

Foreword



This year my emphasis is on the importance of agriculture in dry land, the relationship between agricultural practices in dry land and desertification, and the ways to preserve and enhance the natural resources, and improve the standard of living in the dry land.

Dry land makes up 47 per cent of the world's total land area. Many of the world's poor live in the dry land. Dry farming, or rain-fed agriculture, and irrigated farming are the two main types of agriculture being practiced in the dry land. Dry farming is the most widely practiced method, and the area under dry farming is 4.4 times the area under irrigated farming. The resources available to feed the dry land inhabitants – land and soil moisture – are diminishing mainly in areas where dry farming is being practiced. This leads not only to loss of biodiversity, but also to severe restrictions in crop productivity. Human activities such as clearing of land for agriculture and unsustainable agricultural practices are the main causes of these environmental degradations. This is the main reason why desertification, a serious global environmental problem, is occurring at an alarming rate in the dry land. To avoid triggering of uncertainty of food supply, out-of-control population growth, downward spiral of poverty, hunger-driven conflicts, malnutrition, mass human migration, shortage of water and arable land, and a failing environment, sustainable methods to produce food crops, and preserve and enhance the dry land resources are necessary.

For the sustainable methods to be effective in alleviating the problems associated with practices that are environmentally not friendly, and to provide clean water, good land, thriving forests, and rich biodiversity, research scientists should integrate themselves deeply into the community of dry land farmers. It is important not to forget that traditional dry farming, or cropping methods are the basis of modern farming and continue to provide solutions to environmental problems such as desertification. Thus, research scientists should work with the dry land farmers to learn their techniques and, in turn, bring helpful developments from the laboratory to them. Together, researchers and farmers can improve productivity in dry land while preserving and enhancing the resources. Furthermore, the approaches toward sustainable dry land farming should be integrated, (i.e. multidisciplinary approaches), simple, easy-to-handle, and within the financial capacity of the local farmers. In this way, there will be a sustainable increase in agricultural production and incomes, and economic growth that will lead to improved standard of living.

Lastly, I would also like to take this opportunity to inform you that this year we have started the Japan-China Joint-Project for combating desertification and enhancing rural development in inland of China through the Japan Society for the Promotion of Science (JSPS) Core University Program.

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