

Publications and Summaries of Selected Research Papers

● Publications

PRIMAFF Review (Japanese)	No.8~11	quarterly
Journal of Agricultural Policy Research	No.4~6	published irregularly
Research Monograph Series (Japanese)	No.3~5	published irregularly
PRIMAFF Annual Report (Japanese, English)	No.2	annual

● Summaries of selected research papers

1) Norin Suisan Seisaku Kenkyu (Journal of Agricultural Policy Research)

“Long-term Grain Market Projection with Considerations on the Availability of Arable and Irrigation Land : Development and Use of Resource Constraint Pilot Model”, by Sotaro INOUE, Atsuyuki UEBAYASHI, Koichiro AKASHI and Shunji ONIKI, *Journal of Agricultural Policy Research*, No.4, pp.1-25.

As the earth's resources are limited, the expanding demand for food caused by world population growth will lead to serious food shortages. This gloomy prospect for the future of human society dates back to Thomas Robert Malthus and is still widespread in various forms. This study develops a new type of international grain market model, Resource Constraint Pilot Model, that introduces the availability of arable and irrigation land which are the most important resources for agricultural production, and explores the effects of resource constraints on the food market in the long term. In the model, resource constraints are treated as conditions for the profit maximization behavior of multioutput producers with allocatable fixed inputs.

Scenario analysis using this model shows that the international grain prices are expected to level off during the period from 2000 to 2030. Moreover, after a certain point of time during the forecasting period, the international prices are expected to decline. These findings counter the assertion that serious food shortages will occur in the future. Furthermore, it implies that Japan's food policy should be based on the assumption that pressures to increase grain imports due to slackness in the international grain market will become stronger.

The model also describes the changes of export and import country structure under various scenarios. For example, by assuming more restricted availability of arable and irrigation land, ASEAN is expected to transform from a net exporter of rice to a net importer, and the model quantitatively illustrates the effects of this emerging import demand on the other countries and regions. Our model assists the discussions on the future grain markets from multiple points of view, which combine the possible changes of resource availability and the function of the price mechanism in grain markets.

“Thoughts and its Changing Process of Theatrical Movement in Rural Area : A Case Study of Kenji Miyazawa's View of Art and the Activities of Young Men's Circles and Association in NAGATORO Village”, by Yoshihiko AIKAWA, *Journal of Agricultural Policy Research*, No.4, pp.27-51.

Kenji Miyazawa (1896-1933) proposed that the modern arts monopolized and biased by capitalism should be returned to the hands of the ordinary people and be restored by adding life force and vitality to them. In his thoughts can be clearly observed a strong influence of the democracy movements of the Taisho Era (1912-1926), which coincided with his adolescence, and the popular art theories stimulated by those movements.

The post-war rural theatrical movement in Nagatoro, Yamagata Prefecture, had its origin in Miyazawa's thoughts on the arts. Before the war, Jinjiro Matsuda, who had learned Miyazawa's ideas on the arts from Miyazawa himself, started theatrical movements of young farmers as a means of rural development. These movements were revived in the post-war years as circle activities with the help of students of Ichitaro Kokubu, the leader of a life recording movement, and the young people provoked by Matsuda's theatrical movement. This group activity was supported by local youth circles and associations. To these circles, staging was helpful in building solidarity among members but was an obstacle because it required large funds and much labor. Thus, owing to the collision of the need to strengthen the ties among members and the difficulty of financing, members engaged in staging work were often replaced by new ones.

The rural theatrical movements pursued both an ideal and the provision of entertainment. But

as the young people's circles and associations were dissolved one after another, the rural theatrical movement based on these organizations disappeared. At present, this area has three theatrical groups, which are specializing in a direction that strengthens the aspects of enlightenment or art.

“Assessing the Impacts of Alternative ‘Opt-out’ Formats in Choice Experiment Studies: Consumer Preferences for Genetically Modified Content and Production Information in Food”, by Andreas KONTOLEON*, Mitsuyasu YABE, *Journal of Agricultural Policy Research*, No.5, pp.1-43.

An important aspect of the design of stated preference choice experiments concerns the inclusion and format of an opt-out option in the hypothetical choice set(s) presented to the respondent. This paper assessed the implications from using alternative ‘Opt-out’ formats in choice experiment studies. Two alternative opt-out formats have been widely used, the ‘do not buy’ format and the ‘buy/choose my current brand’ format. The decision of which format to use in different cases may have a substantial impact on the estimated parameters and welfare measures derived from choice experiment data. These impacts are examined in a data set from a choice experiment study on consumer resistance to genetically modified content in foods. A split sample design was used in which the first treatment was provided with the option of ‘not buying’ the good at all while the second with an option of ‘buying their usual brand’. Information over the actual purchasing habits of this latter group was collected and was incorporated into the estimation processes.

The results from each treatment were separately analyzed and the impact of alternative opt-out formats on response patterns and on the significance and stability of coefficients across treatment groups was examined. In addition, using findings from the experimental psychology literature the possible behavioral and psychological forces that are at work under each treatment were assessed. Finally, certain methodological implications for the design of choice experiment studies are drawn.

* Department of Land Economy, University of Cambridge

“A Study on the Volume and Transportation Distance as to Food Imports (‘Food Mileage’ and its Influence on the Environment”, by Tetsuya NAKATA, *Journal of Agricultural Policy Research*, No.5, pp.45-59.

“Food Mileage” is an index that expresses the distance from the farm to the table, particularly of imported foods, and is the aggregate product of the weight and distance transported from overseas of all food items imported by a country. The unit of food mileage is t-km (ton-kilometer).

In 2001, Japan's total volume of food imports was 58 million tons and its food mileage was 900 billion t-km, the latter being almost 1.6 times the total domestic freightage. International comparisons show that this figure is high. The food mileage of South Korea and the United States are around 30 to 40% of Japan's, the United Kingdom and Germany about 20% and France around 10%. The per capita figure of Japan is also high.

Japan's remarkably high food mileage is largely due to particular commodities such as grains and distant export countries such as the United States, and incurs environmental concerns. Japan's huge volume of food imports accompanied by long-distance transportation may be damaging the global environment through the increase of carbon dioxide emissions.

“Analysis for Sustainable Development of the Primary Sector at the Regional Level : A Case Study of Hokkaido Prefecture Using a System for Integrated Environmental and Economic Accounting”, by Takashi HAYASHI, *Journal of Agricultural Policy Research*, No.6, pp.1-22.

This study aims at creating a System for integrated Environmental Economic Accounting (SEEA) matrix at the regional level, Hokkaido prefecture being chosen as a case study, in order to investigate the following two objectives. One is to estimate the input of natural resources in the primary sector using information from the SEEA. The other is to analyze whether economic activities in the primary sector in Hokkaido are consistent with the sustainable development using decoupling indicators proposed by the OECD.

The main results of this study are as follows. 1) The primary sector in Hokkaido uses large quantities of natural resources despite its lower actual expenditures on the environmental protection. 2) The primary sector of Hokkaido is not consistent with the sustainable development : investments in natural resources made by the primary sector are much larger than those in other industries, especially in the use of water resources. For example, treating livestock waste requires large quantities of water resources.

Although multifunctionality of the primary sector is widely recognized, the primary sector causes serious pollution problems. This study shows that environmental pressures on natural resources caused by the primary sector have gradually increased in Hokkaido.

“Rural Finance and Hamlets in Vietnam”, by Takashi OKAE, *Journal of Agricultural Policy Research*, No.6, pp.23-49.

Under the Doi Moi policy, financial institutions were created to help individual farmers adjust to the market economy and have enjoyed good performance through a group lending scheme in collaboration with mass organizations. However, there have been no studies that tried to provide detailed information on the functions of those groups and organizations. This study investigates the functions of credit groups and organizations that intermediate bank loans and indicates the importance of hamlets for rural finance in Vietnam.

The author conducted surveys at one village in Red River Delta (the northern rural area which includes the capital, Hanoi). The financing services of Vietnam Bank for the Poor (VBP) are given mainly through the Farmers' Association (FA) under the guidance of the Communist Party of Vietnam. The staff and budget of the FA are insufficient and do not work at all except for the intermediation of bank loans at the hamlet level.

Officially, people borrowing from the VBP should form a joint liability group, called a Saving and Credit Group (SCG). However, almost all households who receive VBP loans do not know that the real function of a SCG is joint liability for defaulting members. They also do not save money. Recently, Agribank's loans were brought through a group lending scheme, and in this case also, joint liability does not function.

Groups in bank loans are merely nominal and never have a joint-liability function. Besides, the FA does not function actively. Nevertheless, there have never been defaults on the loans because intermediation and monitoring are actually made by the hamlet. The hamlet is a basic and minimum unit of all social organizations.

The daily life of one villager is always seen by others in the hamlet, so the transaction cost of monitoring the bank loans is assumed to be zero where the hamlet intermediates the loans. In this village, the modern financial system is penetrating into the rural area step by step, depending on the hamlet.

“Investigation and Analysis Regarding Safeguard Measures on Agricultural Products Applied by Other Countries”, by Kentaro KATSUMATA, *Journal of Agricultural Policy Research*, No.6, pp.51-81.

The objective of this research is to organize and analyze actual safeguard measures applied by other WTO member countries and relevant findings made by panels and the Appellate Body in the WTO.

The number of safeguard measures applied by WTO member countries per five years continued to decrease from 1980 to 1994, but began to increase from 1995 to 2002. Twenty safeguard measures on agricultural products were applied after 1995 when the Agreement of Safeguards (AS) came into effect.

According to the AS, a WTO member may apply a safeguard measure to a product only if the member has determined that such product is being imported in such large quantities that it may seriously impact the domestic industry that produces similar or directly competing products. In addition, before making such a decision, the WTO member must evaluate all relevant factors of an objective and quantifiable nature that have a bearing on the situation of the domestic industry.

In some agricultural product cases, the rate and amount of the increase in imports or the share of the domestic market taken by imports decreases, other factors do not necessarily decrease concomitantly, and some factors are evaluated not quantitatively but only qualitatively. Moreover some factors are not evaluated at all.

In agricultural product cases, four safeguard measures were discussed at panels and the Appellate Body, and they found all the measures to be inconsistent with the AS. The measures are applied on imports of certain dairy products by Korea, wheat gluten and fresh, chilled or frozen lamb meat by the USA, and wheat, wheat flour and edible vegetable oils by Chile.

Judging from the findings made by panels and the Appellate Body, and the actual situation of the relevant factors evaluated by WTO members, before applying safeguard measures, it is essential to establish strict interpretations of similar or directly competing products and also to establish methods or quantitatively evaluating the relevant factors and of assessing the effects of increased imports.

“Agricultural Reform of CIS: Transition from Planned to Market Economy”, by Koichi NOBE, *Research Monograph Series*, No.3, 368p.

Immediately after the Soviet Union collapsed in late 1991, CIS nations started agrarian reforms for transition to a market economy, though the approach and paces were different from the country to country. What has been the outcome of these efforts? What changes has CIS agriculture had as a result of these reforms? This book, mainly based on materials in Russia, Kazakhstan and Armenia, is an attempt to find answers to these questions. The main points of the article are as follows:

1) Gross agricultural output recorded a drastic free fall until the late 1990's. During the decade of reform, no improvements were achieved in either labor productivity or land productivity. Thus, agrarian reforms have turned out to be a failure.

2) The first reason for the failure is the ignorance of initial conditions, which were formed under the socialist regime. In the first years of reforms, the creation of family farms was promoted energetically. But after more than 70 years of socialism, 'farmers' have been converted into workers in *sovkhozy* and *kolkhozy*. They simply did not want to leave their farms. In the CIS, with only a few exceptions, such as in Armenia and Georgia, the agrarian structure after the decade of reform is still dominated by large-scale agricultural enterprises, the heirs of the *sovkhozy* and *kolkhozy*.

3) Agrarian reforms, conducted by campaigned methods, have made the liberalization of the economy too radical. Almost all supports to agriculture were abandoned, and as a result, terms of trade for agriculture have become decisively unfavorable.

4) The economic network formed under the Soviet regime was disrupted, and all CIS countries were faced with the need to reconstruct their economy with their transition to a market economy. Here is a major factor that contributed to a long-term stagnation in agriculture in the CIS.

“Genetically Modified Crops and Transformation of Grain Food System: Approach from Sociology of Agriculture and Food”, by Masashi TACHIKAWA, *Research Monograph Series*, No.4, 288p.

In August 1999, the Japanese government decided to introduce mandatory labeling for GM food starting in April 2001. Under this labeling system, various food products derived from GM crops are required to be labeled as such. But certain types of highly processed food, such as oil and sweeteners from corn, are exempted from labeling, since scientific verification tests detecting GMO ingredient cannot be applied persuasively.

The result of the introduction of mandatory labeling system was the opposite of the expectation of the Japanese government. In other words, the shift from conventional grain, which might contain GM crops, to non-GM grains has been observed very rapidly among various actors in the US-Japanese food system.

The establishment of an identity-preserved (IP) handling system to procure non-GM crops has raised various socio-economic issues, such as the distribution of additional costs among actors, further coordination among trading partners for the procurement of non-GM crops, liability issues for certification and accidental mingling of GMO, and so on.

The following are the implications that I learned from the Japanese case of the Non-GMO shift. (1) The shift to Non-GM crops forces all actors participating in the food system to engage in IP handling, and vertical coordination will be much more typical among them as they move to procure non-GM grains. This means that the US-Japanese food system interplay will occur in a more coordinated fashion even in the area of bulk commodity trade. (2) The additional costs generated from the IP handling are not always passed over to consumers' price or borne equally by each participants of the food system. As in the cases of tofu and corn starch, it depends on many factors, such as industrial organization, buying power of retailers, technical complexity of manufacturing plant, and so on.

“Agricultural Policies for Less-favored Areas in the European Union: Focusing on Germany”, by Tomoko ICHIDA, *Research Monograph Series*, No.5, 221p.

Compensatory allowances for Less-favored Areas (LFA) have been implemented since 1975 as a part of EU common agricultural policy. Originally it is intended to compensate income deficit in areas disadvantaged with production for continuing farming and living, in order to maintain countryside landscapes and to avoid depopulation. Today agri-environmental policy and rural

development policy are carried out in addition to LFA compensatory allowance. This study aims to describe contradictions among multiple purposes of LFA allowance, details and implementation of other main policies for LFA, and relation among LFA allowance and other policies, focusing on Germany.

In conclusion, first, LFA compensatory allowance was criticized that their main purposes as continuing farming, maintenance of countryside landscape and avoidance of depopulation conflicted with one another, and they overlapped with the purposes of agri-environmental policy and rural development policy. After CAP reform and Agenda 2000, its target is going to be limited. Second, both environmental payment and 5b program assist LFA allowance in making LFA allowance's original purposes clearer, that is to say, the former emphasizes environmental protection, while the latter stresses avoidance of depopulation and creation of job opportunities. The income deficit of farms with LFA allowance was temporarily enlarged after 1992 CAP Reform, but is rather decreasing, although the EU aims to make CAP more market-oriented. Farm income in LFA is supported not only by LFA allowance but also by environmental payment and rural tourism. In the Bavarian case, farm income in mountainous areas is higher than that of cropland because of the grassland premium since 1998. Third, the financial expenditure for agricultural sector in Germany is gradually decreasing, as the system of social market economy since the end of World War II becomes unstable after the reunification in 1990, and the change of cabinet to the coalition by the Social Democratic Party (SPD) and the Green Party in 1998. Since the 1996 national budget for the 'common tasks' has been so reduced, co-financing by the EU and federal states becomes more important.

Councilors and Research Staff Members

● Councilors (2004.2. 1 ~ 2006.1.31)

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Kuniko Inoguchi	Professor of Political Science, Sophia University
Toshiko Kanda	General Secretary SHODANREN/CJ (SHODANREN/CJ is National Liaison committee of Consumer Organizations)
Heita Kawakatsu	Professor, International Research Centre for Japanese Studies
Ichiro Kitasato, PH.D	President, Meiji Seika Kaisha, Ltd.
Soshichirou Nakagawa	Professor, Department of Environmental Policy and Management, Tottori University of Environmental Studies
Shin-Ichiro Nishimura	Professor, Graduate School of Science, Hokkaido University
Toshio Yamada	Senior Executive Director, Central Union of Agricultural Co-operatives
Kazuko Yamamoto	Journalist
Hiroshi Yoshikawa	Professor, Faculty of Economics, University of Tokyo

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Tetsuro Yakushiji, Director

Policy Evaluation Section

Kunihisa Yoshii, Head

Kentaro Katsumata

Environmental Evaluation Section

Takashi Hayashi (Plural Posts; Environmental Policy Division, Minister's Secretariat)

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Supply and Demand Analysis Section

Toshitaka Katsuki, Head

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Shunji Oniki, Senior Researcher

Takaya Honma

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Asia and Africa Section

Yoshihisa Aita, Head

Katsuya Takahashi, Senior Researcher (Plural Posts; Food Policy Planning Division, General Food Policy Bureau)

Supplementary Posts (Temporary Personnel)

Kenji Yoshinaga (Overseas Visiting Researcher; Director, Land and Water Development Division, FAO)

Budget and the Number of Staff

● Budget

Budget for annual revenue for FY 2003:	¥2,895,000
Budget for annual expenditure for FY 2003:	¥889,022,000
(details)	
Personnel expenditure:	¥697,730,000
Research expenditure (excludes Research project expenditure):	¥134,314,000
Research project expenditure:	¥56,978,000

● Number of Staff (2004.3.31)

Director General	1
Deputy Director General	1
Researchers (includes policy research coordinators and assistant policy research coordinators)	48
Administrative officers	30
Total	80

(Note: Those who retired are included in the data above dated March 31, 2004.)

Library

New Volumes of Acceptance (2003) (Volumes)

	Purchase	Donated	Total
Japanese books	1,054	2,243	3,297
Foreign books	197	400	597
Total	1,251	2,643	3,894

Volumes of Library Holdings (as of March 31, 2004)

Japanese books	242,412 Volumes
Foreign books	50,429 Volumes
Total	292,841 Volumes

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