Present State of Agro-Environmental Policies of East Asian Countries and Related Issues

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1. Objective

The objective of this study was to compare movements of the Agro-Environmental Policies of Japan, South Korea and China based on the legislation of each country, statistics and the findings acquired from a hearing survey. The study was also intended to evaluate the influence of organic food products imported from South Korea and China on the Japanese organic food market.

2. Outline of the results

(1) China sees a prosperous future in the acquisition of foreign currencies by exporting "green food" (crops organically cultivated [AA-grade label] and cultivated with low agri-chemical inputs [A-grade label] plus processed products using these crops). The Chinese government announced the promotion of green food production on May 15, 1990 and the Green Food Development Centre (in Beijing : under the Department of Agriculture) was established in November 1992, followed by the construction of the Organic Food Development Centre (in Nanjing : under the Environmental Protection Agency).

By the end of 1998, China converted a cropping acreage of 2.26 million ha, which is equivalent to the total acreage of upland crops in Japan, to land dedicated to green food cultivation. Approximately 8.4 million tons of green food is produced, 1% of which is exported. According to a reference documented in 1996, a total export value of green food (8.5 million dollars) was recorded in the year, 5 million dollars of which covered the exportation to Japan.

Meanwhile, agricultural wages per labourer in China is one twelfth of that in Japan. This fact is reflected in the price of each organic food product, which is significantly lower compared to that of Japan. At present, only a low volume of green and organic food products is exported from China to Japan, but it is predicted that the increase in the degree of Japan's acceptance of these products from China will threaten the status of Japanese domestic production.

(2) In South Korea, the reform of the Sustainable Agriculture Promotion Act in January 2001, made the display of a certification mark mandatory for products with four particular labels (organic, converting organic, with no agri-chemicals and with low level of agri-chemicals). The regulation took effect from

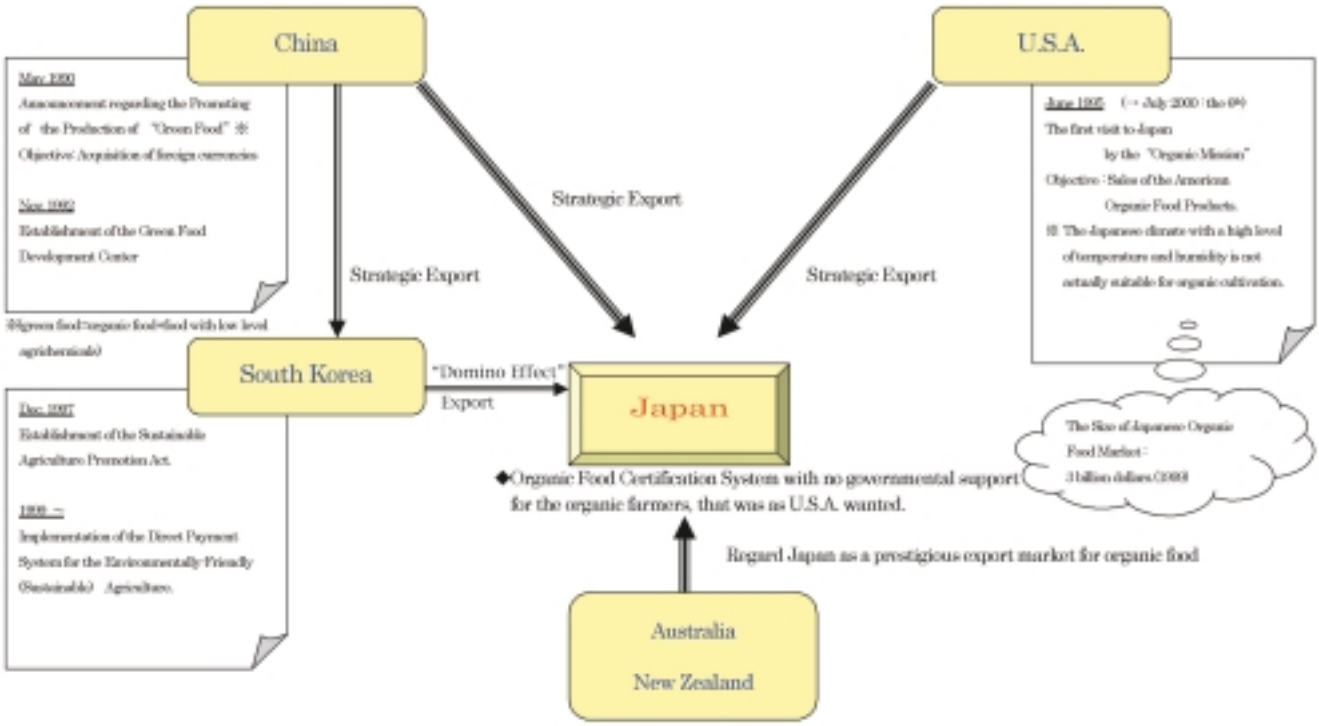

Fig. 1. Neighboring Countries' Political Movement over Sharing the Japanese Organic Food Market

July in the same year. Also, direct payments have been promoted in environmentally controlled areas since 1999, so have they in paddy agriculture since 2001 nationwide.

Organic agriculture in South Korea is not particularly export-orientated like China, Australia, New Zealand and the U.S.A., but it is thought that South Korea is increasingly under pressure to promote the exportation of her products to the Japanese organic food market in order to protect her organic agriculture from the inflow of Chinese green food products within the country.

(3) As far as organic agriculture is concerned, Japanese organic farmers have no power of competitiveness due to high land prices, high labour costs and high costs of other production materials. Farmers are therefore urging for governmental support such as a direct payment program which is already implemented in South Korea.

However, it is necessary to ensure that consumers will, or will not, support farmers with such a proposal. A questionnaire survey was conducted, and the Contingent Valuation Method was employed[1]. The following are the findings from this survey.

"It is 230 billion yen according to a majority decision rule, i.e. supported by 50% of the whole consumers, and it is 47 billion yen by applying a stricter rule, i.e. supported by 80% of the whole consumers. The results suggest that the consumers will agree governmental support such as a direct payment program for the farmers."

note 1) Kyoichiro ADACHI, Kaplan-Meier Survival Estimate of the Consumer's Evaluation Function for Organic Agriculture, *Quarterly Journal of Agricultural Economy* 54(2), April 2000.

Research on Refining the Methods of Forecasting Global Demand and Supply for Food, given Environmental and Resource Constraints

1. Objective

With domestic agriculture production as the base, appropriately matching imports and stockpile to provide a stable supply of food to the Japanese people is an important issue for Japan. Given this, our research aims to develop a more refined model for global demand and supply of food, which takes into consideration environmental and resource constraints.

2. Consisting studies

(1) Development of the economic model for global demand and supply of food that takes into consideration environmental and resource constraints.

A more refined model for global demand and supply of food, which takes into consideration environmental and resource constraints, and a forecast of trends in the global demand and supply of food by using this model.

(2) Research for potential food production capacities in principal regions of the world that takes into consideration of the constraints for environment and resources.

Environmental and resource constraint factors that impact on agriculture and food production are regionally diverse. Our objective is to understand the impacts of these environmental and resource constraint factors on agriculture and food production for each of the principal regions of the world, and then contribute to refining the demand and supply forecast, which is derived from the new global model to be developed under the study 2-(1), which is described earlier.

3. Outline of the results

(1) Survey of preceding studies

Survey on the preceding studies regarding integrated approaches for the international agricultural commodity markets and resource and environmental issues. It was found that there were not many related studies in this field. Moreover, the most distinctive study by IFPRI, IMPACT-WATER, still treats the water market prospects as an exogenous factor to their quantitative study on commodity markets. Therefore it is concluded that there were a number of issues to tackle for the theoretical and empirical integration of the food supply-demand analysis and resource-environmental issues.