for being elected to their respective positions and effectively using their positions to successfully convene this First Conference within three years. Finally may I thank you personally Mr. Chairman and your Executive Committee for giving me the honor to open the first meeting and Scientific Conference and thank you again for the honor bestowed upon our country for hosting this first meeting of SEASAE.

Mr. Chairman, since this is a meeting of agricultural engineers, it might look absurd, boring or even irrelevant to start talking to your experts on the importance of agricultural engineering to agricultural development. However, I still feel obliged to briefly say something on the same.

All our countries in Southern and Eastern Africa (besides South Africa) are basically developing countries whose economies to a greater extent depend on agriculture. Hopefully these countries will in the future become industrialized, but before they come to that stage they must get the required economic base from agriculture. Our countries have depended on agriculture and for that matter to very near primitive agriculture. We have depended on this very unproductive and inefficient agriculture, and this is why we have lost so many decades in terms of development. It is only in developing countries especially in Africa where you find nearly the whole population is engaged in

agriculture and pathetically hardly able to feed themselves. In the developed countries the pattern is completely reversed. There is a very small portion of the population that is engaged in agriculture and this small portion produces more than is required by those nations. This is why I say by using our very near primitive agriculture we have lost decades. It is only in Sub-Saharan Africa (except South Africa) where, since the years of African Independence, i.e. since 1960, the per capita food production has been falling. With the technological advancements that have taken place, this unfortunate trend should not have happened.

As Agricultural engineers you must think and find a solution to this problem. Our agriculture must be modernized and made more efficient. We must go into efficient agriculture so that we have smaller and smaller portions of our populations engaged in agriculture and larger and larger portions move into industrialization. However, if this is to succeed, the few who will be working on the land must guarantee to produce enough food for those working in industries and also produce enough good quality raw materials for industries that process agricultural produce. But as mentioned earlier, before moving into industrialization, developing agriculturally based economies can go industrial only if they can make enough or reasonable saving for investment into industrial projects.

From aforesaid, the task ahead of us is enormous. This is therefore a big challenger to this society. You will definitely need to work in collaboration with your colleagues elsewhere both in the developing and developed nations. This will help you to move faster and in the process also make our farmers move faster into efficient agriculture. The world is changing so fast in terms of technological development, but it is equally losing sympathy for those who are left behind. If Africa loses another decade it might not be able to catch up with the rest of the world anymore. If we have to survive we have to work seriously now and must not lose anymore time.

As agricultural engineers you have a very important role to assist our poor farmers cope up with this situation. if we take the case of Tanzania for instance, in this period of advanced technological achievements and 36 years after our independence, more than 80% of our farmers still use the hand hoe. These primitive implements and tools coupled with poor agricultural husbandry practices can not get us anywhere. Basically in almost every crop the technology used in various operations forty years ago is still in use, or only slightly improved. Just to give examples of some of our major crops; in coffee, from cultivation to harvesting the technologies used 30 - 40 years ago are still in use today, in cotton, the story is the same, in sisal, the sisal is harvested as it was done 40 years ago and this list can go on. So why can't we change this situation?. I think we must change and this society should take up this challenge.

Mr. Chairman, for most of the Southern and Eastern Africa countries, development of agriculture and associated industries is the main economic activity of improving the living standards of the majority of their people and the enhancement of growth of their economies. This is because the statistics from the region and sub-Saharan Africa in general show that, on average agriculture still employ more than 60% of the population and provide more than 40% of marketed products. Therefore, the greatest challenges to development in the region, are related to increasing agricultural production through optimal utilization of our resources and application of proper and efficient use of tools, equipments and machinery. While expanding and improving our agriculture, we have to bear in mind the rate of degradation of one of our most important resource which unfortunately will probably be the most limiting factor to our agricultural development in the near future. This resource is land. As our population is growing at an alarming rate of about 3% annually, most of the good agricultural lands are over utilized and overtime will be depleted. Hence while developing our tools, equipments and machinery for our farming operations, we must bear in mind to develop

equipments that are environment friendly. Likewise our farming operations must not destroy our lands.

It is for this reason that I congratulate SEASAE not only for organizing this Conference but also for choosing the very critical issues of development and environment as the theme of the Conference. As an Agricultural Engineer, it is my personal pleasure and pride to see SEASAE taking a lead on matters which have a bearing on the day to day life of our people.

Mr. Chairman, as you all known, our region is endowed with a lot of renewable natural resources. The climates vary from semi-deserts to tropical rain forests. We get high rainfalls causing floods in one part of the region while another part is experiencing severe drought at the same time. An area which is awash with floods would sometimes be very dry after just a few months. These widely differing climates make agricultural production a daunting task. However, from a regional perspective, the variety of environmental conditions provides us with an opportunity for a robust regional agricultural industry capable of maintaining a year round flow of products to the markets. Therefore, if we develop an optimum level of regional cooperation in agriculture, we can turn the current drawbacks into a big advantage, giving us a competitive edge against other regions of the world. This is because historical experience has shown that, in this region, agricultural production setbacks or even disasters in one country are often compensated by bumper production in another country.

Mr. Chairman, we all agree that the state of poverty in our rural areas stands in sharp contrast to the abundant resources and the possibilities for growth in agricultural industries, found in the region. Given the amount of effort which has been directed to rural development, the high degree of poverty raises many questions, such as:-

- Why did sub-Saharan Africa fail to ride the tide on the Green Revolution?
- Was development efforts and aid properly directed?
- Is smallholder agriculture appropriate?
- What is the role of commercial agriculture? and so on.

I think the main reason behind our problems has been the failure to attain a high level of understanding of our agricultural environment and thus develop and utilize technologies which give us maximum benefits. We have for a very long time remained passive recipients of technologies from other regions, and when these failed to work, we have continually depended on outsiders to tell us the reasons for the failure. We should have our own "Green Revolution" different from Europeans or the Asian ones, but giving us modern farming methods suitable for our environment. We must attain high agricultural productivity the same way as the Europeans or the Asians have, but it must be home grown and within the framework of our environmental conditions.

The major task which lies ahead of us therefore, is to increase the use of science and technology in order to effectively utilize and conserve our renewable natural resources. We need to come up with innovations which will exploit our varieties of topography, soils, climate and biodiversity to ensure viable and competitive agricultural industry, whether smallholder or large scale.

As I said earlier, we have a natural potential to develop a flexible regional agricultural industry capable of producing a wide variety of products at competitive costs, even at smallholder scale. What is necessary is the use of existing scientific knowledge to innovate and apply the necessary and suitable technologies. We should not be satisfied with the current conventionally held wisdom that, "since most Africans are subsistence farmers, appropriate technologies should be developed to

help them subsist". Here, appropriate technology refers to technologies very near to primitive technologies. Instead, we should make a deliberate decision to avail and use properly developed and tested technologies which will eliminate subsistence agriculture [peasantry] and encourage farmers at all scales [small to large] to become commercially oriented. Most efforts devoted to searching and promoting methods of improving subsistence agriculture, must not only end up in perpetuating poverty, but must help smallholder farmers break the vicious cycle of poverty.

Mr. Chairman, given the importance of agriculture in our countries, land and water are the most valuable assets of the region. Unfortunately, in most of sub-Saharan Africa, these assets are grossly under utilized and sometimes squandered. Much of the scarce rainfall water runs to the seas, lakes and oceans unutilized. Worse still the run-off results in costly land degradation through erosion. It is estimated that, in most of the cultivated or grazing lands in our region, about 30% of the seasonal rainfall is wasted as runoff, and average soil loss from these lands is in the order of 50 tones per hectare per year. Poverty and poor agricultural methods are major contributors to this degradation of the environment. These trends need to be reversed as a matter of urgency if our agriculture is to be sustainable and meet the task of eliminating poverty among the rural population and increase our economic growth. I am glad to note that this conference will give the issue of land and water resources the highest attention.

Another important sub-theme of your conference is that of agro-environment management. Currently, there is a lot of debate, for example on the level of chemical fertilizers we can use vis a vis environmental pollution. It is in this area where conflicts between modern agriculture and environmental protection are high. Agricultural engineers have a big role to play, in developing fertilizer application techniques which will ensure maximum nutrient use by plants, thus reducing need for high fertilizers rates and losses which lead to environmental pollution. However, we have to make our choice between economic survival and application of these chemicals.

Mr. Chairman, processing, storage and packaging of agricultural products are necessary and important pre-requisites for commercial market oriented farming. This area requires maximum attention as we strive to convert our agriculture into a world-class competitive industry. We need to rapidly adopt technologies for converting low-value products or even by-products of our agricultural commodities into world standard consumer and industrial products. In this era of privatization and entrepreneurship, processing, packaging and marketing of agricultural products provide the best opportunities for our farmers to benefit from agriculture. I urge you to use your expertise so that our agriculture becomes a fully commercialized industry.

Finally, your choice of information technology as one of the sub-themes is timely. To achieve a regionally integrated agricultural industry, will require a high level of generation and sharing of information. We can not achieve these without adopting new techniques for generating, storing, retrieving and sharing information. Agricultural Engineering is a technical profession. Usually such professions are expensive to research on and develop. This is why I said earlier that it is necessary that your Society collaborates and cooperates with other sister societies or associations regardless of their location. This is important because even between our countries the level of technology development vary. But fortunately it is also true that a technology developed in one country and that works well in that country will normally work in another country may be with some minor adjustments. Therefore, this collaboration is of vital importance to the development and application of efficient tools and equipment. This kind of collaboration will help us avoid duplication of activities which could waste our scarce resources of capital and human resources. I am encouraged that SEASAE is giving information technology the attention it deserves, in this Conference.

Mr. Chairman, the organizing of this Conference has shown that agricultural engineering is an important agent for change. I urge you to use the opportunity of this Conference to form a strong forum for advocating radical but positive changes in enhancing agricultural development. You should come out with suggestions of how our countries can design and implement policies and programs which will enable our agricultural industry to flourish and compete through optimum utilization, conservation and management of our scarce resources. Let me assure you of the government of Tanzania's support and our commitment to build a robust agricultural sector. It is however the responsibility of all agricultural engineers to advise their governments on appropriate and timely measures that should be taken or incorporated in their development programs for a successful agricultural development.

Mr. Chairman, may I now thank all of you for your attention. It is my earnest hope that you will enjoy your stay and that you will participate effectively in the Conference. I wish all of you enjoyable and safe journeys back to your countries and work places after your Conference and tours.

Mr. Chairman, it is now my great pleasure and honor to declare the first SEASAE International Conference on Agricultural Engineering, Environment and Development officially open.

Thank You.