

Message from the President

The unceasing challenge of creating new knowledge for reinforcement of the power of biosystems is essential.



Dr. Yohei SATO

Perhaps owing to the spiraling prices of food starting the year before last, of late there has been lively debate on the world's food problem. Some people argue that there is a food crisis because of heightening food demand engendered by factors such as population growth, economic expansion by the BRICs, and fuel production using grains, together with other reasons such as the declining amount of farmland, topped out yields per unit area of farmland, and stagnating production due to causes such as global warming. On the other hand there are people who take an optimistic position that denies a crisis. The differences between these positions can be seen through their future outlooks on the factors related to food demand and production. But any discourse on the future of food must not leave out a critique from the perspective of sustainability in agriculture.

For "sustainability," Hans-Peter Dürr, professor emeritus at the University of Munich and former director of the Max Planck Institute for Physics, speaks of the need to increase the power of biosystems. He sounds warnings about the crisis facing the Earth organism Gaia, saying that the Earth organism Gaia has been formed as a dynamic system that stores the blessing of the sun and extracts and uses it slowly. However, he says, since the Industrial Revolution humans have like "bank robbers" time after time cracked natural safes holding the savings put there by Gaia for the future, extracted the resources, and continued using them, unaware that this is a dynamic, self-regulating system (*Kan*, Vol. 13, 2007).

Agriculture too has benefited from the dazzling technological progress since the Industrial Revolution. It has gained the ability to efficiently elicit the power of biosystems, and has pushed the specter of starvation away from humankind. But in that process the very biosystems that agriculture depends on have been adversely affected and people are now noticing that modern agriculture has damaged those biosystems. An example of such damage is the biodiversity loss and soil degradation caused by large-scale intensive agriculture.

Our 2nd Medium Term Plan started its third year in FY2008. Some achievements during this time are technologies that entered the demonstration or deployment stage, such as a technology for remediating cadmium-contaminated soil by using plants and chemical washing, and those which are used in demonstration projects, such as a technology for curbing the emissions of greenhouse gases from farmland. The discovery of a microorganism that decomposes biodegradable plastics, and the illumination of its functioning, was chosen by the Agriculture, Forestry and Fisheries Research Council Secretariat, MAFF as one of the ten big topics among the agriculture, forestry, and fisheries research achievements of FY2008; this will lead to new technological developments that will accelerate the decomposition of used biodegradable plastics. Additionally, "Promoting Public Understanding of Soil Using Soil Monoliths" was awarded the Commendation for Science and Technology in the Public Understanding Promotion Category among the FY2008 commendations by the Minister of Education, Culture, Sports, Science and Technology. This award applauded the development of a way to make soil monoliths and the subsequent 30 years of activities for dissemination to and guidance for relevant parties in Japan and other countries.

In a speech delivered at an international conference held last year in Brazil, guest speaker Roberto Rodrigues, the Brazilian Minister of Agriculture, pointed out that of the 10 major problems facing humankind over the next 50 years, the problems of energy, water, environment, food, and poverty all involve agriculture, and he sent a strong message to the audience, saying that the future of Brazilian agriculture is assured because it can make a big contribution to solving those problems. However, based on the awareness that agriculture is dependent on the power of biosystems, this requires that agriculture does not rashly exploit nature, and does not threaten the dynamic self-regulation of the Earth organism Gaia. And it goes without saying that the unceasing challenge of creating new knowledge for that purpose is essential.

We are pursuing high-level research that aspires toward our basic philosophy of the harmony and coexistence of nature, society, and people, and are striving toward our institution's goal of helping to surmount the world's food and environmental problems. We hope that this annual report will be helpful by providing readers with useful information. We look forward to receiving your candid comments and suggestions regarding this report.

Yohei Sato, Dr. Agr.
President