Annual Report on Food, Agriculture and Rural Areas in Japan

FY2002

Part 1 Trends in Food, Agriculture and Rural Areas

Summary

(Provisional Translation)
CONTENTS

Topics

1  Risk Analysis Aimed at Guaranteeing Food Safety
2  The Impact of Deflation on Food Consumption
3  Framework for Rice Policy Reform ñ Principles and Characteristics of Reform
4  Reading the Rice Genome
5  Biomass Nippon Strategy
6  The Ministerial Meeting on ìWater for Food and Agricultureî
7  WTO Agricultural Negotiations

Chapter I  Establishing a System for Stable Food Supply (Related to Food Policies)

Section 1  Guaranteeing the Safety and Reliability of the Food Supply
Section 2  Trends in Food Consumption and the Food Industry
Section 3  World Supply & Demand in Agricultural Products and Japanís Food Self-Sufficiency
Section 4  Trends in Agricultural Policies in Other Countries, WTO, etc.

Chapter II  Sustainable Development of Agriculture Through Structural Reform (Related to Agricultural Policies)

Section 1  Trends in Agricultural Economy
Section 2  Present Production Structure of Japanís Agriculture and Issues in Accelerating Structural Reform
Section 3  Reform of Rice Policies and Supply & Demand Trends for Principle Commodities

Chapter III  Creating a Recyclingñbased Society and Beautiful Rural Areas with Vitality (Related to Rural Development Policies)

Section 1  Maintaining and Promoting the Natural Cyclical Functions of Agriculture
Section 2  The Roles of Farming, Forestry and Fishing Villages in Making Sustainable Use of Biomass
Section 3  Promotional Measures to Create Rural Areas with Vitality
1 Risk Analysis Aimed at Guaranteeing Food Safety

In the context of food, risk refers to the probability that health will be adversely impacted by hazards in food, and the extent of that impact. To appropriately address todayís diversifying problems of food safety, and to ensure that the health of the nation is protected, focus needs to be placed on the risk inherent in food (i.e. food risk), on the precondition that there is no such thing as i absolute safetyí in food. Adverse impact on health must be reduced or prevented on the basis of scientific knowledge, taking care to reflect the opinions of the people. This rationale is practiced using the technique known as i risk analysisî.

Risk analysis is a technique consisting of the three independent yet integrated elements of risk assessment, risk management, and risk communication. It is applied in a variety of fields beside food safety, such as finance and the environment.

Risk analysis is a method of (1) evaluating, from a scientific standpoint, the impact that will be caused by consuming food when the people could potentially be exposed to food hazards (í) and the probability that the impact will occur (risk assessment), (2) seriously considering the policy options that should be taken in order to bring that risk within tolerable levels (risk management), and (3), throughout these processes, mutually exchanging information and opinions between the parties concerned, including consumers, producers, the administration and academia (risk communication).

When implementing risk assessment, firstly, the correlation between a given health disorder and a given hazard is estimated. Next, an estimation is made of how much health damage is caused by how much exposureí to this hazard. At the same time, the degree to which people are exposed to the hazard in normal everyday life is ascertained. Finally, these results are aggregated and the degree of risk to humans predicted.

In risk management, health protection is positioned as a matter of the utmost priority, and options for policies or measures that should be adopted are prepared on the basis of the risk assessment results. Those policies or measures are then decided and implemented while maintaining dialog between the parties concerned. In urgent cases, meanwhile, provisional measures need to be taken before the risk assessment.

In risk communication, steps need to be taken, during the processes of risk assessment and risk management, to form consensus on issues such as the policies to be implemented. To achieve this, the administration and others actively disclose and provide information, and exchange opinions with the parties concerned (i.e. consumers, producers, etc.).

Meanwhile, verifying the effects of policies and measures and evaluating their efficacy, as well as re-evaluating risk in response to new scientific knowledge on hazards, for example, will lead to the implementation of more appropriate policies and measures.

If the administration in charge of future food safety introduces this kind of risk analysis technique, not only could it be expected to reduce or prevent adverse impact on health, but also, by organizing the sharing of roles among the administration, businesses, consumers and others and taking steps for mutual collaboration between them, it will become possible to comprehensively guarantee food safety from a variety of angles in society as whole.

[See Chapter I Section 1 ]

---

*1 Biological, chemical, or physical substances or objects in food that could have an adverse affect on human health, or the condition thereof.

*2 When the body is exposed to chemical substances, etc.
Framework of Risk Analysis

- Identification of problems with food safety
- Commission of risk assessment

- Hazard Identification
- Hazard Characterization
- Exposure Assessment
- Risk Characterization

- Studies based on results of risk assessment
  - Evaluation & decision of options for policies and measures capable of implementation

- Implementation of policies and measures

- Monitoring and Review
  - Evaluation of effectiveness of policies & measures implemented
  - If not effective, revision of risk evaluation, etc.

- Mutual exchanges of information and opinions among all parties concerned
With consumer prices falling for four successive years since 1999, the Japanese economy has been in recession since the second half of 2000, and companies are engaged in rigorous adjustments in both wages and employment in an attempt to reduce personnel costs.

Given such economic conditions, falling prices and diminishing cash income are having an impact on food purchasing behavior, causing consumers to seek lower-priced food products. This, in turn, has led to a fall in agricultural products, which is consequently having an impact on domestic agricultural production.

In Japan, consumer prices have fallen for four successive years since 1999. This kind of situation, in which prices are in sustained decline, is called deflation. The Japanese economy is, therefore, currently in a deflationary phase.

To divide falling consumer prices into products (goods) and services (including eating outlets), the fall in prices in recent years has been greater in products than in services. Amid this trend, the consumer price index for food products has been falling since 1998, while domestic wholesale prices have been more or less flat. On the other hand, sale prices for agricultural products at the producer stage have continued to decline since 1993, falling particularly hard between 1998 and 2000. Furthermore, the difference between the consumer price index for food products and the sale price index for agricultural products has been tending to widen in recent years. In this way, the fall in consumer prices for food products is having a major impact on agricultural production.

In purchasing behavior for food products, consumers generally compare the quality and prices of products. This is because there is a certain breadth in purchase prices even for the same product, due to differences in quality and other factors such as bargain sales. In such cases, when there is breadth in the prices of products, a tendency can be seen for consumers to choose and purchase those with lower prices. This situation is clear when comparing the consumer price index and purchase prices in Surveys of Household Economy. The consumer price index often tends to be higher than those in Surveys of Household Economy, i.e. the prices at which consumers actually purchase foods, because it does not cover discount shops, etc., and bargain sale prices are not taken into account.

According to a Public Opinion Survey on National Life, there were slight increases in respondents who said that, compared to the previous year, their lives were improving or about the same, giving food for hope in 2002.

Against this background, the real spending on food consumption per household member, which had decreased for five years in succession up to fiscal 2001, turned to an increase in 2002. The situation should be monitored to see if this increasing trend will continue in future.

【See Chapter I Section 2】
Indices Related to Food Supply (1991 = 100)

Consumer Price Index and Purchase Prices (1985 = 100)

Perceived Improvement in Life Compared to the Previous Year

Source: Cabinet Office
Note: Surveys for all years taken in May, except 1996 (July), 1999 (Dec.), 2001 (Sept.), and 2002 (June).
3 Framework for Rice Policy Reform ñ Principles and Characteristics of Reform

In recent years, Japanís paddy field agriculture has been in a state that could aptly be called iclosedí. In addition to the declining incomes of rice farmers due to lower rice consumption and stagnant prices, there is an increasing sense of impasse and unfairness over the production adjustments that have been implemented over the last 30 years or so.

The Ministry of Agriculture, Forestry and Fisheries has taken a grave view of this situation. For the future of paddy field agriculture, it drew up an iFramework for Rice Policy Reformî on December 3rd, 2002, and is planning to embark on a major shift in policies on paddy field agriculture and rice in future on the basis of this Framework.

To broadly study future directions for production adjustment, the Ministry of Agriculture, Forestry and Fisheries set up a iProduction Adjustment Research Councilî, consisting of experienced and knowledgeable experts, producersí organizations, local authorities and others, in January 2002. The Research Council met on a total of 46 occasions, including local study group meetings, and compiled iBasic Directions for Reconstruction of Policies on Paddy Field Agriculture and Riceî on November 29th, 2002. In line with this report and others, the Ministry of Agriculture, Forestry and Fisheries drew up a iFramework for Rice Policy Reformî, detailing a major shift in policies on paddy field agriculture and rice with the aim of materializing iThe Ideal Format of Rice Production Systemî by fiscal 2010.

This reform of rice policies has the basic principle of aiming for iunderstandable policies with a clear messageî, iefficient policies without wasteî, and ipolicies with guaranteed transparency of all processes in decisions and operationî, taking account of problems with the existing policies on rice and paddy field agriculture. The actual content of the reforms has the following four characteristics. The first is a isofter landingî to iThe Ideal Format of Rice Production Systemî, by establishing a preparatory period and verifying the progress of implementation for each fiscal year, as well as clarifying the processes of reform. The second is that the content of needed reform is clarified, along with the target years for each task, i.e. production structure, supply-demand adjustment and the distribution system. The third is that, when implementing reform, steps will be taken to prepare the groundwork so that creative input based on the subjective judgement of farmers, farmersí organizations, and distributors may be put to good use. And the fourth is that these policies will be implemented as a whole package, since the whole will be incomplete if reform is lacking in any of the areas of supply-demand adjustment, distribution, structural or management policies, and production measures.

Nevertheless, the effects of these reforms will not be immediately apparent. To materialize iThe Ideal Format of Rice Production Systemî, it will be extremely important not only for farmers and farmersí organizations but also other concerned parties (namely relevant persons in the administration, distributors, and consumers) to join forces in tackling reform based on the gist of this Framework for Rice Policy Reform.

【See Chapter II Section 3】
Clarify Reform Targets

1 Materialize the Ideal Format of Rice Production System by fiscal 2010

Since the rice production system has not met the demand in the food service industry amid changes in diets, demand has fallen.

Fostering of large-scale farmers is delayed, rice production structure is fragile.

Create the rice supply system that consumers want, in response to diverse demand.

Support the growth and expansion of professional farmers, and create a stable food supply system for the 21st century.

2 From fiscal 2008, create a system of supply-demand adjustment involving farmers and farmers' organizations as the principal actors, in collaboration with the government (in fiscal 2006, verify situations such as the readiness of conditions for transition)

Farmers feel enforced by the government's allocation of reduced-yield acreage via the prefectures and municipalities.

Change to a system of autonomous, independent adjustment, and draw on the creative input of farmers.

Immediate Reform of the Supply-Demand Adjustment System

3 Change to an adjustment method based on consumer needs and market trends

Allocation of reduced-yield acreage means that, even if the acreage target is met, it is not practical, rice is left surplus, and falling prices cannot be prevented.

Difficult to attempt organic farming, direct seeding, etc.

Ensure practicality via the method of adjusting production volumes.

Develop an independent sales environment by applying short-term finance schemes for surplus rice in bumper harvests.

Encourage production to meet safety-oriented and low-price oriented consumer needs.

4 Create a system of subsidies to promote structural reform of paddy-field agriculture using local ideas

Subsidy system has been criticized for nationwide blanket application irrespective of regional characteristics.

Change to a system of subsidies that can respond to locally planned and implemented initiatives for structural reform, under the new idea of regional devolution.

Promote production area development whereby diverse produce that consumers want is produced and supplied efficiently, mainly by professional farmers.

Immediate Reform of the Supply-Demand Adjustment System

5 Ease regulations on distribution

Diversifying consumer needs cannot be satisfied by highly regulated, multi-stage distribution and price determination.

Establish a multi-track, diverse and stable supply system by encouraging direct transactions and designation of production areas to meet consumer needs, and creating fair and neutral markets.

6 Guarantee consumer safety & reassurance and the reliability of labeling

Consumer trust in food labeling has fallen sharply.

Introduce methods whereby producers, production areas, etc., can be easily confirmed, establish new standards for polished rice, and thereby restore consumer trust in labeling.

7 Develop a crisis management system

Crisis management by controlling rice for planned distribution (just under 70% of distribution volume)

Develop a stable supply system even in emergencies when rice is in shortage.

Reform the Production Structure

8 Stabilize large-scale farmers' businesses

Price fluctuations greatly impact the business of large-scale farmers

Set up a safety net so that professional farmers can take up positive challenges with reassurance.

9 Foster large-scale farmers

Business farm ÷ 40% of paddy field area

By 2010: Professional farmers ÷ 60% of paddy field area

Make Effective Use of Paddy Fields

10 Manifest multifunctionality, improve self-sufficiency

If the recent decreasing trend in rice consumption continues, 280 thousand hectares of paddy fields will be idle

Promote use of paddy fields to manifest multifunctionality (e.g. protection of natural environment) and improve self-sufficiency.
## 4 Rice Genome Sequencing

With Japan leading an international collaboration for sequencing the rice genome, the Japanese Prime Minister Junichiro Koizumi made an announcement on the completion of a high-quality draft sequence of the entire genome in a commemorative ceremony held in Tokyo on December 18th, 2002. From now on, rice research will focus on elucidating the function of many useful genes, including those that control yield and disease resistance, and practical application of the sequence information to improve many rice varieties. So far, Japanese researchers have already isolated about 40 agronomically useful genes including the gene that controls resistance to rice blast, a major rice disease. Furthermore, Japan is also recognized throughout the world for establishing fundamental tools and materials that serve as keys in elucidating many biologically important genes, and is thereby expected to play a pioneering role in the field of plant research in the future.

More than 10 years ago, Japan embarked on a comprehensive analysis of the rice genome that would provide the foundation for sequencing the genome. The results derived from these efforts have encouraged the rice scientific community to pursue the ultimate goal of sequencing the entire genome, and in 1997 an international rice genome sequencing consortium*3 was formed. From then on, the decoding of the genome has proceeded through international cooperation involving 10 countries and regions around the world (Japan, USA, China, Taiwan, France, India, South Korea, Thailand, UK, and Brazil). Japan is leading this consortium, and is in charge of sequencing over 55% of the whole genome. This epoch-making endeavor will further enhance Japan’s significant contribution in the field of fundamental research.

Rice is not only the staple crop in Japan, but also accounts for some 30% of the entire world grain production. The rice genome is the smallest among major cereal crops such as wheat and maize, and also bears great similarity to their genomes. For these reasons, rice genome sequencing has been promoted to serve as a model for cereal genome research. Moreover, the rice genome has been decoded with 99.99% accuracy, a ground-breaking achievement in the analysis of a major cereal genome. Indeed, on Prime Minister Koizumi’s declaration that the genome had been decoded, numerous messages of congratulations were received from Japan and abroad, notably from US President George W. Bush as well as from Dr. Jim Watson, who discovered the double helix structure of DNA.

With the completion of the high-quality draft sequence of the rice genome, improvements to rice, wheat, maize and other cereal crops (such as the development of varieties that can be cultivated even in arid regions and other unfavorable environmental conditions, varieties with strong resistance to disease pests, and others) are expected to gain momentum from now on. As the world’s undernourished population is now estimated to be around 800 million people, this is expected to contribute to solving food problems. Furthermore, since it is now possible to elucidate and alter the physiology and ecology of plants using genome sequence information, research on developing rice varieties that will address other human needs, for example, preventing common diseases such as hay fever, high blood pressure and other disorders, have also started, as well as research on generating plants that will remove pollutants from soil, etc. These research efforts are expected to be applied to a broad spectrum of fields related to medicine and the environment in the very near future.

---

*3 The International Rice Genome Sequencing Project (IRGSP). An international research collaboration led by Japan and consisting of 10 countries and regions, involved in decoding the sequence of the entire rice genome.
The Completion of the High Quality Draft Sequence of Rice

Message from Prime Minister Junichiro Koizumi

Today, I am pleased to announce a great achievement in international cooperation in plant science research.

The high quality draft sequence of the rice genome has been completed. This is an epoch making achievement comparable to the completion of the first survey of the entire human genome two years ago.

I would like to commend the efforts of the International Rice Genome Sequencing Project. This involved collaboration between Japan, the United States of America, the People's Republic of China, Taiwan, France, India, the Republic of Korea, Brazil, Thailand and the United Kingdom. I would also like to pay tribute to the two private companies that provided the Project with their own sequencing data. I am proud of the contribution Japan has made to world science as a leader of this worldwide consortium.

Today's historic achievement is only the first step toward understanding the entire plant. The publicly available, high quality draft sequence of the rice genome is expected to trigger rapid progress in determining the function of genes in cereals. I am convinced that genome research will make far-reaching contributions to solving the constraints in sustainable food production and environmental problems.

Japan is determined to continue actively contributing to plant science and technology.

December 18th, 2002
Junichiro Koizumi
Prime Minister of Japan
Biomass means resources that are continuously produced by animals and plants using solar energy, for example, waste in the form of livestock manure and decomposable garbage, and unutilized parts of living organisms, such as rice straw, rice husks and thinnings. With a view to making effective use of these resources, the government made a Cabinet decision on a Biomass Nippon Strategy in December 2002. By presenting the targets to be attained and concrete action plans on the utilization of biomass, etc., in an easily understandable way through this strategy, it is hoped that a shared awareness will be engendered among the people and that unique efforts in tune with regional circumstances will be developed.

To prevent global warming and form a recycling-based society, there is an urgent need to materialize a society in which sustainable growth is possible through the use of biomass. At the World Summit on Sustainable Development held in Johannesburg (South Africa) in August 2002, agreement was reached on the development of technology and the promotion of industrialization related to renewable energy (including biomass), and other issues. With this, the comprehensive use of biomass became a subject of international consensus.

In Japan, the importance of a biomass industry making use of agricultural, forestry and fishery resources has also been recognized. It has been decided that the related ministries and agencies will join forces to promote measures for revitalizing agriculture, forestry and fisheries as arenas for environmental protection and biomass production. The Biomass Nippon Strategy was drawn up in response to this, through cooperation between the related ministries and agencies.

In this Strategy, Japan's annual dependence on biomass, use of biomass, and directions for the evolution of related technology are forecast with a view to generating a shared understanding among everyone involved with biomass. It also sets targets for the year 2010. Concerning the more important matters involving issues to be resolved, meanwhile, it maps out specific plans of action indicating the basic rationale, implementing bodies, and the timing of implementation. For example, it cites initiatives involving collaboration between the related ministries and agencies (i.e. comprehensive implementation of facility development and technical guidance aimed at model regions, etc.), and the promotion of regulatory reform (i.e. making use of Special Zones for Structural Reform).

Since the creation of Biomass Nippon will be closely related to the daily lives of the people in future, various efforts based on the Strategy need to be promoted smoothly to assist its early materialization, through positive diffusion and public education on the use of biomass, with the understanding of the nation at large.

It is also to be hoped that positive steps will be taken to promote the use of biomass, by encouraging citizens to perceive biomass as a useful resource and take concrete action in rigorously sorting their decomposable waste, while also purchasing products derived from biomass, with the cooperation of various concerned parties in the region.

【See Chapter III Section 2】

*4 A concept expressing the i mass i of i bio i resources, consisting of organic resources derived from renewable life forms, minus fossil resources.

*5 A society capable of sustainable growth, achieved in Japan through comprehensive use of biomass.
Japan’s annual potential resources of biomass and specific targets for the use of biomass, as indicated in the Biomass Nippon Strategy

| Annual potential resources of biomass | - When converted to energy, equivalent to about 1300 PJ (ca. 35 million kl in crude oil conversion)  
| - When converted to carbon volume, equivalent to 33 million tons (about 3.3 times the total carbon from plastics produced in Japan) |
| Technical perspectives | - In technology for converting low-moisture biomass into energy for direct combustion or gasification, etc., a conversion efficiency of 20% as electric power, or around 80% as thermal energy can be achieved in a plant with a daily biomass processing volume of around 20 tons  
| - In technology for conversion to products, the raw material price of plastics derived from biomass can be reduced to around 200 yen/kg etc. |
| Regional perspectives | Around 500 municipalities will be equipped with systems that can use more than 90% of waste-derived biomass (based on carbon volume conversion; the same applies below) or more than 40% of unutilized biomass |
| National perspectives | To use more than 80% of waste-derived biomass, and more than 25% of unutilized biomass |

Notes
1) Specific targets are aimed at the year 2010.
2) Potential resources of biomass are the total of waste-derived biomass, unutilized biomass, and the potential volume of resource crops. Resource crops here refer to plants cultivated primarily with the aim of producing raw materials for energy and products.
3) The unit used in energy conversion (PJ = petajoule) is a unit expressing thermal volume. 1PJ = 10^{15} joules.

Conversion to a Recycling-Based Society as Envisaged by the Biomass Nippon Strategy

Note: Cost of processing ordinary waste is the total expenditure by all municipalities and general administrative unions throughout Japan in FY2000
The volume of freshwater resources available for use around the globe is limited. To increase food production in response to future projections of global population growth, it will be vital to sustainably develop and appropriately manage water resources.

Against this backdrop, the Third World Water Forum was held in Japan from March 16th, 2003. At a ministerial-level international conference held on the 23rd, a Ministerial Declaration was adopted, expressing the shared resolve of the various countries on water-related initiatives.

In advance of this ministerial-level international conference, the Ministry of Agriculture, Forestry and Fisheries held a Ministerial Meeting on Water for Food and Agriculture as a joint initiative with the FAO. This led to expectations of global initiatives aimed at resolving the 21st century problem of water, such as guaranteeing the supply of food.

Freshwater resources available for use by humans, in the form of river and lake water, are estimated to account for less than 0.01% (105 trillion tons) of all the water on the planet. The global demand for water, meanwhile, is increasing at a pace far outstripping that of population growth. Moreover, water is affected by a variety of problems, namely drought, floods, and water pollution, besides that of water shortages due to population growth. In particular, food production needs to be increased by making more efficient use of agricultural water, which accounts for about 70% of the worldís water usage (1995), and to alleviate poverty by modernizing water use. It is also important to prevent environmental destruction in the form of exhaustion of groundwater resources, saline accumulation, and the advance of deserts due to excessive extraction of agricultural water.

The Ministerial Meeting on Water for Food and Agriculture was attended by around 50 countries and international organizations. It culminated in the adoption of a Ministerial Recommendation based on the three tasks of i) food security and poverty alleviation, ii) sustainable water use, and iii) partnership.

In line with this Recommendation, the ministerial-level international conference drew up principles for efforts by countries all over the world aimed at resolving global water problems. This is expected to trigger concrete action aimed at resolving water problems in various countries of the world.

【See Chapter I Section 3】
Ministerial Recommendation
adopted by the Ministerial Meeting on Water for Food and Agriculture
Third World Water Forum
Otsu, Shiga Prefecture, Japan, 21 March 2003

We, Ministers responsible for water for food and agriculture and the representatives of international organizations assembled at the Ministerial Meeting on Water for Food and Agriculture in Otsu, Shiga Prefecture, Japan on 21 March 2003, at the invitation of the Ministry of Agriculture, Forestry and Fisheries of Japan and the Food and Agriculture Organization of the United Nations.

We assert herein our common recognition to implement the recommendations adopted at the World Food Summit in Rome, the declaration of the First World Water Forum in Morocco, and the ministerial declaration of the Second World Water Forum in The Hague, and the World Summit on Sustainable Development in Johannesburg.

We recognize that water is essential for broad-based agricultural and rural development in order to meet the Millennium Development Goals to improve food security and poverty alleviation.

· **Three challenges**

<table>
<thead>
<tr>
<th>(Food security and poverty alleviation)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. To improve the development and management of water for agriculture to meet the growing and changing demand for food, alleviate poverty and sustain economic growth.</td>
</tr>
</tbody>
</table>

· **(Sustainable water use)**

| 2. To balance the use and development of water with the available water resources; to preserve water quality in order to achieve sustainable patterns of water use through integrated approaches linking water management with the conservation and sustenance of ecosystems; and to maintain the integrity of land and water systems upon which agricultural production depends. |

· **(Partnership)**

| 3. To enhance the cooperation and partnership of all stakeholders in all aspects of agricultural water use, development and management; to increase access to water resources; to improve the productivity of rainfed and irrigated farming systems; and to equitably share benefits and risks. |

**Basic recognition**

| 4. We recall that in the latter half of the 20th century, significant public and private investment in agriculture water development has resulted in much needed productivity gains and has narrowed food security gaps and has contributed to poverty alleviation. |

| 5. We recognize that agricultural production and its water uses are influenced by agro-climatic zones that have resulted in a diverse array of agricultural practice and agricultural economy in the world. |
6. We recognize that agricultural water is not only vital for food production, but also provides a broad spectrum of services related to society, culture and the environment. It is instrumental in improving economic and social benefits to vulnerable people, particularly women and children. These multiple roles and values of agricultural water must be recognized, evaluated and taken into account for the development and management of water resources.

7. We recognize that the development and management of agricultural water resources needs to take into account a variety of other uses, including water supply for urban and rural communities, industry, hydroelectric power generation, navigation, recreation, tourism and fisheries, and conserving ecosystems.

8. We note that in some regions agricultural water demand and use exceed the long term rates of resource replenishment and may require the development of alternative water sources, while looking for innovative means and appropriate actions to achieve sustainable water resource management. In other regions, water resource availability offers scope for further development.

9. We emphasize that achieving the objectives of food security and poverty alleviation for an increasing world population will require the mobilization of all sources of financing and increased investment in water-related infrastructure, research and development in order to sustain productivity gains and create new opportunities for the sustainable development and integrated management of water resources.

· **Plan of concrete actions**

10. We continue to pursue efforts to develop water resources in a sustainable manner while improving the operation, maintenance and rehabilitation of irrigation schemes.

11. We reaffirm our determination and commitment for progressive modernization and improvement of agricultural water use effecting transition of emphasis from supply- to demand-driven agricultural water management.

12. We are determined to increase substantially agricultural water productivity through participatory approaches, appropriate regulations and cost-recovery mechanisms, development and dissemination of research findings, capacity-building and institutional reforms, which are adapted to local climatic, environmental and socio-economic conditions.

13. We will promote improved governance of agricultural water use through integrated water resources management including non-agricultural water use. This process should be efficient and equitable. It would involve the active participation of all user groups, including women and the poor in local water resource settings.
14. We will give due consideration to the environmental aspects in respect of agricultural water use, and seek to maintain productive ecosystems through progressive and innovative approaches to sustainable use of water. An important tool in this process would be environmental impact assessment.

15. We will undertake research and development, including traditional knowledge, to improve the management and availability of limited water resources in water-scarce areas, through improved crops and development of new and non-conventional sources of water for agriculture.

16. We will continue to make efforts to foster international cooperation and partnerships between and among developed and developing countries, through financial and technical assistance and knowledge exchanges, and to encourage private sector involvement in agricultural water development and management.
7 WTO Agricultural Negotiations

At the WTO Agricultural Negotiations, discussions have been underway on the three principal areas of i) export competition, ii) market access, and iii) domestic support, towards the end of March 2003 deadline for establishing modalities. However, there has been no sign of concessions from exporting countries like the USA and the Cairns group, which are making excessive demands, and the gulf between them and Japan, the EU, and other aligned countries has not been bridged. For these reasons, Members failed to establish modalities before the deadline.

The Japanese government, while continuing to align itself with the EU and the other friendly countries, will exert every effort to ensure that a sufficiently balanced, realistic consensus based on coexistence of various types of agriculture is reached.

Agricultural negotiations were started in early 2000 under the provisions of the WTO Agreement on Agriculture. At the 4th WTO Ministerial Conference in November 2001, meanwhile, a new Round aimed at negotiating a broad range of balanced topics was established. With this, the negotiations were positioned as issues that should be agreed as part of a single undertaking under the new Round. At the Ministerial Conference, among other issues, consensus was reached on establishing modalities of agricultural negotiations by the end of March 2003.

At the agricultural negotiations, the USA and the Cairns group (a group of agricultural product exporting countries that aim to eliminate export subsidies) are demanding drastic cuts from agricultural product importing countries, such as cutting all tariffs to 25% or lower within five years. On the other hand, Japan, the EU and other friends of multi-functionality countries, assuming the basic philosophy of coexistence of various types of agriculture, have put forward a reduction formula which enables Members to achieve a balance between exporting and importing countries and flexibility among commodities, while adequately considering non-trade concerns.

Within this context, the Chairman of the Special Session of the WTO Committee on Agriculture presented a first draft on modalities in February 2003, and an amended version in March. The Japanese government immediately announced that it was difficult to accept the draft in its entirety, since it not only failed to address non-trade concerns appropriately and ensure equal burden sharing among Members, but was also, as a whole, too advantageous to certain exporting countries. On the other hand, the USA and the Cairns group repeated their position that the Chairman’s draft was inadequate and that drastic and more significant cuts in tariffs, etc., were needed, thus showing no sign of giving ground. As a result, the target of establishing modalities by the end of March was not achieved.

The Japanese government, while continuing to align itself with the EU and the other friendly countries, will continue to make tenacious efforts to gain the greater understanding of other countries towards Japan’s position, and will exert every effort to ensure that a sufficiently balanced, realistic consensus based on coexistence of various types of agriculture is reached.

【See Chapter I Section 4】
Positions of Various Countries and
Revised Version of First Draft of Modalities

<table>
<thead>
<tr>
<th>Issue</th>
<th>Japan</th>
<th>EC &amp; other FRIENDS</th>
<th>USA</th>
<th>Cairns Group</th>
<th>Developing Countries</th>
<th>Revised Draft of Modalities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tariffs</td>
<td>・Progressive cuts, flexibility among commodities (UR formula) [Japan/EC proposal: average 36%, minimum 15% reduction]</td>
<td>・Radical cuts under the Swiss formula (all commodities cut to below 25% in 5 years)</td>
<td>・Radical uniform cuts in developed countries</td>
<td>・In [5] years, tariffs higher than [90]% to be cut by an average [60]% and minimum [45]%, etc.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tariff rate quotas</td>
<td>・Improved rules (update consumption base period, abolish additional access volume)</td>
<td>・Clarification of rules on TRQ administration</td>
<td>・Uniform expansion (expand by 20% in 5 years)</td>
<td>・Uniform expansion in developed countries</td>
<td>・Expand to [10]% of domestic consumption (some commodities to [8]%)</td>
<td>・Update base period</td>
</tr>
<tr>
<td>Importing state trading enterprises (ISTEs)</td>
<td>・Greater transparency ・ISTEs play an important role in food security</td>
<td>・Greater transparency</td>
<td>・End import monopolies</td>
<td>・Further strengthening of rules</td>
<td>・Consideration for the important role of ISTEs in developing countries</td>
<td>・Subject to certain disciplines (further consultation required)</td>
</tr>
<tr>
<td>Domestic support (AMS)</td>
<td>・Progressive cuts, flexibility among commodities (reduced from bound levels on a total AMS basis) [Japan/EC proposal: Reduction by 55% on total AMS basis]</td>
<td>・Radical cuts (cut to 5% of volume of total agricultural production in 5 years)</td>
<td>・Elimination in developed countries in 5 years, in developing countries in 9 years (cut 50% in first year)</td>
<td>・Elimination in developed countries</td>
<td>・Total AMS cut by [60]% in [5] years</td>
<td>・Capping on AMS by individual commodity</td>
</tr>
<tr>
<td>Export subsidies</td>
<td>・Reduction [Japan/EC proposal: average 45% reduction]</td>
<td>・Elimination in 5 years</td>
<td>・Elimination in 3 years</td>
<td>・Elimination immediately</td>
<td>・Certain commodities eliminated in the 6th year, the rest eliminated in the 10th year</td>
<td></td>
</tr>
<tr>
<td>Export competition</td>
<td>・Replace all export prohibitions/restrictions with export taxes, to be bound and reduced ・Reduction in export credit</td>
<td>・Reduction in export credit [EC proposal: stricter rules] ・Establish lenient rules ・Opposed to reduction and strengthening of rules</td>
<td>・Establish stricter rules ・Immediate ban on export credit not compliant with rules</td>
<td>・Special consideration for developing countries</td>
<td>・Subject to certain disciplines on export credit and food aid (further consultation required)</td>
<td></td>
</tr>
</tbody>
</table>

Note: Figures in [ ] under 'Revised Draft of Modalities' are used for indicative purposes.
Chapter I  Establishing a System for Stable Food Supply (Related to Food Policies)

Section 1  Guaranteeing the Safety and Reliability of the Food Supply

(1) Reform of the Administration in Charge of Food Safety

i) The government has introduced the technique of risk analysis into the administration in charge of food safety, in order to appropriately address the various problems surrounding food safety and to comprehensively guarantee food safety. It has also decided to set up a Food Safety Committee as a risk assessment body and to enact a Basic Law on Food Safety. To this end, a Bill for a Basic Law on Food Safety was submitted to the regular session of the Diet in 2003.

ii) A review of styles of risk management is also required. The Ministry of Agriculture, Forestry and Fisheries is already tackling bold reforms with a view to establishing an agriculture, forestry and fisheries administration that places priority on consumers. As an example of this, in April 2002 the Ministry announced a Food and Agriculture Revival Plan to tackle BSE and illegal food labeling problems. In fiscal 2003, a new bureau handling consumer administration and risk management work is to be set up in the Ministry of Agriculture, Forestry and Fisheries.

(2) Guaranteeing Safety and Reliability by Providing Information on Food

i) To provide comprehensive guarantees of food safety, it is important that exchanges of opinions be held between risk assessment bodies, risk management bodies, consumers, producers, distributors and others through risk communication, and attempts made to form a consensus. To this end, it will first be necessary to ensure transparency in disclosing and providing information, and it will be important for consumers and producers to participate in risk communication. It is important that the individual hazards (risks) that threaten food safety be addressed while adopting this kind of approach.

ii) From the perspective of elucidating the cause whenever a food accident or similar incident occurs, and making it easier to recall affected food, and from the perspective of securing consumer reliance by clearly indicating the history of food production, distribution, etc., it is important to introduce a traceability system allowing checks back on food history information. On the other hand, however, consumers have a low awareness of traceability systems, and future dissemination activities are required.

iii) Meanwhile, the Ministry of Agriculture, Forestry and Fisheries submitted a Bill to the regular session of the Diet in 2003 with the aim of creating a system whereby individual information on cattle throughout all processes from production to consumption would be recorded and transmitted (e.g. using individual identification numbers).
Fig. 1  Proposed Restructuring of Administrative Organization to Guarantee the Safety and Reliability of the Food Supply

Fig. 2  Consumer Awareness and Evaluation of the Traceability System

Notes
1) This Survey was conducted over the Internet, with a nationwide sample of 512 males and females between the ages of 10 and 79  (valid response rate 73.1% )
2) The Traceability System was explained at the beginning of the Survey.
(3) **Action Against the Problem of Unregistered Agricultural Chemicals**

i) In Japan, the sale of unregistered agricultural chemicals is prohibited under the Agricultural Chemicals Regulation Law, which includes measures to ensure that the distribution and use of illegal chemicals cannot occur. In July and August 2002, however, there was a series of incidents in which suppliers were arrested for selling unregistered agricultural chemicals. The Ministry of Agriculture, Forestry and Fisheries then instructed the prefectures to gather information on the distribution, etc., of agricultural chemicals, and to carry out on-site inspections. As a result, evidence of the sale and purchase of unregistered agricultural chemicals was discovered in 44 prefectures. It also became clear that some farmers were using unregistered agricultural chemicals in the knowledge that they were illegal.

ii) It has been pointed out that one cause of this is a loophole in the Agricultural Chemicals Regulation Law, which fails to prohibit the import and use of unregistered agricultural chemicals. In view of this and other factors, the Law was urgently amended in December 2002. The Amended Agricultural Chemicals Regulation Law includes provisions that prohibit the manufacture, import, and use of such chemicals, while the penal provisions have also been strengthened. In future, it will be important to strengthen collaboration between administrative organs (i.e. the central and local governments) to prevent the distribution of unregistered agricultural chemicals, and to give guidance on the correct use of agricultural chemicals to users of agricultural chemicals.

(4) **Restoring Trust in Food Labeling**

i) Since January 2002, there have been numerous reports all over the country of illegal food labeling on meat, such as falsification of the place of origin. As a result, consumer trust in food labeling has fallen sharply.

   In view of this, from the perspective of providing information to consumers and ensuring the efficacy of legislation, the government made an amendment to the Law Concerning Standardization and Proper Labeling of Agricultural and Forestry Products (the JAS Law) in June 2002. Under the amendment, the names and other details of suppliers who break the law will be published promptly while penal provisions have also been strengthened.

ii) Meanwhile, a correction of food labeling is required to enable consumers to make their own judgments when choosing food products. According to a survey by the Ministry of Public Management, Home Affairs, Posts and Telecommunications, more than 10% of sales outlets fail to indicate the place of origin and other information on their fresh food products. In particular, more than 50% of specialist stores use incorrect labeling. In future, it will be important to continue diffusing and increasing awareness of the labeling system, conducting surveys on the state of labeling, and giving guidance to stores.

   Furthermore, in collaboration with the Ministry of Health, Labour and Welfare and others, a Joint Council on Food Labeling has been set up, and is surveying and deliberating on the entire issue of food labeling standards. It is important that efforts be made to make food labeling easier to understand, based on this kind of debate.

iii) To guarantee food safety, individual businesses need to respect the law on the basic principle of consumer priority, in addition to guidance, supervision, etc., from the administration to businesses. Everyone involved in the food industry needs to take such steps to restore and regain the trust of consumers.
Yes (have lost confidence) 78%
No 18%
4% had already lost confidence

Note: "Importer", "Manufacturer", and "Seller" were referred to as "Importing Business", "Manufacturing Business", and "Selling Business" in the Law prior to Amendment.

Source: Cabinet Office
Notes
1) This Survey was conducted over the Internet with members of consumers’ cooperatives.
2) Respondents were asked whether they had "lost confidence in food labeling compared to one year ago".

Source: Cabinet Office
Note: Results of a survey of 16,787 fresh food products in department stores, 66,423 in supermarkets, and 9,647 in specialist stores.
Section 2 Trends in Food Consumption and the Food Industry

(1) Recent Trends in Food Consumption
i) Food product prices have continued to fall since fiscal 1999, a trend that affected nearly all commodities by fiscal 2001 (falling by 1.4% overall from the previous fiscal year). Meanwhile, real food consumption expenditure (food spending) per household member of non-farming households in fiscal 2001 fell for the 5th successive year since 1997 (down by 0.5% from the previous fiscal year), though the rate of decrease eased somewhat. However, while food product prices continued to fall (down by 0.1%) in the last three quarters of 2002 (April-December), real food spending increased (up by 1.1%).

ii) Within this trend, a questionnaire survey comparing Japanese eating habits in 2001 and 2002 showed that, while there was hardly any change in breakfast habits, there was a decline in eating out for lunch, with a concomitant increase in home lunches and the purchase of lunch packs and pre-cooked meals. For evening meals, there was a slight increase in meals taken at home.

(2) Present State of the Japanese Diet
i) Food consumption in Japan has changed greatly in terms of volume, on the back of improved incomes. In recent years, moreover, it has changed qualitatively, too, with the increasing orientation towards diversity, health and safety. In this context, consumer needs have diversified in line with lifestyle changes, etc., and forms of food consumption and purchase have also changed in response to this. As a result, the dependence of the Japanese diet on forms of catering outside the home has increased over the long term.

ii) Although food consumption and diet have changed greatly in both quantitative and qualitative terms, nutritional problems have also arisen in the process ñ namely, a disturbed balance of nutrient intake and over- or under-nourishment. Maintaining good health requires a well-balanced intake of the required nutrients based on an appropriate combination of diverse foods.
Table 1  Trends in Consumer Price Indices for Food (2000 = 100)  
( unit : % )

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Overall</strong></td>
<td>98.9</td>
<td>2.0</td>
<td>0.2</td>
<td>▲ 0.5</td>
<td>▲ 0.5</td>
<td>▲ 1.0</td>
<td>▲ 0.8</td>
</tr>
<tr>
<td><strong>Foods</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cereals</td>
<td>97.9</td>
<td>▲ 0.2</td>
<td>▲ 0.9</td>
<td>▲ 0.4</td>
<td>▲ 2.3</td>
<td>▲ 1.5</td>
<td>▲ 0.8</td>
</tr>
<tr>
<td>Fish/shellfish</td>
<td>98.8</td>
<td>2.3</td>
<td>0.7</td>
<td>▲ 0.5</td>
<td>▲ 1.8</td>
<td>▲ 1.1</td>
<td>0.3</td>
</tr>
<tr>
<td>Meat</td>
<td>99.9</td>
<td>4.4</td>
<td>0.0</td>
<td>▲ 1.2</td>
<td>▲ 1.2</td>
<td>0.1</td>
<td>0.4</td>
</tr>
<tr>
<td>Dairy products/eggs</td>
<td>97.8</td>
<td>1.6</td>
<td>▲ 1.6</td>
<td>1.5</td>
<td>▲ 1.3</td>
<td>▲ 1.9</td>
<td>0.2</td>
</tr>
<tr>
<td>Fresh vegetables</td>
<td>97.7</td>
<td>6.5</td>
<td>10.2</td>
<td>▲ 13.7</td>
<td>▲ 3.4</td>
<td>▲ 5.7</td>
<td>4.3</td>
</tr>
<tr>
<td>Fresh fruits</td>
<td>96.0</td>
<td>▲ 8.7</td>
<td>8.5</td>
<td>▲ 4.9</td>
<td>▲ 1.2</td>
<td>▲ 6.3</td>
<td>▲ 0.3</td>
</tr>
<tr>
<td>Oils, fats &amp; seasonings</td>
<td>98.4</td>
<td>1.3</td>
<td>▲ 0.7</td>
<td>▲ 0.5</td>
<td>▲ 1.7</td>
<td>▲ 1.2</td>
<td>▲ 1.6</td>
</tr>
<tr>
<td>Confectionery</td>
<td>97.9</td>
<td>2.0</td>
<td>0.5</td>
<td>1.2</td>
<td>0.0</td>
<td>▲ 2.0</td>
<td>▲ 1.9</td>
</tr>
<tr>
<td>Cooked foods</td>
<td>98.8</td>
<td>3.0</td>
<td>0.0</td>
<td>▲ 0.3</td>
<td>▲ 0.8</td>
<td>▲ 0.9</td>
<td>▲ 0.4</td>
</tr>
<tr>
<td>Beverages</td>
<td>98.0</td>
<td>2.5</td>
<td>2.1</td>
<td>1.0</td>
<td>▲ 0.9</td>
<td>▲ 1.6</td>
<td>▲ 1.8</td>
</tr>
<tr>
<td>Alcoholic beverages</td>
<td>99.1</td>
<td>1.0</td>
<td>▲ 0.5</td>
<td>▲ 0.2</td>
<td>▲ 0.6</td>
<td>▲ 0.8</td>
<td>▲ 0.9</td>
</tr>
<tr>
<td>Eating out</td>
<td>99.4</td>
<td>3.1</td>
<td>0.2</td>
<td>0.2</td>
<td>▲ 1.2</td>
<td>▲ 0.4</td>
<td>0.3</td>
</tr>
<tr>
<td>Processed foods</td>
<td></td>
<td>2.3</td>
<td>0.2</td>
<td>▲ 0.6</td>
<td>▲ 1.1</td>
<td>▲ 1.1</td>
<td></td>
</tr>
</tbody>
</table>

Source: Ministry of Public Management, Home Affairs, Posts and Telecommunications
Notes 1) Processed foods include cooked foods, alcoholic beverages and others.
2) The index for each fiscal year (April-March) is based on 100 for 2000 (Jan.-Dec.).

Fig. 6  Changes in Meal Composition by Different Meal Times (Breakfast, Lunch, Dinner) in Major Conurbations

Fig. 7  Trends in PFC Ratio in Supplied Calories

Note: Values for fiscal 2001 are estimates.
(3) Promotion of Food Education

i) As the gap between dinner table and farm grows ever wider, there has been a decline in knowledge about food in recent years. This is particularly true among the younger generation, which no longer practices healthy diets. Therefore, it is important that efforts be made to improve abilities and dispositions through learning and practice of knowledge on foods.

ii) In November 2002, a Food Education Promotion Liaison Council was set up as a collaborative effort by three ministries (the Ministry of Education, Culture, Sports, Science and Technology, the Ministry of Health, Labour and Welfare, and the Ministry of Agriculture, Forestry and Fisheries). The Council promotes food education, involving dietary correction and provision of information on food safety. The Ministry of Agriculture, Forestry and Fisheries has designated January every year as a Food Awareness Month, and is engaged in various efforts to this end.

(4) Trends in the Food Industry

i) The food industry, consisting of agriculture, the foodstuff industry and others that supply foods vital to the national way of life, is a so-called industry accounting for 10.1% of GDP by all industry (fiscal 2000). It is also important for regional economy. In terms of employment, too, 20% of all workers are involved in the provision of food, and the food industry is an important arena for employment in regional areas.

ii) Due to the severe economic situation and deflation, the market scale of the restaurant industry (sales turnover) has been in a shrinking trend since 1998. On the other hand, the market scale for intermediary foods — lunchboxes, rice balls, and side dishes — is in an increasing trend.

iii) Given this situation, the foodstuff industry needs to collaborate with agriculture in attempting to discriminate products by using domestic agricultural products, rather than simply reducing product prices, and to promote efforts so that each can remain profitable on a continuous basis.
Fig. 8  Trends in GDP by Different Sectors of the Food Industry

Note: Figures in brackets show the GDP for FY2000 (trillion yen)

Fig. 9  Collaborations Between Food Manufacturers and Parties Engaged in Agricultural Production or Shipment

Note: The survey was conducted with members of regional food industry associations, with valid responses from 357 corporations.
Section 3  World Supply & Demand in Agricultural Products and Japan's Food Self-Sufficiency

(1) International Trends in Supply and Demand for Grain, etc., and Japan's Efforts for International Cooperation

i) After repeated cycles of i boom and i squeeze in supply and demand for the world's major grains and soybeans, the keynote in recent years has been one of moderation. In 2002, however, they have been in a tightening trend, caused partly by droughts in major producing countries. It has been pointed out, moreover, that the world's food supply and demand could face a squeeze over the medium to long term.

ii) On the demand side, global population growth is the main cause of expansion. According to UN statistics, the world's population is forecast to reach 8.9 billion by the year 2050. This presents the possibility that, in developing countries, the demand for grains (including fodder cereals) will increase dramatically along with factors such as rising income levels.

iii) On the supply side, conversely, per capita grain production is in a declining trend owing to diminishing harvested areas and slowing growth in single yields. The difficulty of securing new water resources, the advance of soil deterioration (desertification), and droughts or floods due to abnormal weather are also matters of concern as elements that destabilize supply.

iv) As concerns the food supply and demand in China, on the demand side, imports of soybeans have increased dramatically in recent years due to an increased demand for edible oil in China, as well as an increase in meat consumption accompanying population growth and improved living standards. On the supply side, there is progressive desertification caused by human factors i.e. excessive grazing and excessive crop cultivation accompanying rapid population growth, in addition to natural conditions of wind and flood erosion, mainly in the interior.

v) Apart from these human factors and natural constraints, a geographical bias in food production and consumption areas, and a wealth bias in food purchasing, are also elements that can have an impact on food supply and demand in the world as a whole.

vi) While the world's undernourished population is concentrated in developing countries (especially in Asia and Africa), Japan provides support in the field of rural development, capacity building and R&D activities to assist developing countries in achieving food security. Efforts should be continued through various forms of support, while seeking to collaborate with non-governmental organizations (NGOs) and others for activities at grass-roots level.

【Column】Japanese cooperation in the development of Nerica rice

Japan has provided positive support for the development of Nerica rice (Nerica: New Rice for Africa), a cross between African and Asian rice. For example, Japan has provided research workers and experts, as well as contributing funds for the project. In future, it is hoped that Nerica rice will spread broadly across the African region, and that it will help to improve the region's food situation.
Fig. 10  Trends in grain harvest area and per capita grain production volume in the world (3-year moving average, 1961=100)

Fig. 11  Trends in China's Per Capita Annual Meat Supply

Fig. 12  Trends in China's Export and Import of Soybeans (1995=100)
(2) Trends in Japan is Trade in Agricultural Products

i) Among Japan is imports of agricultural products in terms of value, the proportion of raw-material type agricultural products has gradually declined due to the diversification and greater sophistication of the diet accompanying increased national incomes, while the proportion of processed and semi-processed goods, which have high added value or high unit prices, has increased. In recent years, the proportion of fresh products has increased, due to the expanding needs of the foodstuff industry in pursuit of lower-priced raw materials, and advances in transportation technology.

ii) In this way, the dependence on unprocessed agricultural products (wheat, maize and soybeans), for which the USA is the biggest exporter to Japan, is decreasing in relative terms, while the dependence on fresh products is relatively increasing. This means that the dependence on China, the biggest exporter of fresh vegetables to Japan, is growing.

iii) Around the world, there have been problems of damage caused to agriculture by the advance of desertification and abnormal weather patterns. On the other hand, Japan ñ the worldís largest net importer of agricultural products ñ depends greatly on overseas farmland and water resources. Moreover, large quantities of carbon dioxide are emitted when transporting these products. The excessive dependence on imports could therefore, conceivably, help to aggravate these problems that occur on a global scale.

(3) Trends in Food Self-Sufficiency

i) In fiscal 2001, food consumption of rice and meat decreased, while that of fish and shellfish increased. Domestic production volumes of soybeans, fruit, and wheat increased, while those of vegetables, meat, fish and shellfish decreased. As a result, the overall food self-sufficiency on a calorie basis has been 40% for four successive years since fiscal 1998, the lowest level of any leading industrial nation.

ii) To attain the target of food self-sufficiency, it will be important not only for the government but for all parties concerned ñ consumers, foodstuff industry concerns and farmers ñ to cooperate in efforts aimed at correcting diets by promoting understanding and practice of ñdiet guidelinesî, on the consumption side, and, on the production side, resolving the issues of improving productivity and quality for each commodity indicated in the Basic Plan for Food, Agriculture and Rural Areas.
Fig. 13  Trends in Japanese Imports of Major Agricultural Products

Note: "Fresh vegetables" consisted of different products in 1960 and 1970 onwards, and the figures are therefore not strictly connected.

Fig. 14  Trends in Japan's Food Self-Sufficiency

Fig. 15  Trends in Ratios of Lipids in Supplied Calories and GDP for Different Countries
Section 4  Trends in Agricultural Policies in Other Countries, WTO, etc

(1) Trends in Agricultural Policies in Other Countries
i) In the USA, Counter-Cyclical Payments were newly introduced in the New Farm Bill enacted in May 2002. The new Bill guarantees the incomes of producers of major crops (wheat, maize, soybeans, etc.), based on past production acreage.

ii) In the EC, reforms involving a switch from price support to direct payment not stimulating production are being promoted under the Common Agricultural Policy (CAP). In January 2003, the European Commission announced an amended proposal for a mid-term review of CAP, and the proposal is now being debated by the member states.

(2) Trends in WTO Agricultural Negotiations
i) In the WTO agricultural negotiations, discussions have been underway on the three pillars of i) export competition, ii) market access and iii) domestic support, towards the end of March 2003 deadline for establishing modalities. However, there has been no sign of concessions from exporting countries, which are making excessive demands, and the gulf between them and Japan, the EC, and other aligned countries has not been bridged. For these reasons, Members failed to establish modalities before the deadline.

ii) The USA, Australia and other exporting countries are demanding, among other things, that all tariffs be cut to 25% or lower within five years, that access volumes be uniformly expanded, and that domestic support other than Green Box measures be uniformly reduced to a certain level within a certain period, and subsequently eliminated at some future time.

iii) Japan, the EC and others are proposing reduction formulas which enable Members to achieve flexibility among products, such as the Uruguay Round formula for tariff reductions, and a reduction of domestic support on a total AMS basis, in order to reflect non-trade concerns.

iv) In November 2002, Japan summarized its long-standing position, and submitted a proposal on modalities to the WTO. This contained, among others, the Uruguay Round formula for flexible tariff reduction, and a correction of flaws in the current rules governing minimum access opportunities. The proposal was founded on the basic idea that it is extremely important to establish trade rules under which various types of agriculture can coexist, and called for a balanced outcome from the negotiations, including a review of disciplines on market access (e.g. minimum access), domestic support (e.g. to secure smooth continuation of agricultural reform), and export competition (e.g. to strengthen rules on export restrictions and taxes).
Table 2  Outline of Japanís Proposal on Modalities

1. Market Access

(1) Tariffs
• Reduced from the final bound rates on a simple average basis by 36% (minimum 15% for each tariff line) in equal installments (UR formula).
(2) Tariff quota volume
• Ensure flexibility among products.
• Maintain current access opportunities.
• Concerning minimum access, update the base period of domestic consumption and abolish additional access volume due to delayed tariffication.
(3) Tariff rate quota administration
• Establish guidelines for administration of TRQ commitments.
(4) Special safeguards (SSG)
• Expand current SSG measures to cover the following products:
  • Tariffed products in the UR Agreement
  • Seasonal and perishable products
  • Products with tariff reduction commitments of more than a certain percentage
(5) Importing state trading enterprises
• Establish more stringent notification requirements on importing STEs.
(6) S&D (special and differential treatment for developing countries)
• Provide flexibility for developing countries in terms of implementation period and reduction rates. LDCs shall be exempted from reduction commitments.

2. Domestic Support

• Maintain the current basic framework of iGreeni, iBluei and iAmberi boxes.
(7) Improvement of policy-specific criteria for certain Green Box measures
• Income insurance and income safety-net programs: lower minimum income loss requirement (current criterion is more than 30%) and raise maximum compensation rate (current criterion is less than 70%).
• Natural disaster payments: lower minimum income loss requirement (currently criterion is more than 30%).
(8) Amber Box
• Reduce the total AMS on an aggregated basis from final commitment levels by 55% in equal installments (UR formula).
• Maintain the de minimis provision.
(9) S&D
• Provide flexibility for developing countries in terms of implementation period, reduction rates and the scope of measures exempted from reduction commitments. LDCs shall be exempted from reduction commitments.

3. Export Competition

(10) Export subsidies
• Reduce export subsidies from the final commitment levels for budgetary outlay (average 45%), quantity and unit value in equal installments.
• Strengthen disciplines on domestic support that has similar effects to those of export subsidies.
(11) Export credits
• Reduce officially supported export credits for budgetary outlay and quantity in equal installments.
(12) Food aid
• Progressively replace non-grant food aid (other than that implemented in response to appeals from international organizations such as FAO/WFP) with grant food aid.
• The above international organizations include food stockholding arrangements (e.g. a food stockholding arrangement based on a regional agreement in East Asia), the establishment of which Japan proposes in her negotiating proposal.
(13) Exporting state trading enterprises
• Establish more stringent notification requirements on exporting STEs.
(14) Export restrictions / Export taxes
• Replace all export prohibitions/restrictions with export taxes (tariffication), to be bound and reduced.
• When exporting countries face an emergency need to adjust export volumes, a short-term export restriction shall be allowed until the completion of domestic procedures to impose export taxes, in order to ensure the food security of those countries.
• As S&D, developing countries other than net-exporters of the specific products concerned shall be allowed to invoke export prohibition/restriction measures.
(15) S&D
• Provide flexibility for developing countries in terms of implementation period, reduction rates and the scope of measures exempted from reduction commitments. LDCs shall be exempted from reduction commitments.

Note: Underlined figures were presented in the EC proposal of January 2003, and subsequently supported by Japan.
v) In January 2003, the EU, which has been negotiating in close contact with Japan, submitted a proposal on modalities to the WTO. This put forward the ideas of reducing tariffs under the Uruguay Round formula, and reducing domestic support on a total AMS basis. In this proposal, the EC presented specific figures, for which Japan expressed its support.

vi) The Chairman of the Special Session of the WTO Committee on Agriculture presented a first draft of modalities to the Members in February 2003. This first draft was difficult for Japan to accept in its entirety, since the flexibility, continuity and balance needed to establish realistic modalities had not been secured.

vii) On February 14th-16th, a WTO informal ministerial meeting was held in Tokyo, attended by ministers from 22 countries and regions plus the WTO Director-General. Agriculture was one of the important topics at the meeting, and the first draft of modalities was positioned as a catalyst for proceeding with negotiations.

viii) In March, a revised version of the first draft of modalities was presented. However, the revised version was, like the first draft, difficult for Japan to accept in its entirety, since it not only failed to address non-trade concerns appropriately and ensure equal burden sharing among Members, but was also, as a whole, too advantageous to certain exporting countries. On the other hand, the USA and the Cairms group repeated their position that the revised text was inadequate and that drastic and more significant cuts in tariffs, etc., were needed.

ix) The Japanese government, while continuing to align itself with the EU and the other friendly countries, will continue to make tenacious efforts to gain the greater understanding of other countries towards Japan’s position, and will exert every effort to ensure that a sufficiently balanced, realistic consensus based on coexistence of various types of agriculture is reached.

(3) Efforts to Strengthen Economic Partnership among Countries and Expansion of Preferential Tariff Measures

i) Although it is not permitted to completely exclude major sectors in Free Trade Agreements, full attention needs to be paid to the impact on structural reform of domestic agriculture, the perspective of guaranteeing Japan’s food security, and the possibility of arousing new trade friction with existing exporting countries.

ii) Based on the fact that support for developing countries has been cited as an important issue in G8 summits and elsewhere in recent years, Japan, in its tariff revision in fiscal 2003, plans to vastly amplify preferential tariff measures for agricultural products.
<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>3/25-26 WTO Committee on Agriculture</td>
<td>• Attended by 54 countries and regions, including more than 30 developing countries</td>
</tr>
<tr>
<td></td>
<td>6/14 Ministerial Conference on Non-Trade Concerns (Rome)</td>
<td>• Attended by Agricultural Ministers from Japan, USA, EU, Canada, and Australia</td>
</tr>
<tr>
<td></td>
<td>7/25-27 Quint Agriculture Ministerial Meeting (Nara)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>7/29-30 WTO Committee on Agriculture (Market Access)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>9/4-5, 23-27 WTO Committee on Agriculture (Domestic Support)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>11/13 Japan submitted proposal on modalities</td>
<td></td>
</tr>
<tr>
<td></td>
<td>11/18-22 WTO Committee on Agriculture (Follow-up from previous meetings)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>12/18 Chairman of WTO Committee on Agriculture Special</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Session presented the i Overview paper</td>
<td></td>
</tr>
<tr>
<td>2003</td>
<td>1/22-24 WTO Committee on Agriculture (Comprehensive and substantive review of possible modalities)</td>
<td>• Average 36% minimum 15% tariff cut under the UR formula</td>
</tr>
<tr>
<td></td>
<td>1/27 EC submitted proposal on modalities</td>
<td>• 55% cut in domestic support on total AMS basis</td>
</tr>
<tr>
<td></td>
<td>1/31 Japan expressed support for figures for three pillars of the EC proposal</td>
<td>• Japan announced that it was difficult to accept the draft in its entirety</td>
</tr>
<tr>
<td></td>
<td>2/12 Chairman of WTO Committee on Agriculture Special</td>
<td>• Attended by ministers from 22 countries and the WTO Director-General</td>
</tr>
<tr>
<td></td>
<td>Session presented 1st draft of modalities</td>
<td>• 1st draft of modalities placed as a catalyst</td>
</tr>
<tr>
<td></td>
<td>2/14-16 WTO Informal Ministerial Meeting (Tokyo)</td>
<td>• The UR formula put forward by Japan, the EC and others was supported by 60 countries (75 including the 15 EU members)</td>
</tr>
<tr>
<td></td>
<td>2/24-28 WTO Committee on Agriculture (consideration of the draft of modalities)</td>
<td>• Essentially unchanged from the 1st draft</td>
</tr>
<tr>
<td></td>
<td>3/18 Chairman of WTO Committee on Agriculture Special</td>
<td>• Ended without establishing modalities</td>
</tr>
<tr>
<td></td>
<td>Session presented revised 1st draft of modalities</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3/25-31 WTO Committee on Agriculture (deadline for establishment of modalities)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>6/26-7/1 WTO Committee on Agriculture</td>
<td></td>
</tr>
<tr>
<td></td>
<td>7/16-18 5th WTO Ministerial Conference (Mexico)</td>
<td></td>
</tr>
<tr>
<td>2004</td>
<td>Negotiations based on draft schedules submitted by each Member</td>
<td></td>
</tr>
<tr>
<td>2005</td>
<td>Conclusion of WTO Agricultural Negotiations (single undertaking)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>By 1/1</td>
<td></td>
</tr>
</tbody>
</table>
Chapter II  Sustainable Development of Agriculture Through Structural Reform (Related to Agricultural Policies)

Section 1  Trends in Agricultural Economy

(1) Trends in Gross Agricultural Output

Japanís gross agricultural output in 2001 was around 8.9 trillion yen, a fall of about 2.9 trillion yen or 24% from the peak in 1984. The agricultural producer price index has fallen by about 20% over the last 10 years, and the decline in gross agricultural output in recent years is largely due to successive falls in agricultural product prices.

(2) Recent Trends in Agricultural Production

i) In 2001, agricultural production volumes for fruit, pulses, and wheat increased, but those for rice, vegetables, and livestock products decreased, falling by 1.7% overall compared to the previous year. Agricultural producer prices increased for vegetables and livestock products, but fell for other commodities, declining by 0.2% overall. Agricultural production material prices rose for feed and power requirements, increasing by 0.4% overall.

ii) The trading conditions index for agriculture has been in continuous decline, falling by 1.6 points compared to the previous year. To improve trading conditions from the viewpoint of material supply, it will be necessary to rationalize the distribution, etc., of agricultural production materials and reduce costs. In particular, efforts by agricultural cooperative groups, which handle the majority of distribution, will be important.
Fig. 16  Trends in Agricultural Production (1991=100)

Note: Indices are estimated from official figures, taking 1991 as 100.

Fig. 17  Terms of Trade Index for Agriculture (1995=100)

Note: The terms of trade index for agriculture is the ratio of the total price index for agricultural products to the total price index for agricultural production materials.

Fig. 18  Ratio of Agricultural Cooperative Affiliations in Supply of Fertilizer and Agricultural Chemicals (1999) and Trends in Price Indices for Fertilizer and Agricultural Chemicals (1985=100)
(3) Trends in Farm Economy

i) The agricultural income per commercial farm in 2001 was 1,034 thousand yen (down 4.6% from the previous year). Since non-agricultural income also decreased from the previous year, the gross income per farm was 8,022 thousand yen (down 3.1%). The economic margin per farm, calculated by subtracting household expenses and tax burdens from the gross income per farm, has also been in a decreasing trend.

ii) Gross income per farm has decreased in successive years since 1997, and the rate of decrease is tending to grow larger. The trend towards greater decreases in gross income per farm in recent years, due to declining agricultural income and a vast fall in non-agricultural income, could be seen as evidence that variation in non-agricultural income, which accounts for 60% of gross income per farm, has a major impact on farm economy.

iii) Due to a worsening of farm economy caused by falling agricultural product prices and reduced non-agricultural income, investment in agriculture by farmers has been in a decreasing trend in recent years. There are fears that the decreasing trend in agricultural investment could have an adverse impact on moves towards new business development, i.e. scale expansion.

(4) Trends in Farm Numbers and Agricultural Labor Force

a Number of farms and farming population

i) In 2002, there were 3.03 million farm households in total. Of these, 2.25 million were commercial farms, and while the proportion of side-business farms (with a low dependence on agricultural income) has risen to account for the majority, the proportion of business farms and semi-business farms is in a decreasing trend. In rice farming businesses, the above-mentioned trend is particularly marked. Here, the ratio of decrease in business farms between 1995 and 2000 was 41% nationwide, due to the slump in agricultural product prices.

ii) The farming population in 2002 (based on numbers of farm household members) fell by 270 thousand to 9.9 million compared to the previous year, falling below the 10 million mark for the first time. This was due to the decrease in farm numbers and a progressive trend towards nuclear families. Meanwhile, due to the continuation of farming business by elderly farmers, among other reasons, the ratio of those over 65 years of age is 30%, showing that aging is advancing at a pronounced pace.

b Trends in new business starters

Due to an increased concern for agriculture, new business starters are in an increasing trend. It will be important to provide finely tuned support in response to diversifying routes to farming, namely the trend towards starting work in agriculture by taking up employment in agricultural corporations.

c Trends in female farmers

Women account for about 60% of the population engaged in farming, and make a great contribution to the vitalization of agriculture and rural areas. In future, as now, it will be important to promote social involvement by women and their participation in farm business management, via efforts for support in childbirth and childcare.
Table 4  Trends in Agricultural Gross Fixed Capital Formation (Nationwide)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural Gross Fixed Capital Formation</td>
<td>5,236.0</td>
<td>4,862.3</td>
<td>4,438.9</td>
<td>4,879.6</td>
<td>4,516.1</td>
<td>4,168.9</td>
<td>▲ 20.4</td>
</tr>
<tr>
<td>Land improvement</td>
<td>3,193.0</td>
<td>2,809.1</td>
<td>2,468.8</td>
<td>2,992.4</td>
<td>2,634.8</td>
<td>2,366.2</td>
<td>▲ 25.9</td>
</tr>
<tr>
<td>Agricultural buildings</td>
<td>487.8</td>
<td>588.1</td>
<td>529.9</td>
<td>609.3</td>
<td>596.4</td>
<td>491.5</td>
<td>0.8</td>
</tr>
<tr>
<td>Agricultural machinery</td>
<td>1,393.1</td>
<td>1,311.8</td>
<td>1,291.6</td>
<td>1,134.0</td>
<td>1,149.9</td>
<td>1,175.7</td>
<td>▲ 15.6</td>
</tr>
<tr>
<td>Plants and animals</td>
<td>162.0</td>
<td>153.3</td>
<td>148.6</td>
<td>143.9</td>
<td>135.0</td>
<td>135.5</td>
<td>▲ 16.4</td>
</tr>
</tbody>
</table>

Note: Agricultural Gross Fixed Capital Formation expresses the value added to existing fixed capital for agricultural re-production.

Table 5  Trends in Number of Farm

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>All farms</td>
<td>3,835</td>
<td>Ratio</td>
<td>3,444</td>
<td>3,120</td>
</tr>
<tr>
<td>Commercial farms</td>
<td>2,971</td>
<td>100.0</td>
<td>2,651</td>
<td>2,337</td>
</tr>
<tr>
<td>Business farms</td>
<td>820</td>
<td>27.6</td>
<td>678</td>
<td>500</td>
</tr>
<tr>
<td>Semi-business farms</td>
<td>954</td>
<td>32.1</td>
<td>695</td>
<td>599</td>
</tr>
<tr>
<td>Side-business farms</td>
<td>1,196</td>
<td>40.3</td>
<td>1,279</td>
<td>1,237</td>
</tr>
<tr>
<td>Non-commercial farms</td>
<td>864</td>
<td>-</td>
<td>792</td>
<td>783</td>
</tr>
</tbody>
</table>

Notes: 1) “Business farms” are farms whose principle income is from agriculture ( i.e. more than 50% of the household income is farming income ) , in which persons aged below 65 are engaged in farm work for at least 60 days per year.
2) “Semi-business farms” are farms whose principle income is non-farming income, in which persons aged below 65 are engaged in farm work for at least 60 days per year.
3) “Side-business farms” are farms in which there are no persons aged below 65 who are engaged in farm work for at least 60 days per year (i.e. farms other than business and semi-business farms).
4) Figures for 2002 are the results of an Agricultural Structure Trend Survey, and are not strictly connected to the results of the Agriculture and Forestry Censuses of 1990, 1995 and 2000.
Section 2 Present Production Structure of Japanís Agriculture and Issues in Accelerating Structural Reform

(1) Present Status and Problems with the Structural Reform of Agriculture

a Trends in agricultural structure

i) Viewing trends in the total number of farms and farmed land area since 1975, both have continued to decline, the rate of decrease in the former tending to be greater than that of the latter.

ii) The rate of decrease in farmed land area has been consistently expanding, against the background of a dramatic increase in abandonment of cultivation. In terms of the relationship between the rate of decrease in farmed land area and the rate of decrease in the total number of farms, from 1975 to 1980 the latter was about four times as high as the former. Between 1995 and 2000, however, the rate of decrease in the total number of farms tended to slow somewhat, bringing it closer to the rate of decrease in farmed land area.

b Progress of structural reform for individual commodities

In dairy-only farms, the majority of farmed land area and fixed agricultural capital are concentrated in 90% of business farms. Conversely, only 7% of rice-only farms are business farms, and these only account for around 20% of the farmed land area and fixed agricultural capital. Meanwhile, viewing the proportion of business farms to output value by different commodities, for rice this is 36%, far less than for other commodities (70-90%). Thus, structural reform is markedly delayed in the rice farming sector, and it is therefore particularly important to promote structural reform by concentrating agricultural production resources, i.e. farmland and capital, in motivated and capable farmers.

c Issues in promoting the structural reform of agriculture

i) Furthermore, viewing the state of scale shift by different farming scale (1995-2000), the overall trend is to shift to a smaller scale. Meanwhile, the aging of the agricultural labor force is advancing markedly, and the proportion of persons over the age of 65 among core persons mainly engaged in farming in large-scale businesses increased by more than 10% in 1990-2000.

There are concerns that movements such as the above could cause a slowdown in the structural reform of agriculture.

ii) Given this situation, it is important to further accelerate the structural reform of agriculture, and an issue of pressing urgency is to accurately and fluidly reform systems and policies to enable greater growth by motivated farmers.
Table 6  Trends in the Rate of Decrease in Farm Numbers and the Rate of Decrease in Cultivated Land Area

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate of Decrease in Farm Numbers (A)</td>
<td>▲ 5.9</td>
<td>▲ 6.1</td>
<td>▲ 9.3</td>
<td>▲ 10.2</td>
<td>▲ 9.4</td>
</tr>
<tr>
<td>Rate of Decrease in Cultivated Land Area (B)</td>
<td>▲ 1.6</td>
<td>▲ 2.7</td>
<td>▲ 4.5</td>
<td>▲ 5.5</td>
<td>▲ 5.7</td>
</tr>
<tr>
<td>(A) / (B)</td>
<td>3.7</td>
<td>2.3</td>
<td>2.1</td>
<td>1.9</td>
<td>1.6</td>
</tr>
</tbody>
</table>

Fig. 20 Trends in Area of Abandoned Cultivation Land of Farms and Land-owning Non-farm Households and the Ratio of Farms with Abandoned Cultivation Land (Nationwide, All Farms)

Note: Land-owning non-farm households are non-farm households that own land of 5 ares or more, including both cultivated land and abandoned cultivation land.

Fig. 21 Distribution of Agricultural Production Resources According to Business or Side-Business Farms (2001, Nationwide)

Note: The ratios of agricultural fixed capital for business or side business are calculated by multiplying the amount of agricultural fixed capital per farm by the number of farm.
(2) Fostering Efficient and Stable Farmers

a Fostering approved farmers

The number of approved farmers as of December 2002 had reached 167 thousand. To achieve the goals of farm management improvement plans, i.e. improved farmer incomes, revision is required in the form of a thorough concentration and prioritization of policies, in addition to adequate verification of the approved farmer system.

b Promoting incorporation

Incorporation is effective for new business development such as diversification. Further preparation of conditions is needed to promote corporate farming by encouraging tie-ups with companies not involved in agriculture. Involvement in diverse forms of agriculture is also expected to be promoted by the introduction of Special Zones for Structural Reform.

c New development of farm businesses to be fostered

In the Framework for Rice Policy Reform, community farms that satisfy certain requirements are newly positioned as farm businesses to be fostered, in the form of i community-type businesses. Structural reforms of paddy field agriculture are being accelerated by the effects of promoting integrated use of farmland.

d Present status and problems of large-scale farm business

i) In rice-growing farms, all indices of labor productivity, land productivity, and capital productivity have risen markedly with the expanded scale of cropping area. However, even at the average scale of business farms, scale merits are not being sufficiently manifested, and further reforms are needed in future.

ii) On the other hand, the fall in agricultural product prices in recent years has led to a loss of earning power and adversely affected the business of all farms, and the impact of this is beginning to be felt by large-scale farm businesses, too.

iii) Within this context, some farms are attempting to diversify their business by engaging in processing of agricultural products, direct sales to retail stores and consumers, and contracted production, in addition to their production of agricultural products. In fact, this trend towards diversification is all the more pronounced as the business scale increases. Farms that are engaging in processing, direct sales, and contracted production achieve higher sales of agricultural products per unit land area, and are achieving agricultural production with higher added value, than farms that are attempting none of these.

e Measures for business stability of farmers

Given that agricultural product prices are set to reflect evaluation of quality and the supply and demand situation, a safety net needs to be developed in order to ease fluctuation in agricultural revenue or income due to pronounced price fluctuation.

To this end, business stabilization measures for farmers are being studied for paddy field agriculture, based on the Framework for Rice Policy Reform. These measures would be aimed at farmers who are implementing production adjustment and who would be greatly affected by a decrease in rice revenue due to falling rice prices.
Fig. 22  Breakeven Point Ratios in the Rice Cultivation Divisions of Rice Single Farming (as calculated by prefectures)

![Breakeven Point Ratios Graph]

Notes 1)  The formula below was used to calculate the breakeven point ratio. The breakeven point ratio is an indicator of business stability, and is 100 if neither profits or losses are made. The smaller the value, the more stable the business.
Breakeven point ratio = Breakeven point sales turnover / Actual sales turnover x 100

2)  The breakeven point sales turnover used when calculating the breakeven point ratio was calculated using the following formula. The breakeven point is the point at which sales are equal to costs and neither profits nor losses arise.
Breakeven point sales turnover = Fixed costs / Marginal profit ratio

Fig. 23  State of Diversification of Farm Business by Scale of Cultivated Area
(2000, Prefectures/Commercial Farms)

![State of Diversification Graph]
(3) Securing and Making Effective Use of Farmland

i) The cultivated land area in 2002 was 4.76 million ha, 20% less than it was in 1961 (6.09 million ha). While diversion of land use is in a declining trend, abandonment of cultivation is tending to increase.

The utilization ratio of cultivated land is in a long-term declining trend. In 2001 the ratio was 94.3%. Steps need to be taken to eliminate uncropped land and accelerate effective use of diverted paddy fields, among other measures.

ii) The farmland area subject to rights transfer is increasing, mainly through leasing. The integration of farmland use to approved farmers is also increasing, though its tempo has gradually slowed in recent years, owing to the slump in agricultural product prices and intensification of production adjustment. A further enhancement of efforts is needed, by promoting measures to encourage integration of farmland use and concentration of measures towards approved farmers.

iii) When integrating the use of farmland, it will be both efficient and effective to develop fields collectively, in the form of expanded field divisions. In promoting the fostering of farmers, meanwhile, it will also be necessary to convert from the i) projects mainly designed to improve development ratios of applicable until now to i) projects with emphasis on results in fostering farm businesses.

iv) In hilly and mountainous areas, there is a progressive abandonment of cultivation, since many fields are on steeply sloping land or undeveloped. In this respect, based on the i) System of Direct Payment in Hilly and Mountainous Areas which directly corrects disadvantages in agricultural production, 7 thousand ha of farmland had been newly incorporated in farmland areas for agricultural promotion up to fiscal 2001. The System is thus achieving a certain role in reducing the abandonment of cultivation.

(4) Present Status and Problems of Agricultural Cooperatives

i) Agricultural cooperatives have not responded sufficiently to changes such as the diversification of consumer needs and the increased concern over food safety and reliability. Moreover, the effects of mergers are inadequate, and an increasing number of farms, mainly large-scale farm businesses, are cutting ties with agricultural cooperatives.

Meanwhile, the dependence on the financial sector for revenues disregards efforts to promote regional agriculture with the original role of cooperatives and is hindering the reform of loss-making sectors, i.e. farming and economic business.

ii) Although, in some sectors, concrete results are being achieved in the form of credit business, the reform of farming and economic business is particularly inadequate. Agricultural cooperative groups need to take the initiative in making further reforms, namely production and marketing in response to consumer needs, and cutting the cost of production materials.
Fig. 24  Trends in Land Use for Agriculture

Utilization ratio of arable land (right-hand scale)

Year-on-year change in total cropped land area

Factors behind changes in cropped land area

Fig. 25  Evaluation of Management of Agricultural Cooperatives

Reason for dissatisfaction (multiple response)

Source: Central Union of Agricultural Cooperatives
Note: This was a questionnaire survey of 12,113 full members of agricultural cooperatives, their family members, etc. The response rate was 39.7%. The diagram collates responses from 4,137 of these members/family members.
Section 3 Reform of Rice Policies and Supply & Demand Trends for Principle Commodities

(1) Reform of Rice Policies

While rice consumption remains in a declining trend, a continuing oversupply against demand has caused a fall in rice prices, threatening the management of paddy field agriculture, mainly by large-scale farmers. In addition, increased abandonment of cultivation and progressive aging of the agricultural labor force mean that structural reform of paddy field agriculture is now an important issue. Furthermore, there is a growing need to provide a stable supply in response to the diversifying needs of consumers and users. To this end, a Framework for Rice Policy Reform was drawn up in December 2002 with a view to a major conversion of paddy field agriculture and rice policies.

a Perspectives in reform

When reconstructing paddy field agriculture, it will be important to study the perspectives of i) respecting subjective business judgments by farmers, ii) producing rice in balance with demand, iii) creative input from the parties concerned, iv) developing agriculture with regional flavor, v) promoting the structural reform of paddy field agriculture, vi) resolving the issue of fairness, and vii) developing a safety net.

b Directions for reform

i) The Framework for Rice Policy Reform has three principles, namely i) understandable policies with a clear message, ii) efficient policies without waste, and iii) policies with guaranteed transparency of all processes in decisions and operations. It has four main characteristics, namely i) soft landing, ii) clarifying targets, creative input (subjective judgment) of the parties concerned, and ensuring the uniformity of the whole.

c Specific content of reform

i) In supply-demand adjustment: creation of a system involving farmers and farmers' organizations as the principal actors by fiscal 2008 at the latest, immediate changeover of supply-demand adjustment from adjustment based on reduced-yield acreage to adjustment based on production volumes, changeover of the system of subsidies from a uniform national system to one that draws on creative regional input; ii) in the distribution system: materialization of rice distribution with creative input by reducing regulations to the minimum necessary; and iii) in related measures: establishing business management and structural policies.

(2) Supply and Demand for Principal Commodities

a Rice

The supply and demand for rice have been easing dramatically in recent years. As a result, the scale of the production adjustment area in fiscal 2002 was the same as in the previous year, when it was the largest ever. Accompanying the trend towards externalization and simplification of cooking, the use of rice in the restaurant industry is increasing, as is the consumption of processed rice (rice that requires no washing, aseptically packaged rice, frozen rice).

Increasing the consumption of rice, Japan's staple food, is an important effort that will help to achieve healthy diets and improve food self-sufficiency. It needs therefore to be developed in the form of citizens' movements. Particularly necessary are efforts to enhance food education and increase opportunities for rice-based school meals, to support their role in passing on traditional food culture to children.
Fig. 26  Trends in Production Adjustment Target Area and Independent Distribution Rice Price

![Trends in Production Adjustment Target Area and Independent Distribution Rice Price](image)

Note: Prices are a weighted average of the results of bids for all brands listed at the Independent Distribution Rice Price Formation Center.

Fig. 27  Awareness of Marketing Situation and Price Trends for Rice

![Awareness of Marketing Situation and Price Trends for Rice](image)

Note: Survey aimed at farms that had a rice cropping area of at least 1 ha in the 1998 harvest, and which have subscribed to rice farming stabilization measures (4,868 households).

Fig. 28  Trends in Per Capita Annual Consumption of Rice

![Trends in Per Capita Annual Consumption of Rice](image)

Note: Annual consumption is the net supply of food per person per year.
b Wheat and soybeans

The production of wheat and soybeans is in an expanding trend. However, sharp production increases without qualitative enhancement is causing a growing mismatch between supply and demand. Steps should be taken to produce crops corresponding to user needs, as well as improving and stabilizing quality. In terms of consumption, meanwhile, it is important to promote efforts aimed at local consumption of locally produced agricultural products.

c Fruit and vegetables

i) Although vegetables occupy an important position in agricultural production, in recent years their production volumes have been in a declining trend. Meanwhile, imports of vegetables are in an increasing trend, though smaller in volume in 2002 than in the previous year. To be able to supply domestically produced vegetables with quality and prices that are favored by consumers and users, while coping with international competition, structural reform needs to be promoted in both areas of production and distribution.

ii) In 2001, the production of fruit as a whole was higher than in the previous year. Meanwhile, yields of Unshu mandarins and apples were more or less according to plan, thanks to adjustment of the production volume.

Although fruit consumption has been more or less level in recent years, it is in a declining trend particularly among the younger generation, which prefers to seek convenience. The 1200 Grams of Fruit a Day Movementi needs to be promoted in order to permeate awareness of the function of fruit in promoting health and to increase the consumption of fruit.

d Livestock

i) Immediately after the discovery of a BSE-infected cow in September 2001, the consumption of beef fell dramatically. This has, however, been in a recovering trend since November of that year, after the establishment of a system of inspecting all cattle at abattoirs. In 2002, both the production volume and market shipments of domestic produce had recovered to the previous year's level. With a recovery in consumption, beef prices have also been in recovery mode since March 2002.

ii) Owing to the fall in livestock prices immediately after the discovery of BSE, the profitability of livestock products sold in fiscal 2001 deteriorated in beef cattle fattening and breeding farms. Therefore, various measures were implemented to help stabilize the business of livestock farms. In July 2002, meanwhile, a BSE Special Countermeasures Law was enacted. Based on this, business continuation support measures, etc., were implemented successfully for farms on which new cases of infection were subsequently confirmed. In future, it will be important for all parties concerned to join efforts in helping to elucidate infection sources and routes and establish a traceability system for beef.

iii) Increasing domestic production of feed is extremely important in terms of improving feed self-sufficiency and reducing production costs. While the cropping area for feed crops in 2002 was on a par with the previous year, the yield fell slightly. As a result, the production volume of feed for self-supply is forecast to decrease (by 1.5% compared to the previous year).

iv) The larger-scale dairy farms are showing a willingness to reinforce their feed production infrastructure. To bring this to fruition, steps need to be taken to promote the production of feed on existing cultivated land (i.e. paddy fields) and grazing on abandoned cultivation land in hilly and mountainous areas. On the other hand, the cropping area of rice fermentation roughage, which can be produced in wet fields and contributes to effective utilization of paddy fields, has been increasing in recent years (forecast for 2002: 3,308 ha). Such collaboration between crop cultivation farms and livestock farms will continue to be important in future.
Notes: 1) The "4 corns" are wheat, Rokuro barley, Nijo barley, and rye.
   2) The crop diversion area for the 2002 harvest is as of July 31st.
   3) Of the targets, those for FY2010 are the Production Effort targets indicated in the Basic Plan on Food, Agriculture and Rural Areas (Cabinet Decision of March 2000), and those for FY200 are the "Policy Targets" set in FY2000 with a view to reaching those values.

Fig. 30  Production Trends in Soybeans

Note: See Notes 2 and 3 above

Fig. 31  Trends in Market Circulation of Beef and Respective Contributions of Imports & Domestic Products  (Aug. 2001-Aug. 2002, year-on-year change)
Section 1  Maintaining and Promoting the Natural Cyclical Functions of Agriculture

(1) The Global Environment and Agriculture
i) Based on forecasts that the problem of global warming will make trends in the worldís food production less transparent, it is important to consider the relationship between problems of the global environment and food, agriculture and rural areas. To solve such problems, both developed and developing countries need to be aware of their own responsibilities, and implement measures on a basis of cooperation. From this perspective, with a view to effectuating the Kyoto Protocol, it is important to demand that the USA, the worldís largest emitter of carbon dioxide, take self-determined and responsible action in this respect.

ii) Since agriculture and the environment have a mutual impact on each other, agricultural production activities share a close relationship with environmental problems. The process of increasing consumption of resources in agricultural production places a certain load on the environment. To resolve the problems of the global environment and help create a recycling-based society, it is vital that agriculture is developed sustainably while minimizing its negative effect on the environment and maximizing its positive effect.

(2) Diffusion and Establishment of a Production System Using the Natural Cyclical Functions of Agriculture
i) To maintain and promote the natural cyclical functions of agriculture and form favorable environments, it will be necessary to diffuse and establish eco-friendly agriculture. In this respect, the number of eco-farmers and accredited farmers under the organic JAS accreditation system is steadily increasing.

ii) The larger the scale of a farm, the greater the engagement in (or motivation to engage in) eco-friendly agriculture. Moreover, many farms that are engaged in eco-friendly agriculture also undertake contracted production. In this way, large-scale farms and other energetic producers are engaging in eco-friendly agriculture and positively responding to consumers needs.

iii) The organic JAS accreditation system is, for consumers, a means of obtaining important information to help them select their foods, while for producers it is an effective means of communicating the correct value of their produce to consumers. However, producers are not sufficiently aware of the existence or advantages of this system. Therefore, achieving greater diffusion and public awareness of the system is an urgent task.
Fig. 34 Views on Authorization under the System of Testing & Accreditation for Organic Foods in Eco-Friendly Farms, and Reasons for Not Wishing to Receive Authorization

- Want to receive (or have already received) authorization 6.5%
- Others 11.6%
- No authorizing body in the local area 1.4%
- No particular advantages 18.4%
- No plan to seek authorization 54.5%
- Conditions are too strict 23.1%
- Don't know enough about the organic JAS system 39.1%

Fig. 33 Proportion of Farms Engaged in Eco-Friendly Agriculture, by Scale of Cropping Area (2000, Commercial Farms)

- Rice single farming
- Outdoor-grown vegetable single farming
- Cultivation with no agricultural chemicals and no chemical fertilizer
- Cultivation with no agricultural chemicals or no chemical fertilizer
- Cultivation with reduced agricultural chemicals and reduced chemical fertilizer, or one of these

Note: Bracketed scale stages of cropping area are those for outdoor-grown vegetable single farming.

Fig. 32 Trends in Energy Consumption and Application of Chemical Fertilizers in Primary Industries (OECD Member States, 1980 = 100)

Source: OECD "OECD Environmental Data"
Note: "OECD Member States" are those as of 2000.
(3) Content of the Multifunctionality of Agriculture

i) The multifunctionality that arises from the pursuit of appropriate agricultural production activities includes conservation of land, recharging of water resources, protection of the natural environment, formation of pleasant landscapes, and tradition of culture. These functions were enumerated by the Science Council of Japan, from a scientific viewpoint, in 2001. In future, efforts will be needed to enhance public understanding of them. Some functions, meanwhile, have been subjected to monetary evaluation by the Mitsubishi Research Institute, based on certain hypotheses in line with the debate by the Science Council, etc. Based on the issues highlighted in the Council’s report, research on techniques needs to be further intensified.

ii) In hilly and mountainous areas, multifunctionality is maintained through production activities and water channel maintenance involving collective work by residents. Even among settlements with small farming populations, about 60% hold meetings on the maintenance of water channels. Once farmland is abandoned and multifunctionality lost due to the disappearance of settlements or other causes, the damage can be irreparable. To further intensify public understanding on the multifunctionality of agriculture, even greater efforts are needed to deepen mutual understanding through farm experience for children and city-country exchanges.
Fig. 34 Multiple Functions and Roles Manifested by Agriculture, Forestry and Fisheries

<table>
<thead>
<tr>
<th><strong>Fisheries</strong></th>
<th><strong>Agriculture</strong></th>
<th><strong>Forestry</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Function</strong></td>
<td><strong>Outline</strong></td>
<td><strong>Function</strong></td>
</tr>
<tr>
<td>Protection of the people's lives and property</td>
<td>Fishing boats, fishing ports, and fishing villages in coastal regions form a giant network that assists in locating marine accidents and disasters, rescue operations and border surveillance, emergency refuge, disaster prevention, etc.</td>
<td>Conservation of the national land</td>
</tr>
<tr>
<td>Protection of the environment</td>
<td>Nutrients that flow down from land to sea are transformed into useful fishery products via eco-systems, and are returned to the land via fishery activities. Fisheries thereby fulfill the role of a material cycle from sea to land.</td>
<td>Recharging of water resources</td>
</tr>
<tr>
<td>Provision of opportunities for recreation, exchange and learning</td>
<td>Coastal areas provide the people with places of relaxation, including swimming, shell-hunting, fishing and other forms of recreation. They also provide opportunities for exchanges between urban and rural dwellers.</td>
<td>Protection of the natural environment</td>
</tr>
<tr>
<td>Continuance of culture</td>
<td>Through their activities, fisheries and fishing villages form a lifestyle culture (e.g. foods, festivals), a fishing culture and a unique world view on fishing villages. These are maintained and passed down by the fishing villages and the fishing people who live in them.</td>
<td>Formation of pleasant</td>
</tr>
<tr>
<td>Stable supply of fishery products</td>
<td>A stable supply of fishery products for the people.</td>
<td>Transmission of culture</td>
</tr>
<tr>
<td>Stable supply of food</td>
<td>A stable supply of food for the people.</td>
<td>Protection of the living</td>
</tr>
</tbody>
</table>

- Sediment runoff and collapse is prevented because the soil is covered with fallen leaves and forest vegetation, and the roots of trees act to hold the soil together. | | Provides habitats for a diversity of living organisms. | | | | Produces timber, mushrooms, and other special forestry products. |
Section 2  The Roles of Farming, Forestry and Fishing Villages in Making Sustainable Use of Biomass

(1) Significance of the Use of Biomass
i) Biomass refers to organic resources derived from living organisms, which may be used sustainably as energy and products. Since the use of biomass does not add to the carbon dioxide in the atmosphere, it is expected to reduce the generation of carbon dioxide through substitution for petroleum resources, and to help prevent global warming. Moreover, making use of waste will contribute to the formation of a recycling-based society.

ii) Biomass has strong links with agriculture, forestry and fisheries, and exists in abundance in rural communities involved in these activities. Therefore, making use of it will maintain and promote the natural cyclical functions of agriculture, forestry and fisheries, and contribute to the sustainable development of farming, forestry and fishing villages. Furthermore, it is expected to lend a new role to agriculture, forestry and fisheries, namely that of supplying energy and industrial products.

iii) The people are in favor of promoting the use of biomass. In future, positive efforts will be required at all stages from production to use. On this basis, the government will intensively and systematically implement measures such as preparing the groundwork for encouraging the use of biomass by fiscal 2010, in line with the Biomass Nippon Strategy (Cabinet decision of December 2002).

(2) Present Status of Biomass Use in Japan
At present, the use of waste-derived biomass such as livestock manure is progressing. On the other hand, most forms of biomass (e.g. non-edible residues of agricultural crops) remain unused owing to the problem of retrieval costs. Furthermore, the cultivation of energy crops is virtually zero. In future, it will be important to promote the development and commercialization of efficient retrieval technology, and to attempt to improve economy.

(3) Present Status and Future Prospects of Cities and Farming, Forestry and Fishing Villages with Respect to the Sustainable Use of Biomass
With concerns over the proliferation of waste, there are precedents in which cities and rural communities have collaborated in making use of waste-derived biomass. An efficient system of collection and transportation needs to be created by reducing transportation costs.

However, some regions have reached the limit of recycling biomass on farmland by composting into fertilizer, and the parties concerned need to collaborate organically in response to regional characteristics, such as studying use as raw materials for products or energy, etc., and take steps to applying this.
Table 7  Examples of Biomass Currently in Practical Use or at the Demonstration Stage

<table>
<thead>
<tr>
<th>Category</th>
<th>Format after conversion</th>
<th>Main uses</th>
<th>Examples of usable biomass</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct combustion</td>
<td>Firewood, chips</td>
<td>Fuel for power generation and heat sources</td>
<td>Thinnings, scrap timber from lumber yards, etc.</td>
</tr>
<tr>
<td>Gaseous fuel</td>
<td>Methane</td>
<td>Fuel for power generation and heat sources</td>
<td>Livestock manure, food waste, sewage sludge</td>
</tr>
<tr>
<td>Liquid fuel</td>
<td>Bio-diesel</td>
<td>Fuel for diesel vehicles</td>
<td>Waste food oil, rapeseed oil</td>
</tr>
<tr>
<td></td>
<td>Ethanol</td>
<td>Automobile fuel</td>
<td>Maize, sugar cane, scrap timber from lumber yards, etc.</td>
</tr>
<tr>
<td></td>
<td>Methanol</td>
<td>Fuel for power generation and heat sources, fuel for fuel cells</td>
<td>Rice straw, rice husks, scrap timber from lumber yards, etc.</td>
</tr>
<tr>
<td>Fertilizer</td>
<td>Compost</td>
<td>Used as compost</td>
<td>Livestock manure, food waste, sewage sludge</td>
</tr>
<tr>
<td>Feed</td>
<td>Feed</td>
<td>Used as feed for livestock and aquaculture</td>
<td>Food waste, fishery product waste</td>
</tr>
<tr>
<td>Industrial raw materials</td>
<td>Plastics</td>
<td>Food trays, materials for agriculture, forestry and fisheries</td>
<td>Food waste, maize, potatoes, rice</td>
</tr>
<tr>
<td></td>
<td>Recycled chipboard</td>
<td>Furniture, underflooring</td>
<td>Thinnings, scrap timber from lumber yards, etc.</td>
</tr>
<tr>
<td>Raw materials for functional food</td>
<td>DHA, EPA</td>
<td>Nutrients</td>
<td>Fishery product waste</td>
</tr>
</tbody>
</table>

Note: Recycled chipboard is a wooden material made by applying bonding agent to finely crushed or pulped waste wood, then press-forming it.

Fig. 36  Views on Promoting the Use of Biomass Energy
Section 3  Promotional Measures to Create Rural Areas with Vitality

(1) Present Situation of Rural Areas

i) Viewed over the long term, population movement in Japan has continued to flow from rural areas to the three major conurbations. Thus, in recent years, there has been a growing trend for population concentration in these three conurbations, particularly Tokyo, while, on the other hand, the population in rural areas continues to decline.

ii) Viewing trends in farm household composition, household members aged 24 or less have decreased dramatically while elderly household members aged 65 or over account for 28.6% (2000). Population has declined in all regions, excluding urban areas. In mountainous agricultural areas, the lower the local population, the higher the ratio of persons aged 75 who move away.

iii) With a continuing decline in numbers of agricultural settlements, the number of settlements in which many farmers live has decreased dramatically. The stagnation of settlement activity is a matter of serious concern, in that the greater the decrease in population in hilly and mountainous areas, the more settlements neglect to manage water channels, and the smaller the farmer population of a settlement, the fewer meetings are held per year.

iv) In rural areas, just as in the cities, the full unemployment ratio has virtually doubled over the last 10 years. In recent years, there has been a pronounced decrease in the ratio of job offers to applications by senior high school graduates in rural areas.

(2) Towards the Creation of Rural Areas with Vitality

a Attractive regional development

i) According to a public opinion survey, the emphasis of peopleís awareness is changing from i material affluence ï to i spiritual richness ÿ. Nearly 70% of city dwellers feel that there are still many attractions in rural areas, such as nature and culture. Concerning visits to the countryside, most young men and women in their 20ís would prefer to be accompanied by friends, while most of those aged 30 or over prefer to go with their spouse or family members, showing major variance between generations.

ii) Rural areas contain tangible and intangible assets related to agriculture, and artists tend to settle there. It is important to re-evaluate these as new resources.

b Promoting internal stimulation of rural areas

i) City dwellers are increasingly interested in allotment gardens. More than half of the users of these gardens do so to promote health, grow farm produce they can trust, and so on. These have been increasingly set up by local authorities in recent years. In particular, residential-type allotment gardens had been set up in 49 districts across the country by the end of March 2002. Users involve themselves in exchanges on a broad level, ranging from i greeting local residents ÿ to i helping with farm work ÿ. A system of regional development together with city dwellers needs to be created around a core of facilities.
Fig. 37  Trends in Population Movement in the Three Major Conurbations and Other Prefectures

Source: Ministry of Public Management, Home Affairs, Posts and Telecommunications
Note: Graph indicates surplus inflow or outflow of population from the various regions for each year.

Fig. 38  Trends in Unemployment Rates in Urban and Rural Areas

Source: Ministry of Public Management, Home Affairs, Posts and Telecommunications
Notes: 1) The unemployment rate is the ratio of fully unemployed persons to the working population.
2) The working population is the total of employed and fully unemployed persons over the age of 15.

Fig. 39  Accompaniment on Future Visits to Rural Areas

Source: Organization for Urban-Rural Interchange Revitalization
Note: Results of a questionnaire survey aimed at 2,150 working persons living in the Tokyo metropolitan region (response rate 77.7%).
ii) With expectations that new industries will be spawned, green tourism needs to be promoted. In particular, many local authorities are proposing a relaxation of regulations on the opening of farm guesthouses in Special Zones for Structural Reform. In future, conditions for starting such businesses will need to be improved, by relaxing related regulatory laws and actively providing information on permits, licenses and other procedures.

iii) When the elderly are involved in agricultural production and the sale of agricultural products, not only does it foster local links and human contacts, but such local activity also contributes, among other things, to the transmission of traditional culture to the younger generation. On the subject of nursing for the elderly, meanwhile, compared to ordinary households, farm households use nursing facilities for short periods, and thereby reduce the burden in the home. With the advance of depopulation, it is important that local organizations, i.e. agricultural cooperatives, collaborate in taking care of community health care and welfare.

c Developing social infrastructure in rural areas

i) According to a questionnaire survey of municipal officers in charge of agricultural administration, more than 10% of them answered that rural areas have vitality. Of these, 90% took the view that public works undertaken around five years previously had been useful. However, the development of fundamental living environment facilities remains, as ever, at a low level. For greater stimulation in future, commercial facilities, sewage treatment facilities and other aspects of domestic infrastructure need to be developed.

ii) Although the rate of Internet use in rural areas is far higher than in the previous year, this is still at a low level compared to prefectural capitals. The development of telecommunications infrastructure in rural areas needs to be promoted to ensure that this does not create a new form of disparity, while taking maintenance and running costs into account. Meanwhile, transmission of information from rural areas also needs to be promoted, and a recycling-based society formed in which information is exchanged mutually with cities.

iii) To prevent a deterioration of eco-systems due to business operations that prioritize efficiency, eco-friendly business regions should be positioned within the future ideal concept, based on the views of experts and others. These need to be continuously monitored, while taking steps to form a consensus with local residents and others.

   Meanwhile, activities are also needed to positively aim for a revival of nature, in collaboration with NPOs.

iv) In response to changes in people’s values and issues concerning land use in rural areas, it is hoped that there will be further expansion in efforts through self-determined activity by municipalities, aiming for appropriate conservation and use of farmland that plays an important part in the attraction unique to rural areas, i.e. their landscapes, in line with regional characteristics and based on the consensus of local residents.

v) It is important that local residents themselves take the initiative in clarifying the targeted image of rural areas, and that various related projects and measures be implemented uniformly from the planning stage, including land use. To this end, the government should give advice, etc., to local authorities and others on planning proposals and adjustments, through collaboration between the ministries and agencies.
Fig. 40  Trends in Development of Principal Living Environment Facilities According to Municipal Scale (with large cities as 100)

Source: Ministry of Public Management, Home Affairs, Posts and Telecommunications

Notes: 1) Cities and municipalities throughout Japan were divided into four categories (large cities, including designated cities and special zones; medium-scale cities, provincial core cities and cities with a population of 100,000 or more; small cities, with a population of less than 100,000; and towns and villages. Of the figures aggregated for each of these divisions, those for medium-scale cities and towns and villages are shown here.

2) The road improvement rate is the proportion of extended roads that comply with the standards of the Road Structure Ordinance.

3) The sewage treatment facility diffusion rate is the diffusion rate of public sewerage, agricultural settlement drainage facilities, and other facilities resulting from public works.

4) The rate of development in large cities at the same point in each year is taken as 100.

5) The rate of development is as of March each year.
## Examples of Cultural Properties Connected with Agriculture

<table>
<thead>
<tr>
<th>Type/Category</th>
<th>Name/Location</th>
<th>Photograph</th>
<th>Type/Category</th>
<th>Name/Location</th>
<th>Photograph</th>
</tr>
</thead>
<tbody>
<tr>
<td>Important Cultural Property (Structure)</td>
<td>Tsujun Bridge Yabe Town, Kumamoto Prefecture</td>
<td></td>
<td>Historical Site</td>
<td>Shirakawa-Goh (group of wooden houses with steep rafter roof) Shirakawa Village, Gifu Prefecture</td>
<td></td>
</tr>
<tr>
<td>Important Intangible Folk Cultural Property</td>
<td>Life ritual implements of Okumino Meiho Village, Gifu Prefecture</td>
<td></td>
<td>Place of Scenic Beauty</td>
<td>Terraced paddy fields at Shirayone Wajima City, Ishikawa Prefecture</td>
<td></td>
</tr>
<tr>
<td>Important Intangible Folk Cultural Property</td>
<td>Rice planting ceremony and Oyama memorial service at Shiobara Tojo Town, Hiroshima Prefecture</td>
<td></td>
<td>Natural Monument</td>
<td>Migratory swan landing point at Suibara Sasakami Village, Suibara Town, Niigata Prefecture</td>
<td></td>
</tr>
<tr>
<td>Important Intangible Folk Cultural Property</td>
<td>Kurokawa Noh Kushibiki Town, Yamagata Prefecture</td>
<td></td>
<td>Preservation District for Groups of Important Historic Buildings</td>
<td>Northern part of Miyama Town, Kyoto Prefecture</td>
<td></td>
</tr>
</tbody>
</table>

Source: Agency for Cultural Affairs