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International symposium: Foods, agriculture, life and biodiversity

Conservation and revival of indigenous varieties ~Case studies on the millet and vegetables in Japan~

Mikio KIMATA
Field Study Institute for Environmental Education
Plants and People Museum Initiative, Forest and Village Foundation

Summary

The biodiversity has become more abundantly through the biological evolution on the earth since about 3.5 billions, but this long history was a process full of ups and downs. The whole biodiversity on the earth has been attacked by the catastrophes five times. Today the sixth severe catastrophe is the most important environmental issue for us, because it is clearly led by humankind and their modern civilization, but not by the natural process. The biodiversity consists of very complex relationships. Table 1 shows each biodiversity of the following levels, community, species, individuals and gene at the agro-ecosystem.

Recently, a concept of biocultural diversity is proposed, because the biodiversity, which had involved with cultural evolution, has been promoted by the history related organism with humankind on farmland since the beginning of agriculture (10,000 BP). This concept involves various traditional cultural matters from plant diversity (e.g. genetic variation) to techniques on the use, cultivation, processing, cooking, agricultural functions and table manner, as a basic agriculture complex, "from seed to stomach" (Nakao 1966), including all organism (wild and domesticated plants) related with humankind.

The conservation of plant biodiversity contains not only biological issues from ecosystem to gene, but also cultural issues. Moreover, we must conserve the written and visual information of biocultural diversity, while we do conserve the traditional knowledge of proud villagers who have lived at a farmland and rural community for the fundamentals of environmental learning. Everybody needs to learn the indigenous traditional knowledge of biocultural diversity. The rice paddy cultivation is so-called Japanese

fundamentals, but the farmers had used wild plants and cultivated millet, wheat, barley etc. at upland fields in mountain villages.

We have practiced a project “Plants and People Museum” at the Ecomuseum Japan Village for learning conservation of biocultural diversity, in Kosyge-mura, Yamanashi prefecture, where is located very important forests for the drinking water reservation of Tokyo Metropolis. This project may propose a model for rural development with the conservation of biocultural diversity. We promote the conservation and revival of indigenous varieties of millet and vegetables with villagers. This concept is supported theoretically by our research on the traditional knowledge system of distinguished farmers in Japan and Eurasia. They have vividly told us their excellent experiences and indigenous knowledge.