Multi-disciplinary approaches to solving agro-environmental problems

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A new 5-year Plan with a target year of 2010 was formulated and launched in FY 2006. The achievements of the Plan in FY 2006 are presented in this annual report.

As is well known, we are pursuing a mission that is clearly described in legislation: to conduct fundamental technological research and other activities pertaining to the environments of organisms used in agricultural production, with the aim of helping to upgrade technologies for the conservation and improvement of those environments.

To achieve the goals of this mission, the new 5-year Plan was formulated with a special focus on "risk assessment and risk management" as applied to the agro-environment. The Plan has the following three research objectives, which emphasize basic research meant to ensure the safety of agricultural production environments:

1) assessment and management of agro-environmental risks
2) elucidation and management of the structure and function of agro-ecosystems to maintain and enhance the function of natural cycles
3) fundamental studies on elucidation of agro-ecosystem functionality

Science itself has two different categories. One is science that contributes deeper knowledge and new findings to the development of a discipline. This is called "science for the sake of science" and corresponds to "mode I" of the Mode Theory proposed by Gibbons et al in the book of "New Production of Knowledge: The Dynamics of Science and Research in Contemporary Societies". The other is science that serves society by solving societal problems; this is called "science for society" and corresponds to "mode II" of the Mode Theory. The development of these two sciences must be promoted to prevent the global crisis that is predicted to occur in the 21st Century.

Our research is intended to develop these sciences. We hope to be able to contribute our achievements in science and technology to society by deepening understanding of the disciplines related to agro-environmental sciences and by generating knowledge by a multi-disciplinary approach to solve agro-environmental problems.

In the context mentioned above, many products from FY 2006 are presented in this annual report, and for your information we also present details of the structure of our new research and administrative organization. We will be greatly delighted if the reports of our work in FY 2006 inspire the further development of research on the agro-environment and are used to solve agro-environmental problems. A list of research papers published by NIAES staff in FY 2006 is included at the end of the report. Please do not hesitate to contact us if you have questions about any aspect of agro-environmental research.

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