

Opening address:

Namibian National Workshop on Plant Genetic Resources

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Distinguished delegates, I feel honoured to be here in front of you today and share a few thoughts with you. But before I do that, I would like to welcome everybody to this workshop. I would like specifically to welcome our guests from outside Namibia. I hope that your journey to Namibia was pleasant and I hope that your stay here will be fruitful and enjoyable. We shall try our level best to make your stay in our country a pleasant one. And for our local colleagues who have travelled long distances to be here with us, I would also like to thank you for your efforts and commitment. The presence of everybody here is appreciated and this workshop would not have taken place without your presence.

We are gathered here today to share views and ideas on Plant Genetic Resources. A lot of concern is being expressed these days about the way we exploit our Natural Resources, particularly our vegetation and specifically the forests. It has been argued on numerous occasions that human beings are destroying the very environment on which they depend for their survival.

The concern about the environment is real. One only needs to look at the number of publications coming out today that cater for the environmental audience. The number of environmental groups the world over has increased over the last decade and even institutions such as the World Bank and the IMF have finally come round to recognise the fact that our environment is in danger from man himself. In the 1960's and 1970's environmental issues were on the periphery and those who campaigned for such issues were regarded as lost souls. Little did we know that the environmental pioneers of those days were much more far-sighted than their contemporaries. Today, environmental issues are at the top of the agenda. Next year in June/July, there is going to be a summit on the environment in Brazil, to be attended at head of state level. We have come a long way.

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When we talk about the destruction of the environment, we are talking about the destruction and loss of Plant Genetic Resources. We are losing thousands of plant species every year, some of which are not yet known to mankind.

When we go back to the early days of mankind, we will find that crops were domesticated from wild plants and today we are having various types of food crops, vegetables, fruits, medicinal plants plus a host of other plants which we can use for various purposes. Today, when plant breeders want to improve the crops we grow, they have to rely on some of the primitive species.

It is a well-known fact that before the plant breeder arrived on the scene, it was the farmer who was selecting and developing some of the crop varieties. That process is still going on particularly in third world countries where farmers still use their own seed.

The advent of the Green Revolution brought about a phase in the development of Agriculture when high yielding varieties (HYV's) were produced. But these HYV's had a narrow genetic base and some of them were susceptible to local diseases, they could not withstand drought etc. The Green Revolution brought about a substantial increase in crop yield but it was also responsible for the narrowing of the genetic base of the HYV's.

The other consequence of the selection process over the years is the gradual reduction in the total number of food crops on which human beings depend on for food. Although there are thousands of food crops the world over, human beings depend only on 30 major crops and among all these, three top the list: wheat, rice and maize. It has often been mentioned that the Green Revolution was not successful in Africa. One of the reasons for this is because the Green Revolution concentrated on the three major crops; wheat, rice and maize, paying less attention to other crops. In Africa, apart from maize which is one of the staple crops in parts of Sub-Saharan Africa, the other crops which are common are millet, sorghum, tuber crops, plantain and a whole host of pulses. Most of these crops were not very much affected by the Green Revolution. Within the sphere of domesticated crops there is room for improvement in that the HYV's genetic base can be improved by introducing new genetic material from landraces. Most of the crops grown by peasant farmers especially outside the commercial sector are still unimproved, thus there is room for improvement here. And if we move outside the domesticated sector, into the forests and savannas, the scope is even wider.

The task facing us is how we can best preserve our Plant Genetic Resources but at the same time utilize these resources to improve food output. It is often being mentioned that population growth in most parts of Africa outstrips food output. Given that situation, we have to utilize the resources at our disposal fully.

The Green Revolution brought us HYV's, but the development of science has since brought us to the brink of another revolution: the Biotechnology Revolution. Where-

as the Green Revolution technology took 7 - 10 years to develop a new variety, with biotechnology that time is approximately cut in half. This is especially important for tree crops which take a very long time to reach maturity.

Biotechnology is a double-edged sword; on the one hand it reduced even further the genetic base of the crop variety at hand compared to the Green Revolution but on the other, it is much more precise and promises to produce varieties which are much higher yielding within a shorter time. At another level, biotechnology has opened up new horizons in that genes can be moved between different species. The potential for improvements is much higher.

It has been agreed that Africa did not benefit as much from the Green Revolution compared to, say, Asia. Are we going to do any better with biotechnology? A lot will depend on the policies of each country. First of all there is need for properly trained research personnel, secondly there must be investments in research facilities especially the equipment needed. The interaction with other research centres is also vital. Another factor which is also going to determine the success rate of biotechnology in Africa is the debate on patent rights.

Traditionally, patents have been used on industrial products but as of late, there have been moves to patent life forms including crops of certain characteristics within a crop variety. The potential benefits to accrue to biotechnology companies are enormous but third world countries have also been arguing for the recognition of farmer contribution to the agricultural development process.

How does Namibia fit into all these? Despite the aridity of the country, Namibia is quite rich in plant genetic resources. The National Herbarium is having a wide collection of most of the plants to be found in Namibia and they are still continuing with their effort to build up as much information as possible on our plant species. Information on our own plant genetic resources is important for building up our own knowledge but also for economic reasons.

A National Genebank to house the National collection of crop germplasm is under construction and that will enable us to store our germplasm. However, for long-term storage, local germplasm will be sent to the SADCC Regional Gene Bank in Lusaka. A few collection trips have been organised so far to the northern areas and preliminary indications have shown that there is potential particularly for the millet. Some of the germplasm collected appeared to be unique to Namibia.

Agricultural research in Namibia, particularly on crops, has been neglected over a long period of time. It is the intention of the Ministry of Agriculture to put more emphasis on agricultural research. A demonstration of this fact is that in the 1991/92 budget about R13.6 million was allocated to agricultural research. The Ministry has embarked upon a research programme called "Sustainable Agricultural Development Programme for Northern Namibia." The objective of this programme is to do research on the local crop varieties particularly millet and grain legumes which have been neglected so far. The programme also includes the training of Namibian re-

searchers at both undergraduate and post-graduate level. This is necessary for the long-term sustainability of this programme. The government has allocated R4 million to this programme for the 1991/92 financial year and ICRISAT Zimbabwe has been very helpful in providing assistance in the form of material and personnel to help us get this programme off the ground.

The Government has put a high priority on Food Self-sufficiency and Food Security and the Ministry of Agriculture has been tasked to ensure that Namibians have enough food to eat. To improve agricultural output, we need to make use of research output from elsewhere but we also need to do our own research.

This workshop provides us with a forum where we can share ideas with our colleagues who have come from outside Namibia. We will be able to know what is going on elsewhere. But it is also a forum to take stock of our current situation with regard to the level and direction of agricultural research, the status of plant genetic resources in Namibia and how we can best utilize this resource.

The term plant genetic resources may have little meaning to the common man in the street but the deliberations of this workshop have long-term implication for our country. In most of the communal areas, environmental degradation is taking place at an alarming rate. It is incumbent upon us to preserve the environment for future generations. Thus, if possible, we must try and reverse the current trend of environmental degradation. We have to impress it upon our farmers that they must live in harmony with the environment and learn to farm on a sustainable basis. To do this, we must find ways and means as to how the modern technology can help us to achieve our objectives. It can be put to good use but it can also affect us adversely.

In one way, one may say that we are lucky in Namibia in that we have an opportunity to learn from mistakes made by others. I hope we are not going to commit the same mistakes. But the important thing particularly for this workshop is to look at the resources at our disposal in the context of plant genetic resources and see how best we can utilize them. The future of this country lies in our own hands and whatever strategies we will adopt here will have a bearing on that future. Posterity will judge us on the basis of what we do today. I am confident that this workshop will rise to that challenge.

Finally, I would like to thank you for the financial assistance which made this workshop a reality. I would also like to thank the organisers for having brought everybody together. I am sure the deliberations in the next few days will enrich us all and that Namibians will also be able to benefit from our deliberations in the long run.
