Opening Address

Takahiro Inoue

President, JIRCAS

Distinguished Guests, Participants, Ladies and Gentlemen,

On behalf of the Symposium Organizing Committee, I have the honor and privilege to open the International Symposium on " Water for Sustainable Agriculture in Developing Regions - More Crop for Every Scarce Drop-", which is organized by the Japan International Research Center for Agricultural Sciences (JIRCAS).

Above all, I would like to extend my cordial welcome to all the guests and participants, in particular to those who came to Japan from abroad.

JIRCAS was established in October 1993 as a result of the reorganization of the former Tropical Agriculture Research Center (TARC) to further promote research for the development of agricultural technology to cope with the changes in the world situation and became a semi-autonomous agency under the supervision of the Ministry of Agriculture, Forestry and Fisheries of Japan on April 1 of this year.

The research activities of JIRCAS encompass all the fields of agriculture, forestry and fisheries. The research activities of JIRCAS are not limited to collaboration with developing countries in the tropics and subtropics but cover wider geographic regions such as cool areas and temperate zones. One of the major activities of JIRCAS is to dispatch research scientists to overseas research institutions located in developing countries to conduct collaborative research work on various subjects relating to agriculture, forestry and fisheries. In addition, to support these activities, JIRCAS consolidated the structure of research at the Center in Tsukuba and at the Okinawa Subtropical Station by promoting advanced studies relating to biological fields, computer simulation of selected economic and environmental processes relevant to the developing countries, postharvest technology, etc.

The present symposium, which is the eighth organized by JIRCAS, is particularly timely since it is predicted that water scarcity, which is already prevailing in certain regions of the world, will become even more acute in the near future and since global climate changes may affect the water regime.

Water plays a major role in agriculture which accounts for about 70% of the total water withdrawals. Since it is likely that the amount of water used for agriculture will decrease due to competition with domestic and industrial uses, judicious utilization and management of water resources are essential, even in areas with well developed irrigation facilities, to promote sustainable development of agriculture in order to achieve food security for the growing world population.

To meet this challenge, an environment-friendly strategy combining the improvement of the infrastructure for water distribution and use with the improvement of agricultural practices, to increase the water productivity for agriculture, should be adopted.

In this symposium, emphasis will be placed on the rainfed, semi-arid and arid areas where water availability is limited and erratic, crop productivity is very low, and which are inhabited by a large proportion of the world population.

To improve the conditions in these areas, the development of technology for water harvesting, storage and recycling along with the application of methods of conservative irrigation such as trickle irrigation and effective utilization of ponds, small reservoirs and groundwater is particularly important, since it is unlikely that state-of-the-art irrigation facilities will be constructed in the future, due to the high cost and possible adverse impact on the environment. It is also essential that the measures previously outlined be combined with the improvement of agricultural practices. These should be mainly centered on the use and development, through conventional breeding methods and biotechnological procedures, of crop varieties that are characterized by a high water use efficiency and that can withstand reduced water conditions. Methods of cultivation and agronomic practices should essentially aim at minimizing crop water use through the preservation of soil moisture, and at the optimization of ecophysiological characteristics of crops, such as the ability of roots to penetrate into deep soil layers.

To successfully implement these measures, international collaboration should play a major role in assisting the respective countries in addressing these problems. In this regard, JIRCAS is conducting research in collaboration with institutes located in the rainfed area of Northeast Thailand and in the semi-arid zone of West Africa along with receiving a large number of researchers from developing countries in the laboratories of Tsukuba and the Okinawa Substation.

In these countries, a multidisciplinary approach should be adopted, involving the participation of engineers and crop scientists in close collaboration with administrators from the central government and local and regional authorities as well as the rural communities. Above all, however, it is essential that the users and beneficiaries become aware of how valuable water is as a resource that should be carefully utilized and preserved for future generations.

I am convinced that valuable information on the problems associated with water availability and use in the developing regions in the 21st century will be exchanged throughout the discussions during this symposium.

Incidentally, I have much pleasure in informing you that during the reception this evening, we plan to hold a ceremony to celebrate the reorganization of JIRCAS into a semi-autonomous agency. Please, join us to share our happiness.

I again wish to express my cordial welcome to all the guests and participants.

Thank you.