Annual Report on Food, Agriculture and Rural Areas in Japan
FY2006

Policies on Food, Agriculture and Rural Areas in Japan
FY2007

Summary
(Provisional Translation)
Objectives and Major Points of this Annual Report

To explain the importance of improving the food self-sufficiency ratio and food supply capability, promoting the WTO, EPA and FTA negotiations, and securing the stable supply of safe food

- Explanations are given regarding the meaning of the food self-sufficiency ratio and the background circumstances and factors behind its decline, as well as the risk of heavy reliance on imported food. The meals that can be supplied by domestic production alone with maximum calorie efficiency are indicated. It is pointed out that promoting the improvement in the food self-sufficiency ratio will lead to the enhancement of the food supply capability (self-sufficiency capability).
- To improve the food self-sufficiency ratio, from the consumption view, it is important to encourage people to adopt well-balanced “Japanese dietary pattern,” featuring rice by promoting “Shokuiku” and promote domestic agricultural product consumption. It is also important, in terms of production, to realize agricultural production that meets the requirements of consumers, and improve the feed self-sufficiency ratio.
- Practicing “Japanese dietary pattern” is expected to contribute to reduce excessive fat intake and health maintenance, while the increase in consumption of domestic agricultural products promotes local agriculture and contributes to the reduction of global warming.
- It is explained how tariffs play a very important role in sustaining and developing agriculture in Japan. The Japanese policies with regard to the WTO, EPA and FTA negotiations are clarified.
- It is pointed out that the interaction between the agricultural, environmental and medical sectors will become more active in the future. The close collaboration among related organizations is therefore important.

To explain the trends of rural areas and actions taken to conserve and utilize rural resources, as well as the importance of using human resources and knowledge concentrated in cities for revitalizing rural areas

- The united efforts of the community, as well as the support from and the collaboration of central and local governments and other organizations, are necessary to reduce damage caused by animals.
- The importance of strengthening the linkage between the food industry and agriculture is pointed out, showing that the economic effects of such linkage are greater in provincial areas where food, agricultural and fisheries industries are more active.
- There is a need to deepen understanding of the multifunctionality of agriculture, forestry and fisheries.
- A variety of actors are expected to participate in the “Measures to Conserve and Improve Land, Water and Environment,” which is to be introduced in FY2007, and perform a wide range of activities.
- In addition to the production of agricultural products, urban agriculture has many other roles such as providing an opportunity to experience agriculture.
- The adoption of effective management techniques and new ideas from external sources to farm management is important to improve farm household economy and strengthen agricultural physique.

To explain the government measures designed to foster and secure principal farmers, trends of agricultural ventures, and actions taken to increase domestic biofuel production and promote agricultural exports

- While showing example cases in which new engaged in farming became principal farmers, it is explained how important it is to provide detailed support to them until they can fully establish themselves as farmers, to increase the number of young people becoming principal farmers.
- As the new “Direct Payment for Land-extensive Farming” is to be applied to the crops produced in FY (Fiscal Year: from April to March next year) 2007, various actions are being taken to foster and secure certified farmers and develop organized rural community farming. Upscaling agricultural production through organizing village farming collectives are expected to increase income for farmers.
- It is necessary to fairly evaluate the roles of female farmers and further promote their participation in agriculture.
- With regard to training and technical internship programs for foreign people, there is a need for the government to establish a system to accept foreign trainees that reflects the current conditions of Japanese agriculture, and for organizations accepting such trainees to understand and appropriately operate the programs.
- The increased production of domestic biofuel and the promotion of export of agricultural products contribute to development of new fields of agriculture.
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• The values in figures and tables are, in principle, rounded, and therefore their totals do not necessarily match the indicated total values.
Annual Report on Food, Agriculture and Rural Areas in Japan
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Trends in Food, Agriculture and Rural Areas
### 1 Significance and Efficacy of Improvement of the Food Self-sufficiency Ratio

- The food self-sufficiency ratio is the index that reflects how effectively the domestic food consumption is covered by domestic production. Japan’s food self-sufficiency ratio on a calorie basis is continuously decreasing for a long time and the recent ratios have leveled off at 40%.

#### How to Calculate the Food Self-sufficiency Ratio

**Two methods for calculating the food self-sufficiency ratio**

<table>
<thead>
<tr>
<th>Food Item</th>
<th>Domestic Production (yen)</th>
<th>Domestic Consumption (yen)</th>
<th>Self-sufficiency Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wheat</td>
<td>55,000</td>
<td>25,000</td>
<td>57.1%</td>
</tr>
<tr>
<td>Soybeans</td>
<td>75,000</td>
<td>15,000</td>
<td>50.0%</td>
</tr>
<tr>
<td>Rice</td>
<td>90,000</td>
<td>20,000</td>
<td>44.4%</td>
</tr>
<tr>
<td>Fish</td>
<td>50,000</td>
<td>20,000</td>
<td>25.0%</td>
</tr>
<tr>
<td>Beef</td>
<td>40,000</td>
<td>10,000</td>
<td>25.0%</td>
</tr>
<tr>
<td>Pork</td>
<td>50,000</td>
<td>15,000</td>
<td>30.0%</td>
</tr>
<tr>
<td>Livestock Feed</td>
<td>25,000</td>
<td>10,000</td>
<td>25.0%</td>
</tr>
<tr>
<td>Potatoes</td>
<td>75,000</td>
<td>35,000</td>
<td>63.3%</td>
</tr>
<tr>
<td>Vegetables</td>
<td>79,000</td>
<td>29,000</td>
<td>62.9%</td>
</tr>
<tr>
<td>Fruits</td>
<td>41,000</td>
<td>14,000</td>
<td>47.0%</td>
</tr>
</tbody>
</table>

#### Examples of Self-sufficiency Ratio by Food Item

- **Wheat** (Raw material for bread, pasta, noodles, etc.)
- **Soybeans** (Raw material for fermented soybeans, soybean paste, tofu, dressings, etc.)
- **Rice**
- **Fish** (for food)
- **Beef**
- **Pork**
- **Livestock feed**
- **Potatoes**
- **Vegetables**
- **Fruits**

### Nutrition of Meals and the Food Self-sufficiency Ratio

<table>
<thead>
<tr>
<th>Meals</th>
<th>Supplied calories (kcal)</th>
<th>Fat ratio (%)</th>
<th>Food self-sufficiency ratio (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Japanese meal</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Steamed rice</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Miso soup (with nameko mushroom)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grilled Japanese horse mackerel</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fried and boiled potatoes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boiled spinach with ground sesame seeds</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Western meal</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baguette</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corn soup</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pepper steak with vegetables</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Green salad</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Prepared by MAFF according to “Food Balance Sheet,” MAFF

- The possibility has been pointed out that the global food supply-demand problem will become more serious in the long and medium terms because of various factors of instability.
- Even if food import is stopped due to unforeseen circumstances, according to estimates, food equivalent to 2,020 kilocalories per day can be supplied to each person by domestic production alone. The contents of the meals, however, will be far different from the current contents. More potatoes are included, while the amount of milk, dairy products and meat is reduced. The food supply capability should be enhanced to prepare for any contingency.
- Well-balanced “Japanese dietary pattern” featuring rice was realized at the mid-1980s. At that time, the food self-sufficiency ratio on a calorie basis ranged from 52 to 54%. The “Japanese dietary pattern” is expected to contribute to reduce excessive fat intake to maintain healthy life.
- The increase in consumption of domestic agricultural products promotes local agricultural production and contributes to improve the food self-sufficiency ratio.
- For example, taking another spoonful of rice is estimated to improve the food self-sufficiency ratio on a calorie basis by 1%. The increase in consumption of domestic agricultural products, which leads to a reduction of the carbon-dioxide emission associated with marine transportation required to import food, contributes to reduce global warming.
2 Concentration and Prioritization of Measures for the Principal Farmers

• Through promoting the “Direct Payment for Land-extensive Farming” which is to be applied for the crops produced in FY2007, the policy measures for the principal farmers and those who wish to be the principal farmers are to be increasingly concentrated and prioritized. In this manner, a strong agricultural structure that enables sufficient agricultural production by efficient and stable agricultural management is to be established.

Fundamental Reform of the Countermeasures for Fostering and Securing Principal Farmers

- Certified farmers: 200 thousand
- Scale expansion, Improvement of management, Innovation
- Uncertified farmers: Areas without rural community farming
- Rural community farming: 10 thousand
- Specified farming community: 213
- Specified agricultural corporation: 345
- Efficient and stable agricultural management
- Provision of total support for the principal farmers
- Improvement and enhancement of financial resources
- Establishment of the loan-based financial support system
- Support for consolidation of farmland
- Coping with projects without previous production records
- Establishment of organizations and corporations

Source: Prepared by MAFF
Note: The numbers of certified farmers, specified farming communities, and specified agricultural corporations are obtained from FY 2005 data.

• Assurance of a sufficient number of people involved in agriculture is of prime importance because the number of farmers is decreasing in the long run. In addition to the promotion of Direct Payment for Land-extensive Farming, the introduction of policies that enable fostering and securing the principal farmers and exchange of information is indispensable for an increasing number of young people to come to be engaged in agriculture.

How to be Engaged in Agriculture (Models)

- How to be Engaged in Agriculture (Models)
  - Farmer A [45-year-old male] who was born in Kawasaki, Kanagawa Pref.
    - Moved to Tokyo (6 years old)
    - Interested in agriculture through animal breeding and vegetable growing
  - Farmer B [31-year-old female] who was born in Kanazawa, Ishikawa Pref.
    - Entered Kyushu Tokai University after graduation from a high school
    - Specialized in agriculture (19 years old)
    - Participation in the short study abroad program at University of Hawaii (19 years old)
    - Participation in a one-year agricultural training program in South America (24 years old)

- How to be Engaged in Agriculture (Models)
  - Farmer C [25-year-old male] who was born in Y asugi-shi, Shimane Pref.
    - Graduated from Hyogo Nutrition, Cooking, Confectionery College (22 years old)
    - Served as a dietitian at a hospital in Osaka (Interested in agriculture as the basis of food production) (22 years old)
    - Graduated from Aichi Gakuen University (25 years old)
    - Served as a dietitian at a hospital in Osaka (Interested in agriculture as the basis of food production) (25 years old)

- How to be Engaged in Agriculture (Models)
  - Farmer D [25-year-old male] who was born in Y asugi-shi, Shimane Pref.
    - Married a farmer’s son (25 years old)
    - Engaged in agriculture in Y asugi-shi, Shimane Pref. (25 years old)
  - Farmer E [25-year-old male] who was born in Y asugi-shi, Shimane Pref.
    - Married a farmer’s son (25 years old)
    - Engaged in agriculture in Y asugi-shi, Shimane Pref. (25 years old)

Source: Prepared by MAFF
Notes: 1) The ages in the angled brackets and the names of municipalities are based on data as of the end of 2006.
2) The figures in the round brackets are the ages corresponding to the events.
3) The real names are not disclosed.
3 Developing New Agricultural and Rural Frontiers  
— Acceleration of Biomass Utilization and Countermeasures for the Global Environment —

- Utilization and application of biomass contributes to development of new agriculture, forestry and fisheries fields.
- In recent years, many countries have promoted production and utilization of biofuel in order to reduce global warming and respond to the inflating crude oil prices. The verification tests for bioethanol are currently being conducted in six places in Japan. The local governments also promote biodiesel fuel (BDF) utilization and application.
- MAFF plans to introduce 50 thousand kl of domestic biofuel in a single year in FY2011.
- In November 2006, the Prime Minister directed the agencies and ministries concerned to make a concerted effort to greatly increase domestic biofuel production. In response to this direction, MAFF prepared a progress schedule to remarkably increase domestic biofuel production and submitted the schedule to the Prime Minister in February 2007.

Progress Schedule for Achievement of Increase of Domestic Biofuel Production

<table>
<thead>
<tr>
<th>Stage of practical application</th>
<th>2010</th>
<th>2015</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
</tr>
</thead>
<tbody>
<tr>
<td>Irregular agricultural products and waste*</td>
<td>Verification</td>
<td>Production expansion, facility improvement</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Biomass requiring technical development</td>
<td>Establishment of low-cost collection technology and efficient glycation and fermentation technology</td>
<td>Verification and practical application of system</td>
<td>Production expansion, facility improvement</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Establishment of low-cost production technology</td>
<td>Cultivation of high-yielding variety with utilizing genome information</td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Establishment of efficient pretreatment technology</td>
<td>System verification and practical application of system</td>
<td>Production expansion, facility improvement</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Establishment of efficient glycation and fermentation technology</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Development of collecting/transporting machinery</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Establishment of uninterrupted simultaneous glycation and fermentation technology</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Target production cost</td>
<td>Sawmills, residual woods, rice straw (100 yen/l estimation)</td>
<td>Logging residue, resource crops (100 yen/l estimation)</td>
<td>Competitive pricing to cope with other types of fuel and international prices</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Management systems</td>
<td>Promotion of bioethanol dissemination by conducting a large-scale verification project</td>
<td>Starting a full-fledged program</td>
<td>Attempting to achieve further expansion under the current system*</td>
<td>Establishment of a social infrastructure that allows the use of fuel containing more than 3% bioethanol (1.3% oxygenated fuel)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Further expansion might be acceptable</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

*Waste: The cost of waste disposal is collected in advance so that waste can be used as raw material.

Japan is committed to reducing greenhouse gas (GHG) emissions by 6% in the first commitment period (2008-2012) compared to the base year (1990 in principle) under the Kyoto Protocol to the United Nations Framework Convention on Climate Change (UNFCCC). GHGs increased by 8.1% in FY2005. The measures to cope with global warming should be strongly promoted.

- Promotion of agricultural production activity in a stable manner enables continuous formation and maintenance of the unique natural environment. Efforts should be made to conserve biodiversity of the national land by harmonizing agricultural activity with nature and conserving the ecosystem.

Transition of Greenhouse Gas Emission in Japan

(Unit: 1 million tons, CO2)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>1,261</td>
<td>1,355</td>
<td>1,364</td>
<td>1,186</td>
</tr>
</tbody>
</table>

Pest control using a native enemy
• Japanese agriculture faces the possibility of reduction in the scale of the domestic market. Therefore, the traditional idea that the agricultural, forestry and fishery products and foods are produced only for domestic consumption should be changed and the possibility of entering foreign markets should be explored.

• In recent years, there has been a Japanese food boom in foreign countries because of its healthy image and sophisticated taste. Moreover, high-quality Japanese agricultural products are highly appreciated in the world.

• Exports of agricultural, forestry and fishery products and foods are increasing and, in 2006, the export value reached 373.9 billion yen, which indicated a 50% increase compared with the figure for 2001. Currently, various agricultural products and foods including apples, Chinese yams, and soy sauce are exported to many countries, such as the U.S. and European countries and especially Asian countries.

Aiming to increase the export value to approximately one trillion yen by 2013, the Government of Japan has prepared a logo for export promotion, has developed a comprehensive export strategy and has held exhibitions and commercial meetings in foreign countries.

In order to widely and effectively inform about the attractive points of Japanese foods and Japanese foodstuffs, the Government promotes a project titled “WASHOKU-Try Japan’s Good Food.” Furthermore, in March 2007, it has undertaken the process of putting a plan titled “Proposal for Japanese Restaurant Recommendation Program,” which was proposed by the Council of Advisors for the Recommendation of Japanese Restaurants outside Japan, into effect so that Japanese food, which is now booming in the world, can build further popularity.
4 Revitalization of Rural Areas

— Multifunctionality of Agriculture and Preservation and Utilization of Rural Resources —

- Agriculture plays a large variety of roles, including food supply, conservation of national land, conservation of water resources, and preservation of the natural environment. Agriculture, which is closely tied to forestry and fisheries, fulfills various functions.

- Although agricultural land and water are the essential social common capital for stable food supply and fulfillment of multifunctionality of agriculture, their maintenance and preservation have become increasingly difficult because of structural changes in rural communities.

- In FY2007, “Measures to Conserve and Improve Land, Water and Environment” is introduced so that the activity for resource and environment preservation and the farming activity which is to be carried out in the preserved environment by using the preserved resources can be integrated and the improvement of the quality of such activities and long-term preservation can be assured.

Overview of “Measures to Conserve and Improve Land, Water and Environment”
Promotion of Complementarities and Interrelationships between Urban and Rural Areas

- Promotion of complementarities and interrelationships between urban and rural areas is necessary for revitalization of rural areas. Various interaction programs such as short stay and settlement in the countryside are currently promoted.

**Activities Involved in the Promotion of Complementarities and Interrelationships between Urban and Rural Areas**

<table>
<thead>
<tr>
<th>Staying forms</th>
<th>Short term</th>
<th>Period of staying in the countryside</th>
<th>Long term</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short stay in the countryside</td>
<td>(Day trip)</td>
<td>(Short stay)</td>
<td>(Long stay)</td>
</tr>
<tr>
<td>Double residence</td>
<td>Using farmhouses and guest houses</td>
<td>Second houses</td>
<td>Living in the countryside</td>
</tr>
<tr>
<td>Settlement</td>
<td>Kleingarten</td>
<td>Utilization of allotment gardens, various programs for farming experience</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Utilization of restaurants managed by farmers</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Utilization of direct sales outlets of agricultural products</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Utilization of tourist farms</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Farming experience programs for children at school</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Voluntary farming supporters, working holiday in the countryside</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Agricultural training for the young people and baby boomers that are willing to engage in agriculture</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Activities and experiences**

- Learning the joy of agriculture through agricultural products
- Enjoying participating in agricultural practice
- Learning through practical experiences
- Supporting agricultural practices
- Learning agricultural technologies
- Stay in the rural area and rural life experience (dietary culture)
- Utilization of restaurants managed by farmers
- Utilization of direct sales outlets of agricultural products
- Utilization of tourist farms
- Farming experience programs for children at school
- Voluntary farming supporters, working holiday in the countryside
- Agricultural training for the young people and baby boomers that are willing to engage in agriculture

**Source:** Prepared by MAFF

- The Government, NPOs and private companies promote various projects to cope with the needs of the young people and baby boomers that are willing to settle down in the countryside. A campaign for green tourism is also launched.
- Fostering and securing the personnel serving as leaders and establishment of a network supported by a large variety of individuals are indispensable for promotion of complementarities and interrelationships and fostering local brands.
- The human resources and technologies owned by universities and companies and the baby boomers’ knowledge that they accumulated during their careers are expected to play important roles in local revitalization. Actually, utilization of external human resources and technologies in the local industry has successfully contributed to the development of new products based on fresh ideas. Rural areas can be revitalized if such an approach is taken widely.

**<Case Example: Local Revitalization through Introduction of the Latest Technology and Development of New Products by Utilizing External Human Resources>**

The local government of Ama-cho, Shimane Pref. promotes invitation of specialists and dispatching of workers so that the local workers can learn the methods for utilization of new freezing technique and the traditional salt manufacturing technique. In this manner, the local government makes efforts to develop local industry and create employment. In collaboration with the external enthusiastic specialists and the Agricultural Cooperative Women’s Association, the local government has promoted a project to commercialize turban shell curry so that the special items of the local island can be commercialized on the basis of innovative ideas. The preparations to receive the external persons and promote their long-term settlement on the island, including residences, have been assured. In cooperation with the persons who moved to the island (those who settled in the countryside by making an I turn and U turn), the local fishers started to produce and sell rock oysters. The external human resources and technologies have been effectively utilized. Moreover, the local government holds various programs for the students who have experience in living outside of the island and the young people not in education, employment or training (NEET) to promote their engagement in the local industry, and fosters the interaction between the urban and the rural areas in various forms.
(1) Global Food Situation and Agricultural Product Trade Negotiation

- The global economy has greatly expanded, wealth and capital have moved around the world, and economic ties have been deepened. These phenomena have contributed to the acceleration of economic globalization. Consequently, agricultural product trade has expanded substantially especially with North America, Europe and East Asia.
- In recent years, agricultural product trade with developing countries characterized by rapid economic growth, such as China and Brazil, has expanded greatly.

Transition of Agricultural Product Trade Value by Foreign Geographic Area

Agricultural production, which is extremely vulnerable to natural conditions, is characterized by considerable variation in production and difficulty in meeting the rapidly changing international demands.

Furthermore, the trade ratio of agricultural products is lower than the trade ratios of mineral resources and industrial products, and the structure of agricultural product trade is characterized by the fact that specific countries or regions account for a large percentage of exports of main agricultural products.

Trade Ratios of Main Agricultural Products (2005)

Percentage Shares in Export Markets of Main Agricultural Products, Selected Countries (2005)

Significance and Problems of Improvement of the Food Self-sufficiency Ratio
Regarding grain supply and demand in the world in recent years, the amount of production falls below the amount of consumption. The ending stocks ratio has been decreasing and the 2006 ratio decreased to a level close to that in the first half of 1970s, when the export of some agricultural products was restricted.

While the food demand in the world is expected to further increase with the increase in population in the developing countries, there is concern about the factors of instability adversely affecting agricultural production, such as shortage of water resources and the effects of global warming.

Amid the expectation of an increase in the demand for grain for animal feed resulting from the increased demand for meat mainly in the developing countries, the increased demand for bioethanol in the U.S., which accounts for 70% of the corn exports in the world, probably has significant influence on the global food supply and demand.

The possibility that the global food supply-demand problem will become more serious in the long and medium terms has been pointed out. In this situation, the countries having many undernourished people and the food importing countries should assure a stable food supply by promoting continuous development of domestic agricultural production.

The countries should take a cooperative approach to assure the security of the food supply in the world. Japan is expected to make efforts to stabilize the food supply in East Asia by looking at the problem of food supply and demand in a broader picture.
• In 2006, the value of agricultural product imports has reached a record high of 5,004.1 billion yen in Japan.
• Japan is the world’s biggest net importer of agricultural products. Compared with the agricultural product trade in the major countries, the trade in Japan is characterized by heavy dependence on imported agricultural products. Japan imports agricultural products from specified countries, as demonstrated by the fact that more than 60% of imported agricultural products are from the top five exporting countries, including the U.S. and China.
• In view of the state of agricultural product imports in Japan, which is characterized by the above data, various factors are expected to influence the food supply in Japan because agricultural product imports are easily affected by changes in the crop situation, crop diversion, and climatic damage at the exporting countries.
• In view of the present state of food supply and demand in the world, making efforts to improve domestic agricultural production and attempting to assure stable import of agricultural products are significantly important.

### Former Cases of Disturbed Food Supply

<table>
<thead>
<tr>
<th>Year</th>
<th>Country and region</th>
<th>Crop</th>
<th>Factor</th>
<th>Countermeasures introduced by the Japanese government</th>
</tr>
</thead>
<tbody>
<tr>
<td>1973</td>
<td>U.S.</td>
<td>Soybeans</td>
<td>The price of U.S. soybeans tripled due to the global crop failure in the previous year and export restriction imposed by the U.S.</td>
<td>Prevention of buying up and reluctant selling</td>
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<td></td>
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<td>Advising to control exports</td>
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<td>Suspension of imported soybeans transactions in the mercantile exchange</td>
</tr>
<tr>
<td>1996</td>
<td>Panama Canal</td>
<td>Feed grains</td>
<td>The transportation was limited, resulting from the enhancement of the water line limit following the El Nino-associated lowered water levels</td>
<td>Utilization of stockpile</td>
</tr>
<tr>
<td>2005</td>
<td>U.S.</td>
<td>Feed grains</td>
<td>The shipments from the harbor were disturbed by Hurricane Katrina’s onslaught</td>
<td>Utilization of stockpiles</td>
</tr>
</tbody>
</table>

Source: Prepared by MAFF
Note: In Japan, the food supply was disturbed by a rice failure due to cool-weather damage in 1993.
• Although the member states have made every effort to reach agreement in the World Trade Organization (WTO) negotiation, they still have different opinions on the reduction of U.S. farm subsidies, liberalization of the agricultural market in the EU and G10 member states, and liberalization of non-agricultural product and service markets in the developing countries. Because the WTO negotiation reached no settlement, it was transiently terminated late in July 2006.

• The WTO negotiation was resumed after a WTO Informal Ministerial Meeting in Davos, Switzerland, in January 2007.

Progress of the WTO Agricultural Negotiation

November 2001  The 4th WTO Ministerial Meeting (Doha, Qatar)
• The Doha Development Agenda was established. Negotiations were started in the respective fields, including agriculture, non-agricultural products and service.

July 2004  General council (Geneva, Switzerland)
• An agreement was reached on the framework of the negotiation.

December 2005  The 6th WTO Ministerial Meeting (Hong Kong)
• An agreement was reached that a modality, which is a common rule among the member states, was to be established by the end of April 2006 on agricultural and non-agricultural products. The member states agreed that they were to submit their draft schedules of concessions by the end of July 2006.

January-July 2006  Ministerial-level Meetings (Geneva, Switzerland, etc.)
• Despite the discussions in the ministerial-level meetings and the attempt to establish the modality, no agreement was reached. The negotiation was transiently terminated late in July.

September 2006  G20 Ministerial Meeting (Rio de Janeiro, Brazil)
• Cairns Group Ministerial Meeting (Cairns, Australia)
• Several ministerial meetings were held, and the WTO member states explored the possibilities of resuming the negotiation.

November 2006  Informal Trade Negotiation Committee (Geneva, Switzerland)
• Lamy, the Director General of the WTO, recommended that the chairpersons in charge of negotiation promote discussion in line with the respective conditions.

January 2007-  Informal Ministerial Meeting (Davos, Switzerland)
Informal Trade Negotiation Committee (Geneva, Switzerland)
• As a result of discussion in the Informal Ministerial Meetings, full-fledged negotiation has been resumed.

Source: Prepared by MAFF

Japanese Attitude toward the WTO Agricultural Negotiation

• Emphasis should be placed on the multifunctionality of agriculture, including assurance of food security along with open trade order.
• The basis that enables maintenance and continuation of local agriculture under different conditions is needed.

• International competitiveness of agriculture should be enhanced by fostering principal farmers and producing domestic products that have high added value.
• Practical trade rules are needed to allow the continuation of agricultural policy reform.

• Although various regulations exist for importing countries, the regulations applicable to exporting countries are less strict. Accordingly, recovery of a balance is needed.

• In view of the conditions in developing countries, certain measures including special processes should be introduced.
• In addition to improvement of market access, support programs should be provided in combination with cooperation. (Development Initiative, December 2005).

Source: Prepared by MAFF
The negotiation of the Economic Partnership Agreement (EPA) and the Free Trade Agreement (FTA), which complements the WTO multilateral trade system, is promoted. In the process of negotiation, the influence on domestic agriculture is sufficiently noticed and a strategic approach is taken based on the principle of “Protecting whenever necessary” with due consideration for the progress in structural reform of domestic agriculture.

There is a wide difference in agricultural structures between Japan and Australia. More than half of the agricultural and fishery products imported from Australia such as beef, wheat, dairy products and sugar are the products which are important agricultural products in Japan. The abolition of tariffs on such important products has significant effects not only on agricultural activities, but also on the whole society because of the effect on multifunctionality including preservation of national land and environment. In the process of negotiation, the Government sufficiently considers the influence on domestic agriculture, forestry and fisheries, and makes a concerted effort to insist on the Japanese conditions with patience based on the principle of “Protecting whenever necessary.”

### Progress of Negotiation of EPA and FTA on the Side of Japan

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</tbody>
</table>

Source: Prepared by MAFF

Note: Cooperation Council for the Arab States of the Gulf (GCC) is organized by six countries including Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and United Arab Emirates.

### Comparison between Japan and Australia from the Aspect of Agricultural Structure

<table>
<thead>
<tr>
<th></th>
<th>Japan</th>
<th>Australia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total land area</td>
<td>38</td>
<td>774</td>
</tr>
<tr>
<td>(Unit: 1 million ha)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Area for farmland</td>
<td>5</td>
<td>447</td>
</tr>
<tr>
<td>(Unit: 1 million ha)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean area under</td>
<td>1.8</td>
<td>3,385</td>
</tr>
<tr>
<td>management (ha/farm)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Per capita farmland</td>
<td>0.04</td>
<td>22.9</td>
</tr>
<tr>
<td>area (ha/person)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(B/A) [times]

### Conditions of Import from Australia (2005)

- Imports of agriculture, forestry and fishery products: 604.8 billion yen
- Duty free goods: 300 billion yen
- Beef (33%): 220 billion yen
- Dairy products (6%): 36 billion yen
- Liquefied natural gas (22%): 135 billion yen
- Coal (33%): 198 billion yen
- Sugar (2%): 12 billion yen
- Rice (0.2%): 12 billion yen
- Wheat (4%): 56 billion yen
- Barley (3%): 39 billion yen

Source: Prepared by MAFF according to "Trade Statistics," Ministry of Finance Japan
Note: Coal, limestone and liquefied natural gas have already been included in duty free goods.

### Significance of Tariffs

Tariffs are an important means to correct the gap in competitiveness resulting from the difference in national land conditions, and WTO allows the member countries to impose tariffs. The Japanese government set tariff rates to a certain level for several products subject to tariff rate quota, including rice to prevent their disorderly massive import.

If tariffs of these products are eliminated, it is expected to significantly affect not only Japanese agriculture but also the entire Japanese society. According to the estimate, 1) the total agricultural output is to be reduced by 40% (reduction of about 3.6 trillion yen) and 2) the food self-sufficiency ratio on a calorie basis is to be reduced from 40% to 12%.

Tariffs play an important role in continuously sustaining and developing agriculture in Japan.
(2) Trends of Food Consumption and Production

- Although the current economic situation reflects business recovery, consumer spending remains stagnant in Japan. The food expense as a percentage of consumption expenditure shows a mildly decreasing trend.
- Because of the accelerated diversification in dietary habits resulting from the increase in national income, the food items consumed by the Japanese have changed. The increase in consumption of livestock products and fats and the decrease in consumption of rice have contributed to change of food consumption form.
- The change of food consumption form is related to the increase in imports of agricultural products. Such a change, along with the increasing externalization of our diet, influences the reduction of the food self-sufficiency ratio.

- Public lifestyles have been changed and individual freedom and worthwhile activity have been increasingly emphasized. Women’s participation in society has promoted gender equality in employment and the number of double-income households has increased.
- The number of general households has increased and, at the same time, the percentage of single households has increased considerably. As a result, the mean size of households has been decreasing.
- The change of lifestyles has influenced the dietary style. The decrease in cost effectiveness of home cooking and the increased enjoyment of gourmet food have promoted externalization of our diet.

Transition of the Female Labor Force Rate by Generation

Transitions of the Number of General Households by Household Structure and the Mean Size of Household

Source: “Labor Force Survey,” Ministry of Internal Affairs and Communication
Note: Labor force rate (proportion of the laboring population) / laboring population

Source: Prepared by MAFF according to “Population Census,” Ministry of Internal Affairs and Communication
Notes: 1) “Three-generation family” is defined as a total of the household consisting of wife and husband, children and the parent(s) of the couple and the household consisting of wife and husband, children, the parent(s) of the couple and other relative(s).
2) “Nuclear family household” does not include the household of husband and wife alone.
3) The data on the “single household” are derived from those reported in “Population Census.”
• The food expenditure of a single household (annual mean monthly per capita food expenditure) is 1.7 times as much as that of a household consisting of more than two members in 2006. In single household, eating out and prepared food accounted for 50% and the percentage of eating out increases in the higher income group. The eating out expense as a percentage of food expenditure has increased in the younger age group, and this trend is common to males and females.

• Further increase in number of single households in the future may accelerate externalization of our diet. Japanese consumers are potentially willing to select domestic products, while the percentage of imported products used in food processing and the food service industry is generally increasing.

• More efforts should be made to establish a collaborative relationship between the food industry and agriculture, cope with consumers’ needs and increase the percentage of domestic products for industrial use. By taking such an approach, we can improve our food self-sufficiency ratio.

Conditions of Food Consumption Expenditure of Single Households and Households Consisting of More Than Two Members
(Average expenditure per month, per household in each annual income quintile group in 2006)

Conditions of Food Consumption Expenditure of Single Households
(Average expenditure per month, per household in each gender and generation group in 2006)

Source: Prepared by MAFF according to “Survey on Household Economy,” Ministry of Internal Affairs and Communication.

Notes: 1) All of the single households and households consisting of more than two members are included. The households consisting of more than two members are defined as those excluding the agriculture, forestry and fishery households.

2) Foodstuffs include grains, fish and seafood, meat, milk, eggs, vegetables, seaweeds, fruits, fat and seasonings.

3) The eating out expense of the single household includes charges for food in dormitories, etc.

Foodstuffs
Confectionery and snacks
Beverages and alcohols
Prepared food
Eating out

Source: Prepared by MAFF according to “Survey on Household Economy,” Ministry of Internal Affairs and Communication.
Note: For details of foodstuffs and eating out, see the notes attached to the above figure.
Section 1  Significance and Problems of Improvement of the Food Self-sufficiency Ratio

- Japanese agricultural production has been decreasing since around 1985. The labor force outflow, farmland diversion, and the increase in abandoned cultivated land have promoted a decreasing trend in those engaged in farming, the cultivated land area and the utilization rate of cultivated land.
- The total agricultural output showed expansion in various directions and increased in line with the domestic demand. Since 1985, however, the total output of agricultural products including rice, which is decreasing in demand, has been declining.

- Japanese agricultural production is characterized by an imbalance between consumption and production with respect to vegetables, fruits, meat and milk and dairy products.
- More than 60% of domestic agricultural and fishery products are to be consumed as fresh food. Japanese agricultural production fails to appropriately meet the demand from the food industry, resulting in the increased use of imported food in the industry.
- In this situation, promotion of agricultural production corresponding appropriately to the consumers’ needs is important. All of the population is expected to make efforts to improve the food self-sufficiency ratio and assure a stable supply of food by taking various approaches and promoting sustainable development of agricultural production.

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**Transition of Total Population and Agricultural Production in Japan**

The level achieved in 1965 was defined as 100.

**Transition of Total Agricultural Output in Japan**

Unit: 1 trillion yen

**Transition of Production and Consumption of Main Agricultural Products in Japan (FY1965-2005)**

Unit: 1 million tonnes

Source: Prepared by MAFF according to “Population Census” and “Labor Force Survey” published by the Ministry of Internal Affairs and Communication, and “Index Number of Agriculture, Forestry and Fishery Production” and “Statistics of Cultivated Land and Planted Area” published by MAFF.

Source: “Statistics of Agricultural Production Income,” MAFF. Note: The numerical values in the figure are obtained by summing up the total agricultural output.

Notes: 1) Consumption is defined as domestic consumption including supplies for food, feed, seed and industrial use.
2) The data for the nine years (1965, 1970, 1975, 1980, 1985, 1990, 1995, 2000 and 2005) are plotted as a connected line in the Figure. Each year’s data is obtained from averaging the data on the year in question and the preceding two years.
(3) Improvement of Food Self-sufficiency Ratio and Enhancement of Food Supply Capability

- Japan’s food self-sufficiency ratio has been decreasing over a long period of time, and the ratio on a calorie basis has decreased from 73% in FY1965 to 40% in 1998 (for 33 years). For the subsequent eight years, the ratio has leveled off at the same level.
- Japan’s food self-sufficiency ratio on a production value basis, which has shown a more gradually decreasing tendency than that on a calorie basis, has been reduced to 69% in FY2005. This gradual reduction was due to the tendency of domestic production to shift to production of relatively higher value added products including vegetables, fruits, and livestock products.

• Japan’s food self-sufficiency ratio on a calorie basis is the lowest among the major advanced countries.
• Japan’s self-sufficiency ratio of grains (on the weight basis) is low, ranking 124th among 173 countries and regions and 27th among the 30 member states of the Organization for Economic Co-operation and Development (OECD).

Source: “Food Balance Sheet,” MAFF.

Source: Estimated by MAFF according to “Food Balance Sheet” (MAFF), “Food Balance Sheets” (FAO), and “Korean Food Balance Sheet” (Korean Rural Economy Research Institute).

• The drastic change in dietary habit and increased imports of agricultural products, which cannot be sufficiently covered by domestic production, have caused a prolonged decline in the food self-sufficiency ratio on a calorie basis.
• The assessment of supplied calories per day per capita shows a reduced percentage of rice which can be produced in Japan and an increased percentage of livestock products and fats.
• Wide agricultural land is needed to produce the feed grains necessary for production of livestock products and fat seeds as the raw materials for vegetable fats and oils whose consumption has been increasing. The farmland needed for production of the main imported agricultural products is estimated at about 12 million ha, which is about 2.5 times as large as our farmland area*.1.
• The decline in domestic production has also contributed to a reduced food self-sufficiency ratio*2. Although the main factor of this phenomenon is the decline in production associated with the reduced consumption of rice, the fact should not be overlooked that domestic production cannot sufficiently satisfy the increased demand for foodstuffs in the food service industry and home-meal replacement industry resulting from the accelerated externalization of our diet.

Changes in the Composition of Supplied Calories and Self-sufficiency Ratio by Food Item (on a Calorie Basis)

Total supplied calories: 2,549 kcal per capita per day
[Domestic calories: 1,799 kcal per capita per day]

(percentage of supplied calories)

- Others 68%
- Soybeans 41%
- Fish and seafood 110%
- Sugars 31%
- Wheat 28%
- Fats 33%
- Livestock products 4%

Total supplied calories: 2,573 kcal/person per day
[Domestic calories: 1,021 kcal/person per day]

(percentage of supplied calories)

- Others 25%
- Soybeans 24%
- Vegetables 76%
- Fish and seafood 57%
- Sugars 34%
- Fats 3%
- Livestock products 4%

*1: The research group led by Prof. Taikan Oki, Institute of Industrial Science, the University of Tokyo, estimated the water needed for the production of currently imported agricultural products (five grain products and four livestock products) in Japan (virtual water) at 62.7 billion m³ at 2000. This estimation exceeds the amount of domestic use of agricultural water in 2003 (55.7 billion m³, data reported by the Ministry of Land, Infrastructure and Transport Japan)

*2: The caloric supply by domestic agricultural products was 1,021 kcal per capita per day in 2005 (Approximate calculation), which was equivalent to the basal metabolism (minimum energetic metabolism needed for survival) of boys ranging from six to seven in age. (“2005 Standard of Food Intake for the Japanese People” published by the Ministry of Health, Labour and Welfare)
The livestock products produced by using imported feed, which are regarded as domestic products, are not included in domestic calories for the purpose of calculation. Therefore, the self-sufficiency ratio of livestock products on a calorie basis is affected by the feed self-sufficiency ratio. In FY2005, the feed self-sufficiency ratio was 76% in the case of roughage and 11% in the case of concentrated feed. The overall feed self-sufficiency ratio in FY2005 was 25%, which was comparable to the overall ratio in FY 2004. The recent ratios generally continue to be flat.

When we consider the recent trend of global feed supply and demand, we should improve the feed self-sufficiency ratio.

Because the demand for roughage can be satisfied by domestic production, more efforts are to be made to expand the production of whole crop rice silage and promote the use of domestic rice straw as feed so that the food self-sufficiency ratio can be improved.

Production of feed from residual food (eco-feed) should be promoted to improve the roughage self-sufficiency ratio. An attempt has been made to produce rice for feed and ultra-high-yielding varieties, which have achieved a yield 1.5 times to twice as high as that of rice for staple food [800-1,000 kg/10 ares (results obtained in the experimental field)], have been developed. Further efforts should be made to develop high-yielding varieties so that profitability can be improved.

<Case Example: Project for Improvement of Feed Self-sufficiency Ratio>

(1) Project for Production of Whole Crop Rice Silage
Since 2002, Adogawa Rice for Feed Production Association (Takashima-shi, Shiga Pref.) has supplied livestock farmers with whole crop rice silage which is produced from crops on land diverted from paddy fields by crop production farmers. In FY2006, rice for feed was grown in 15.5 ha of diverted land and whole crop rice silage was given to more than 2,000 cows. In the future, aiming at producing whole crop rice silage that satisfies livestock farmers’ needs, crop production farmers will make more efforts to further expand the feed supply by stabilizing the production and improving the quality.

(2) Project for Raising Hogs with Rice for Feed
In Yuza-machi, Yamagata Pref., with a view to the effective utilization and preservation of agricultural land and an improvement of the food self-sufficiency ratio, since FY2004, various sectors including farmers, agricultural cooperatives, universities, hog raisers, NPOs and cooperatives, have jointly promoted the project for raising hogs with rice for feed. Rice for feed is grown in abandoned cultivated land which local farmers or NPOs rent from the town. The harvested rice for feed is sold to nearby hog raisers who add the rice to the feed mixture. In this manner, the corn content can be reduced to 50-40%. Since 2006, the rice fed hog meat has been sold through cooperatives. The sale price of rice for feed is about one sixth of the price of rice for staple food and part of the production cost is covered by the subsidy. Therefore, more efforts have been made to reduce the production cost by introducing the direct seeding cultivation and use of hog manure (liquid fertilizer). Further improvement is needed before the yield can be increased and the cultivation cost can be considerably reduced.
• It has been pointed out that the global food supply-demand problem could potentially become more serious in the long and medium terms because of various factors of instability. Improvement of the food self-sufficiency ratio is important to ensure food security. Promoting understanding of the present condition of the food self-sufficiency ratio and the significance of its improvement is of prime importance.

• In the Basic Plan for Food, Agriculture and Rural Areas, the target food self-sufficiency ratio in FY2015 is defined as 45% on a calorie basis and 76% on a production value basis.

• The process control has been conducted under the supervision of the Food Self-Sufficiency Ratio Improvement Council. For example, the detailed activities of the staff concerned and the progress of the project according to the action plan including the goals have been regularly checked and verified. More quantitative goals were included in the action plan in FY2006 so that the project can be promoted effectively.

• The food self-sufficiency ratio differs depending on the dietary habits of the population concerned. The expansion of consumption of domestic agricultural products supports local agriculture and contributes to the improvement of the food self-sufficiency ratio and reduction of global warming.

• The food supply capability should be enhanced by taking the following approaches: assuring agricultural resources including farmland and agricultural water under normal circumstances, fostering and securing the principal farmers and improving the technological standard of agriculture. We can contribute toward the stabilization of global food supply and demand if we make efforts to assure the stable supply of food by effectively utilizing our resources.

### Survey on Awareness of the Japanese Food Self-sufficiency Ratio

![Survey on Awareness of the Japanese Food Self-sufficiency Ratio](chart)

Source: "Food as Intergenerational Linkage, Actual Condition of and Attitude toward Food" (published February 2004, by The Norinbunkin Bank)

Notes: 1) The survey was conducted on 500 housewives with children, ranging from 30 to 59 years of age. (Response rate: 80.0%)

2) Whether the respondents recognized the food self-sufficiency ratio on a calorie basis was unknown because the categories of the food self-sufficiency ratio were not mentioned.

### Main Goals Included in “FY2006 Action Plan for Improvement of Food Self-sufficiency Ratio”

<table>
<thead>
<tr>
<th>Key targets</th>
<th>Targets</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Promotion of “Shokuiku,” expansion of consumption of domestic agricultural products</strong></td>
<td>Awareness of “Japanese Food Guide Spinning Top”: 30%; Awareness of early implementation of tri-weekly rice school lunch, commercialization of new processed rice, and new foods made from ground rice: 30%</td>
</tr>
<tr>
<td><strong>Promotion of local consumption of local produce</strong></td>
<td>Number of developed plans for promotion of local consumption of local produce: 900 areas (FY2007); Improvement of percentage of local agricultural products in school lunch: 30% and more (FY2010)</td>
</tr>
<tr>
<td><strong>Assurance of reliance on domestic agricultural products</strong></td>
<td>Preparation of Good Agricultural Practices (GAP) Manual: 30 prefectures; Establishment of GAP verification production areas: 120 sites; Percentage of items which can be traced by traceability system: 50% (FY2007)</td>
</tr>
<tr>
<td><strong>Promotion of production in line with demand by principal farmers</strong></td>
<td>Number of certified farmers: about 225 thousand; Number of village farming collectives: 15 thousand (about 2.5 thousand specified farming communities and about 1.5 thousand specified agricultural corporations included)</td>
</tr>
<tr>
<td><strong>Enhancement of collaboration between food industry and agriculture</strong></td>
<td>Development of new products produced by using domestic agricultural and fishery products: 22 items; Percentage of food processors who procure raw materials from domestic farmers under contract: 60% (FY2010)</td>
</tr>
<tr>
<td><strong>Promotion of efficient utilization of farmland</strong></td>
<td>Number of new engagements in farming (general companies included): three-fold rise in five years; Increase in consolidated farmland area for use by those involved in agriculture: 42 thousand; Number of important sites for promotion of feed production: 180 sites; Self-sufficiency of rice straw: 100%; Beef cattle grazing in paddly fields: 5 thousand</td>
</tr>
</tbody>
</table>

Source: Prepared by MAFF

Note: Goals with no mention of fiscal year are to be achieved in FY2006.

### Influence on Food Self-sufficiency Ratio on Calorie Basis from Aspect of Consumption

<table>
<thead>
<tr>
<th>Example of change in consumption to improve food self-sufficiency ratio by 1%</th>
<th>Per capita daily increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rice Consuming another spoonful of rice per meal</td>
<td>About 7.2 g</td>
</tr>
<tr>
<td>Wheat Consuming another three bowls of noodles made from 100% Japanese wheat per month</td>
<td>About 7.0 g</td>
</tr>
<tr>
<td>Soybeans Consuming another three pieces of tofu made from 100% Japanese soybeans per month</td>
<td>About 6.0 g</td>
</tr>
</tbody>
</table>

Source: Estimated by MAFF according to “Food Balance Sheet,” MAFF

Note: The estimation was made on the assumption that the increase in consumption might result in a corresponding reduction in the consumption of different items dependent on foreign imports.

### Estimation of Carbon Dioxide Emissions Associated with Food Transportation (Preliminary calculation)

![Estimation of Carbon Dioxide Emissions](chart)

Source: Prepared by MAFF according to the article titled “Discussion of Total Amount and Distance of Food Importation (Food Mileage) and the Resulting Burden on the Environment” [Tetsuya Nakata, “Agriculture, Forestry and Fishery Policy Research Institute, Ministry of Agriculture, Forestry and Fisheries].

Twelve percent of the Japanese forest area is needed for the absorption of emitted carbon dioxide.
Section 2
Stable Supply of Safe Food and Ensuring Consumer Confidence

(1) Initiatives to Ensure Food Safety

- Taking the food chain approach, and conducting the risk management for the prevention of problems and accidents are indispensable for ensuring food safety.
- Since the establishment of the “Standard Operating Procedure on Risk Management for Food Safety” in 2005, the risk management of contaminants in food, on the basis of scientific principles, has been started.
- The occurrence of chemical contaminants in food and feed is investigated to estimate the risk to human health.
- Efforts are made to improve safety and quality of food by disseminating and promoting GAP, and fostering appropriate use and control of production materials.

Strict Ensuring of Food Safety through the Food Chain

(2) Initiatives on Animal and Plant Quarantine Control

- The measures for controlling intrusions and spreads of livestock diseases and plant pests are conducted according to the concept of risk analysis.
- On occurring of the Highly Pathogenic Avian Influenza (HPAI) outbreaks in Japan in 2007, all possible measures to prevent the disease from spreading as well as to provide consumers with accurate information and producers with appropriate supports. Additionally, since then, a vigorous effort has been made to investigate the cause of the outbreaks.
- With due consideration for ensuring of food safety and consumers’ confidence, a stepwise approach was taken to solve the problem of importing US beef. Necessary measures supported by scientific basis were taken, and the import procedures were resumed in July 2006.

Situation of Outbreak of Highly Pathogenic Avian Influenza in Japan

Note: The number of birds is that of birds bred in farms, as of March 1, 2007.
(Outbreak in 2004) subtype H5N1
January, Yamaguchi Pref. (approx. 30 thousand birds in one farm)
February, Oita Pref. (14 birds in one farm)
February, March, Kyoto Pref. (approx. 240 thousand birds in two farms)

(Outbreak in 2005) subtype H5N2
June 2005-January 2006, Ibaraki Pref., Saitama Pref. (approx. 5,780 thousand birds in 41 farms)

(Outbreak in 2007) subtype H5N1
(1) Kiyotake-cho, Miyazaki Pref. (approx. 12 thousand birds in one farm)
January 13: Confirmation of event. Compulsive movement restrictions on farms near around the index farm (approx. 190 thousand birds in 16 farms)
February 7: Lift of movement restrictions

(2) Hyuga-shi, Miyazaki Pref. (approx. 53 thousand birds in one farm)
January 25: Confirmation of event. Compulsive movement restrictions on farms near around the index farm (approx. 510 thousand birds in 21 farms)
February 21: Lift of movement restrictions

(3) Takahashi-shi, Okayama Pref. (approx. 12 thousand birds in one farm)
January 29: Confirmation of event. Compulsive movement restrictions on farms near around the index farm (approx. 950 thousand birds in 18 farms)
March 1: Lift of movement restrictions

(4) Shintomi-cho, Miyazaki Pref. (approx. 93 thousand birds in one farm)
February 1: Confirmation of event. Compulsive movement restrictions on farms near around the index farm (approx. 2,880 thousand birds in 97 farms)
March 1: Lift of movement restrictions

Source: Prepared by MAFF
Cases of human HPAI due to direct contact with poultry were found in 12 countries including Indonesia (as of March 31, 2007). In view of the possibility of outbreak of pandemic influenza with strong infectious mobility between humans, the Government of Japan is playing an active role in controlling avian influenza, and is making international collaborations with Asian countries where the continuous infections have occurred.

It has been pointed out that not only the case with the response to HPAI, agriculture is becoming more closely related to issues of environment and health care. In this situation, intense collaboration should be established among relevant organizations.

### Initiatives for Gaining Consumers’ Confidence

- The rate of introduction of a traceability system in foods other than beef has increased up to 40% (FY2005).
- According to the results from the general inspection of fresh foods, the percentage of inappropriate labeling has decreased from 25.3% (FY2003) to 14.8% (FY2005). Continuous efforts should be made to improve food labeling.
- In the food service industry, 70% of restaurants (on a shop basis) have labeled the place of origin of ingredients voluntarily. Some food service providers are willing to label the place of origin if an appropriate system is established. More efforts should be made to promote understanding and dissemination of the guidelines in the food service industry.

### Percentage of Introduction of Traceability System in the Food Industry

<table>
<thead>
<tr>
<th>Year</th>
<th>Food Processors</th>
<th>Food Retailers</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>12.1</td>
<td>25.9</td>
</tr>
<tr>
<td>2004</td>
<td>17.1</td>
<td>34.4</td>
</tr>
<tr>
<td>2005 FY</td>
<td>17.2</td>
<td>37.9</td>
</tr>
<tr>
<td>2003</td>
<td>6.2</td>
<td>13.8</td>
</tr>
<tr>
<td>2004</td>
<td>6.4</td>
<td>17.3</td>
</tr>
<tr>
<td>2005 FY</td>
<td>6.4</td>
<td>20.7</td>
</tr>
<tr>
<td>Partial introduction (limited to certain products)</td>
<td>12.6</td>
<td>11.2</td>
</tr>
<tr>
<td>Total introduction (all foods)</td>
<td>11.2</td>
<td>14.8</td>
</tr>
</tbody>
</table>

Source: “Survey of Trends in the Food Industry,” MAFF

### Transition of Inappropriate Labeling of Fresh Foods (Labeling of names, shop basis)

<table>
<thead>
<tr>
<th>Year</th>
<th>Food Processors</th>
<th>Food Retailers</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>25.3</td>
<td>20.0</td>
</tr>
<tr>
<td>2004</td>
<td>20.0</td>
<td>14.8</td>
</tr>
<tr>
<td>2005 FY</td>
<td>14.8</td>
<td></td>
</tr>
</tbody>
</table>

Source: “Survey of Conditions of Introduction of Quality Indication of Fresh Foods,” MAFF

Note: A survey on the conditions of indication of names and origins was conducted on 32,080 retail stores in 2003, 35,738 retail stores in 2004, and 36,941 retail stores in 2005.
(1) Promotion of “Shokuiku”

- Our dietary habits have been diversified along with the changes in our lifestyles. In recent years, disorder of dietary habits, lack of physical exercise and increasing the consumption of fats like the case of France and the U.S. caused some problems such as the increase in the prevalence of lifestyle related diseases.

![Percentages of Supplied Calorie by Nutrient in Selected Countries](image)

- A half of Japanese males ranging from 40 to 74 years in age are strongly suspected of having metabolic syndrome (visceral fat syndrome) or are candidates for this syndrome. A total of about 19.6 million persons are likely to suffer from metabolic syndrome.
- The problems, such as skipping of breakfast and eating alone without family members has worsened.

![Prevalence of Metabolic Syndrome in Japan (20 years old and over, 2004)](image)

![Persons with whom Children Often Have Dinner (Multiple answers allowed)](image)
“Shokuiku Basic Law” came into enforcement in July, 2005, and the Shokuiku Basic Promotion Program has been enacted in March 2006. In this matter, “Shokuiku” has been promoted as a national movement.

It is necessary to promote the well-balanced ‘Japanese dietary pattern’ featuring rice by utilizing the “Japanese Food Guide Spinning Top,” which described plainly “what to eat” and “how much to eat.”

These activities are expected to contribute toward improving the food self-sufficiency ratio and handing down traditional dietary culture, as well as toward promoting health.

<Case Example: Opening of the Children’s Educational Farm, “Agricultural Elementary School,” for Learning Living Skills>

In April 2005, in collaboration with the local producers, the local government of Suzaka City, Nagano Prefecture opened Toyooka Branch School of Shinshu Suzaka Agricultural Elementary School, so that children could learn both the difficulty and joyful aspects of agriculture, acquire great inner strength and creative ability, and feel gratitude for food.

The local producers, who participate in the program as voluntary agricultural teachers, and the members of the “Staff Committee of Toyooka Branch School, Shinshu Suzaka Agricultural Elementary School” consisted by the board of education are involved in total management of the educational program, including the development of a detailed curriculum. Twice a month, on Saturdays, the participants get together to perform agricultural tasks such as planting rice and vegetables, pulling up weeds, harvesting, and threshing. In this manner, they can experience a series of agricultural tasks throughout the year. The curriculum also includes a program for making contact with local traditional culture and traditional food. This annual program contributes toward promoting intergeneration ties and cooperation between adults and children in the local community, and encourages participants to feel gratitude for food.
(2) Promotion of Local Consumption of Local Produce

• The concept of local consumption of local produce is not only to consume locally produced products in the local community but also to connect production with consumption. The program of local consumption of local produce has been promoted in various local communities because consumers appreciate reasonable prices, appropriate quantities, and remarkable freshness and taste of such products. Further dissemination of this program is expected.

Consumers’ Evaluation and Satisfaction of Local Products

<table>
<thead>
<tr>
<th></th>
<th>Image before purchase</th>
<th>Satisfaction after purchase</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Price</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Good (inexpensive)</td>
<td>8.5</td>
<td>14.5</td>
</tr>
<tr>
<td>Fairly good (fairly inexpensive)</td>
<td>21.7</td>
<td>30.4</td>
</tr>
<tr>
<td>No opinion</td>
<td>32.7</td>
<td>46.9</td>
</tr>
<tr>
<td>Fairly bad (fairly expensive)</td>
<td>33.0</td>
<td>19.9</td>
</tr>
<tr>
<td>Bad (expensive)</td>
<td>4.1</td>
<td>8.0</td>
</tr>
<tr>
<td><strong>Quantity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Image before purchase</td>
<td>3.7</td>
<td>13.1</td>
</tr>
<tr>
<td>Satisfaction after purchase</td>
<td>12.1</td>
<td>22.0</td>
</tr>
<tr>
<td><strong>Taste</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Image before purchase</td>
<td>31.4</td>
<td>26.5</td>
</tr>
<tr>
<td>Satisfaction after purchase</td>
<td>35.3</td>
<td>43.8</td>
</tr>
<tr>
<td><strong>Freshness</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Image before purchase</td>
<td>39.3</td>
<td>52.1</td>
</tr>
<tr>
<td>Satisfaction after purchase</td>
<td>44.7</td>
<td>32.7</td>
</tr>
</tbody>
</table>

Source: “Questionnaire on Awareness of Local Agricultural, Livestock and Fishery Products and Purchase of Such Products” (Published, in February 2004, by The Norinchukin Bank)
Note: The questionnaire survey was conducted on a total of 1,250 persons who prepared meals most frequently at home. (Retrieval rate: 63.3%)

• The initiatives of local consumption of local produce have been promoted around Japan, and 230 million people use 14 thousand direct sales outlets every year. An increasing number of people use guest farmhouses and farmhouse restaurants.

• The initiatives of local consumption of local produce are divided into the following three activities: a “communication activity” to promote understanding of local agricultural products among consumers; a “sales and distribution activity” to distribute local agricultural products within the local community; and an “exchange activity” to promote interaction between producers and consumers. The issues relating to these activities should be handled effectively by taking multiple flexible approaches.

Issues Relating to Local Consumption of Local Produce by Activity

**Communication Activity**
- Providing basic information that directly affects consumer behavior (information about the shops dealing in local products)
- Building up a “visible” relationship with consumers by introducing producers and disclosing the history of cultivation via the Internet

**Sales and Distribution Activity**
- Providing the “opportunity for exchange of information” to harmonize producers’ needs with users’ needs and extend the current business relationship to the actual trade
- Securing of quantities and items of agricultural products (direct sales outlets: 77%)
- Year-round stable securing of raw materials (factories for processing of agricultural products: 35%)
- Difficulty in securing sufficient amounts (school lunches: 64%)

**Exchange Activity**
- Promoting detailed discussion about the measures for securing repeaters and extending staying times by sponsoring attractive events
- Promoting local consumption of local produce along with “Shokuiku” campaign

Source: Prepared by MAFF according to the “Interim Report of Local Consumption of Local Produce Promotion Council” (August 2005), “Local Consumption of Local Produce: Awareness and Intention” (March 2007), and the “2004 Survey of Actual Conditions of Local Consumption of Local Produce” (May 2005) published by MAFF
Note: The information requested by consumers is defined as that which they consider important, and the figure in the parentheses indicates the percentage of the consumers who selected “Consider important” among the following five choices: “Consider important,” “Consider fairly important,” “Not consider so important,” “Not consider important at all,” and “No opinion.”
Section 3 Practice of Japanese Dietary Pattern and Various Initiatives Promoted in the Process from Production to Consumption

- In addition to dissemination of the initiatives of local consumption of local produce among consumers, collaboration among various sectors including producers, educational institutions, local government and consumer groups is indispensable for further promotion of the initiatives.
- Promotion of the initiatives of local consumption of local produce is expected to bring about benefits such as 1) the progress of “Shokuiku” leading to an increase in public awareness of food and the inheritance of local traditional food culture, 2) revitalization of the local community through creating relationships in which consumers and producers are “visible” to each other and can engage in dialog, and 3) improvement of the food self-sufficiency ratio.

Image of Collaboration among Various Sectors in the Initiatives of Local Consumption of Local Produce (Case of school lunches)

Producers and Agricultural cooperatives
Various crops are produced and fresh local agricultural products are provided. The agricultural experience seminar is held.

School luncheon
Local agricultural products and related foodstuffs are provided.

Dieticians and Board of education
The parent-and-child school luncheon is held. A meal is planned so that local agricultural products can be used in cooking.

Family
The importance of local agricultural products is recognized. “Shokuiku” is practically conducted at a family level.

Municipalities
The representatives of producers, agricultural cooperatives and boards of education get together for discussion.

Association involved in the school nutritional program
Information magazines of local agricultural products are published.

Consumer groups
The consumer monitoring and exchange meetings are held.

<Case Example: Program for Baking Bread with 100% Local Wheat for School Lunch>

Obihiro City, Tokachi district, Hokkaido, is one of the most famous wheat-producing areas in Japan. Little local wheat, however, is distributed in the community. In this situation, Obihiro City, the board of education, feeding centers, producers, millers, bakers, and PTAs, examined the possibility of using Tokachi wheat for baking school lunch bread. In FY2003, they provided trial bread containing 50% local wheat for the elementary and junior high schools in the city, and held meetings for the consumers so that they could try the local bread. After repeated improvements, the bakery was able to supply the public schools with 100% Tokachi wheat bread in FY2006. Currently, such bread is supplied to all elementary and junior high schools in the city (a total of 41 schools) 120 times a year. Approximately 80 tons of Tokachi wheat is used to bake bread for 17 thousand people every year. As part of “Shokuiku,” leaflets, which have been prepared to explain Tokachi wheat and the food self-sufficiency ratio in Japan, are distributed to the pupils and students. Through developing the varieties of wheat which can be used for baking bread and adjusting the amount of production and price of such wheat, this program is expected to contribute to the improvement of the food self-sufficiency ratio.
(3) Initiatives on the Food Industry

- The food industry, which accounts for 10% of the gross domestic product (GDP), is an important industry comprising all the food related industrial sectors such as food processors, food distributors, the food service industry, and the material supplying industry, as well as agriculture and fisheries. Although the domestic production of agricultural and fishery products is 12 trillion yen, the final consumption value of food and drink expenditure is as much as 80 trillion yen.
- Appropriate measures are needed to cope with the diversification of consumers’ needs, competition with imported products and reduction in market scale due to falling populations. Further efforts should be made to reduce environmental burdens and utilize resources more effectively.

Flow from Production of Agricultural and Fishery Products for Food to Final Consumption Value of Food and Drink Expenditure (2000)

<table>
<thead>
<tr>
<th>Category</th>
<th>Value</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>For direct consumption</td>
<td>7.8 trillion yen</td>
<td>18.8%</td>
</tr>
<tr>
<td>For processing</td>
<td>2.9 trillion yen</td>
<td>36.5%</td>
</tr>
<tr>
<td>Imports of primary processed foods</td>
<td>0.5 trillion yen</td>
<td>12.4%</td>
</tr>
<tr>
<td>Imports of final products</td>
<td>1.9 trillion yen</td>
<td>47.2%</td>
</tr>
<tr>
<td>For food service industry</td>
<td>1.4 trillion yen</td>
<td>35.4%</td>
</tr>
<tr>
<td>Imports of fresh foods</td>
<td>3.2 trillion yen</td>
<td>40.0%</td>
</tr>
<tr>
<td>Final consumption value of food and drink expenditure</td>
<td>80.3 trillion yen</td>
<td>100%</td>
</tr>
</tbody>
</table>

Exports of primary processed foods 41.5 trillion yen (51.7%)
Final consumption value of food and drink expenditure 80.3 trillion yen (100%)
Food service industry 23.7 trillion yen (29.5%)

Source: Estimated by MAFF according to "Input-Output Tables" (Ministry of Internal Affairs and Communications and nine other ministries and agencies)

<Case Example: Development of Biotechnology for Cultivating Summer and Fall Strawberries and Achievement of Year-round Supply of Strawberries to the Confectionery Makers>

In Higashi Kagura-cho, Hokkaido, a company succeeded in developing a new variety of strawberry whose fruits could be harvested in summer and fall, and in growing the seeds and seedlings by using the tissue culture method. The company sells the seeds and seedlings to contract farmers. A system has been established so that harvested strawberries can be repurchased and sold as fruit for industrial use, to confectionery makers and baking companies.

Generally, summer is a period of short supply of strawberries in Japan. Therefore, most of the strawberries used for confectionery purposes, whose quality and quantity of supply should be consistent throughout the year, are imported from the U.S. in the summer. The Hokkaido-based company assures a stable supply of sweet strawberries loved by the Japanese people even in summer, and successfully takes a 10% share of the market for strawberries for confectionery use.
- Wastage of Food generated by the food industry reached about 11 million tonnes in FY2005. This large figure suggests the difficulty in controlling the generation of wastage of food. The recycling of wastage of food for producing fertilizer and feed has been promoted, and the recycling ratio for the whole food industry increased to 52% in FY2005. Despite this achievement, the recycling ratio differs widely from sector to sector, ranging from 20% to 80%.
- In the future, the amount of generating wastage of food should be effectively controlled, and sectors which make little effort to reduce waste generation should be encouraged to increase the recycling ratio.

![Amount of Generating Wastage of Food and Recycling Ratio](image)

**Source:** “Statistical Survey on Recycling of Circulating Food Resources,” MAFF

**Note:** (Recycling ratio) = (Amount of controlled generation) + (Amount of reuse) + (Amount of reduction) / (Amount of controlled generation) + (Amount of generation) x 100

The “Amount of reuse” is defined as the amount of waste used as raw material for fertilizer, feed, fat & fat products, and methane.

- There are attractive markets in East Asia. Unlike the food industry based in western countries, the Japanese food industry is reluctant to expand into overseas markets. If the food industry continues to depend on the domestic market alone, its management basis may be weakened and the function of stable food supply may not be able to be fulfilled.
- According to the “New Agricultural Administration for the 21st Century-2006,” Japan contribute to the development of East Asia by encouraging the food industry to invest overseas, and promote the “East Asia Food Industry Community Plan” which allows mutual growth.

**Basic Concept of East Asia Food Industry Community Plan**

**Background**
- Attractive markets
- Many problems including poverty

**East Asia**
Includes ASEAN + China, Korea and India

**Common food culture**

**Background**
- Falling population
- Maturation of domestic market

**Japan**
The food industry is to invest overseas while its basis is maintained in Japan.

**The Japanese food industry is to promote its investment in East Asian countries or regions while its basis is maintained in Japan.**

**Aiming at establishing a network that enables dialogue among industry, academic, and government leaders, regarding the ideal coexistence and co-prosperity of the food industry and agriculture, forestry and fisheries in East Asia in the future.**

**Development of Action Plan for East Asia Food Industry Vitalization Strategy, and a practical introduction of the concrete programs formulated according to the plan.**
• The gross farm income of main-business farm households decreased to 5.39 million yen, which indicated a 6.0% decrease compared with the previous year. The income of main-business farm households, which is characterized by a high dependent ratio on agriculture, is easily affected by the change of agricultural income which is vulnerable to climatic damage.

• The debt of main-business farm households is 4.05 million yen. Generally, the debt is to be paid back within a short period (1 year or shorter) and stable money income is needed every year.

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The debt of main-business farm households is 4.05 million yen. Generally, the debt is to be paid back within a short period (1 year or shorter) and stable money income is needed every year.
(2) Trends of Households Engaged in Farming and New Farmers

- The number of farm households is continuously decreasing. The numbers of main-business farm households and semi-business farm households in 2005 have decreased by 40% compared with the figures obtained 10 years before.
- Regarding the number of key agricultural workers, the margin of decrease has been falling since 1995. The percentage of these core persons 65 years old and over has nearly tripled (57%) in 2005, compared with the figure 20 years before (20%).
• Although the number of the new farmers is increasing, of 80 thousand new farmers, those 60 years old and over account for 50%. The number of the young new farmers 39 years old and younger is about 12 thousand.
• Before starting to work as farmers, they save their own money and usually use the financial aid programs. The new farmers try to find their farmlands by themselves, although the percentage of the new farmers who ask the agricultural committees to find suitable farmlands is high.
• It is important to secure a sufficient agricultural labor force with a large variety of skills, and to encourage young people and baby boomers to participate in farming in the future. Detailed support should be provided, from the initial stage to the stage of settlement, for the new farmers who have no previous experience, to facilitate their adaptation to their new environment.

Interannual Changes in Age Distribution of the New Farmers

Source: “Agricultural Structure Census” MAFF
Notes: 1) The new farmers include those whose employment status is changed from “student” to “mainly farming” (those who become farmers immediately after graduation), and those whose employment status is changed from “office worker” to “mainly farming” (those who switch to farming from other professions). [In the latter case, whether they belong to a home business or go back to their hometown for farming (U-turn) is not considered.]
2) The 2005 numerical data were obtained by reclassification counting according to the “Agriculture and Forestry Census” (2005) and the “Agricultural Structure Census” (2006).

How the New Farmers Secured Their Financial Resources and Farm Lands

Source: “Survey on the Newly Engaged in Agriculture, Forestry and Fisheries” (published by MAFF in February 2004).
Notes: 1) A questionnaire survey was conducted on the new farmers during the period from June 2002 to May 2003 (total responses: 3,625). Of these respondents, 402 persons who were classified as those responsible for management of or members of newly established sectors were selected as subjects.
2) “The new farmers” are defined as those who had no experience of farming, those who had experience of farming in the form of a side-business, and those who were not regularly employed. They are supposed to have started participating in farming to gain a regular income for one year prior to the survey, and work on a regular basis. Their ages ranged from 15 to 64 years at the time of the survey.
(3) Promotion of Participation of Female Farmers

- Female farmers, who account for 45.8% of the key agricultural farmers, play an important role in agriculture. The proportion of female farmers among the certified farmers and the members of the agriculture committees is still low.
- A Family Business Agreement defines the roles and working conditions of family members in farm management. Half of the agreements are applied to the responsible persons of farm management and the relationship between husband and wife as partners of farming.
- Most of the defined contents are related to farm management and the improvement of the working environment. Each farmer is expected to fully understand the contents of the Family Business Agreement, and its necessity should be carefully considered.
- The female farmers who receive salaries account for 50%. Their roles should be appropriately evaluated to promote their participation.

### Number of Certified Female Farmers

<table>
<thead>
<tr>
<th>Number of key agricultural workers (1,000 persons)</th>
<th>Number of certified farmers (persons)</th>
<th>Number of members of the agriculture committees (persons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of female key agricultural workers (1,000 persons, %)</td>
<td>Number of certified female farmers (persons, %)</td>
<td>Number of female members of the agriculture committees (persons, %)</td>
</tr>
<tr>
<td>2,241</td>
<td>1,027 (45.8)</td>
<td>200,842</td>
</tr>
</tbody>
</table>

Source: "Agricultural and Forestry Census" MAFF. Investigated by MAFF.
Notes: 1) The data on certified farmers were obtained in 2006 and the remaining data were obtained in 2005. 2) The number of "certified female farmers" includes females who independently applied for the plan for improving agricultural management and couples who submitted joint applications.


- Determination of the policies of farming management: 85.8%
- Working hours and holidays: 84.3%
- Division of farming roles (division of tasks, bookkeeping): 73.4%
- Reward for labor (daily pay, monthly pay): 69.4%
- Distribution of profit (distribution of profit other than daily or monthly pay): 46.3%
- Division of roles in daily life (housekeeping, social interaction): 42.8%
- Management transfer (inheritance included): 40.9%
- Occupational health, health management: 34.2%
- Division of agricultural roles [related industrial and commercial activities (processing, sales) included]: 22.5%
- Participation in social and community activities: 20.6%
- Taking care of retired parents (housing, living, caring): 15.0%
- Distribution of nursing roles: 7.5%
- Succession of property: 7.2%
- Others: 38.9%

Source: Investigated by MAFF.
Note: Numerical data as of the end of March 2006.

### Awareness of Family Business Agreement

A Family Business Agreement should be worked out although there may be some problems to be solved. Because family members can discuss various issues, working out a Family Business Agreement is not necessary. The details of the Family Business Agreement are unfamiliar because of lack of sufficient knowledge. No specific comment on the Family Business Agreement.

<table>
<thead>
<tr>
<th>Total respondents (males + females)</th>
<th>Male respondents</th>
<th>Female respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>More farmers should be encouraged to work out a Family Business Agreement.</td>
<td>10.5</td>
<td>10.1</td>
</tr>
<tr>
<td>If effort is needed to solve the problems, working out a Family Business Agreement is not necessary.</td>
<td>4.5</td>
<td>4.9</td>
</tr>
<tr>
<td>The details of the Family Business Agreement are unfamiliar because of lack of sufficient knowledge.</td>
<td>37.9</td>
<td>41.0</td>
</tr>
<tr>
<td>No specific comment on the Family Business Agreement.</td>
<td>17.3</td>
<td>14.2</td>
</tr>
<tr>
<td>Others</td>
<td>0.5</td>
<td>0.5</td>
</tr>
</tbody>
</table>

Note: The survey was conducted on 3,000 female farmers around Japan and their 3000 spouses [retrieval rate: 50.3% (females), 50.0% (males)].
(4) Trends of Foreign Workers in Agriculture

- The number of foreigners working in Japan has been increasing and reached about 610 thousand in 2005.
- The foreigners who acquire technologies, skills and knowledge under the Training and Technical Internship Programs, which have the purpose of development of human resources in developing countries, are allowed to receive two year’s technical internship, as long as they complete the initial one year training course and satisfy the specified conditions.
- The number of new foreign trainees is increasing, and about 83 thousand foreigners came to Japan to receive technical training in 2005.
- In 2005, the number of foreign trainees in agriculture increased rapidly to about 6,600. This figure is 1.9 times as large as that obtained in 2001. The number of foreign technical interns is also increasing. Although trainees and technical interns are not to be accepted as basic labor, they are liable to be expected as labor force, against the purpose of the Programs.
- An improvement of the system for accepting the foreign trainees based on the actual state of agriculture, an understanding and an appropriate management of the Program on the side of the accepting organizations are of prime importance.

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### Number of Foreign Workers (2005)

<table>
<thead>
<tr>
<th>Category</th>
<th>Foreigners (persons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foreigners who visited Japan for work (Professional or technical fields)</td>
<td>About 180 thousand</td>
</tr>
<tr>
<td>Foreigners of Japanese descent, spouse or child of Japanese National, etc.</td>
<td>About 240 thousand</td>
</tr>
<tr>
<td>Part-timers (engage in an activity other than those permitted)</td>
<td>About 100 thousand</td>
</tr>
<tr>
<td>Technical Interns, working holiday travelers, etc. (Designated activities)</td>
<td>About 85 thousand</td>
</tr>
<tr>
<td>Total</td>
<td>About 610 thousand</td>
</tr>
</tbody>
</table>

(Reference) Illegal overstayers: about 190 thousand


---

### Framework of the Training and Technical Internship Programs for foreigners

1. **Entrance**
2. **On-the-job training**
3. **Technical internship training under the employment relationship**
4. **Off-the-job training**
5. **Technical internship training**
6. **Three years (maximum training period)**
7. **Returning home**

---

### Transition of the Numbers of Trainees in the Agriculture and Food Processing Fields

<table>
<thead>
<tr>
<th>Year</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trainees in the agricultural field</td>
<td>3,516</td>
<td>4,645</td>
<td>4,280</td>
<td>5,980</td>
<td>6,606</td>
</tr>
<tr>
<td>Trainees who applied for transition to technical interns</td>
<td>510</td>
<td>849</td>
<td>1,155</td>
<td>1,837</td>
<td>2,758</td>
</tr>
<tr>
<td>Trainees in the food processing field</td>
<td>4,963</td>
<td>7,060</td>
<td>6,611</td>
<td>8,322</td>
<td>10,048</td>
</tr>
<tr>
<td>Trainees who applied for transition to technical interns</td>
<td>2,202</td>
<td>2,596</td>
<td>3,134</td>
<td>4,158</td>
<td>4,844</td>
</tr>
</tbody>
</table>

Source: Investigated by MAFF and Japan International Training Cooperation Organization

Note: Trainees include those who are not engaged in On-the-job training.
Section 2 Initiatives to Foster and Secure Principal Farmers

(1) Trends of Principal Farmers

- The number of certified farmers is increasing and the number of management bodies reached about 220 thousand as of the end of December 2006. According to the farming type classification, the total percentage of quasi-monoculture mixed farming and mixed farming has been increasing.
- Regarding farm households without certified farmers, the area of cultivated land under management and the number of farm households are decreasing. In the case of farm households with certified farmers, these figures are increasing, which suggests the progress of concentration of management resources.
- The number of village farming collectives, which remained roughly flat from 2000 to 2005, increased by about 2 thousand, up to about 12 thousand for the period from 2005 to 2007. The establishment of village farming collectives has contributed to an increase in income and a reduction in working hours.

Transition of the Number of Certified Farmers and the Composition Ratio According to Farming Type

Trends of the Cultivated Land under Management and the Number of Farm Households According to the Presence or Absence of Certified Farmers

Comparison of Agricultural Income per Farm Household (2005, paddy field farming)
In the case of rice single-crop farming, the break-even point ratio (which is the index indicating the profitability and stability of farming management, a lower ratio representing excellent profitability and stability) decreases with the increase in the farming scale. The large scale farming group makes more profits more efficiently.

Dynamics of Farm Households with 5.0 ha of Farmland or More (1990-2005, excluded the data of Hokkaido)

- Source: "Agriculture and Forestry Census" MAFF
- Note: The numbers of households newly included or excluded from the groups during the period from 2000 to 2005 were approximate values

- In the case of rice single-crop farming, the break-even point ratio (which is the index indicating the profitability and stability of farming management, a lower ratio representing excellent profitability and stability) decreases with the increase in the farming scale. The large scale farming group makes more profits more efficiently.

Break-even Point Ratio of Rice Single-crop Farming
(Data Based on the Scale of Total Planted Area of Paddy Fields)
(2005, excluded the data of Hokkaido)

- Source: Estimated according to "Statistical Survey of Farming Management (Management Statistics by Farming Type, Statistics of Cost of Production of Farm Products)" (MAFF)
- Note: The numerical data derived from the rice single-crop farming were used for estimation.
(2) Trend of Abandoned Cultivated Land and Promotion of Concentration of Farmland Use by the Principal Farmers

- The cultivated land area was 4,670 thousand ha in 2006, which indicated a continuously decreasing tendency. The abandoned cultivated land area was 386 thousand ha in 2005, or 5.7 times the size of Lake Biwa, and accounted for 8% of the cultivated land area. According to the classification of farm households, the percentages of non-farm households having cultivated land and noncommercial farm households have increased.
- The projects for utilizing abandoned cultivated land have been promoted by encouraging companies to participate in agriculture and improving the infrastructure.
- Acceleration of the concentration of farmland towards the principal farmers should be promoted. Superior farmland should be secured and the generation of abandoned cultivated land should be prevented. In order to solve these problems, more study is needed to revise the farmland policies.

Transition of the Percentages of Abandoned Cultivated Land Area by Farm Household Type

<table>
<thead>
<tr>
<th>Year</th>
<th>Non-farm households having cultivated land</th>
<th>Noncommercial farm households</th>
<th>Commercial farm households</th>
</tr>
</thead>
<tbody>
<tr>
<td>1995</td>
<td>33.8%</td>
<td>17.0%</td>
<td>49.3%</td>
</tr>
<tr>
<td>2000</td>
<td>38.7%</td>
<td>16.2%</td>
<td>45.0%</td>
</tr>
<tr>
<td>2005</td>
<td>42.1%</td>
<td>20.5%</td>
<td>37.4%</td>
</tr>
</tbody>
</table>

Transition of the Cultivated Land Area to Be Cultivated and the Abandoned Cultivated Land Area by Farm Household Type (Nationwide data)

<table>
<thead>
<tr>
<th>Year</th>
<th>Non-farm households having cultivated land</th>
<th>Noncommercial farm households</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>28.3%</td>
<td>57.3%</td>
</tr>
<tr>
<td>2005</td>
<td>23.7%</td>
<td>44.7%</td>
</tr>
</tbody>
</table>

There is an increasing tendency of concentration of farmland towards the principal farmers, which is characterized by the fact that the percentage of land-use right creation exceeds that of land transfer. This tendency should be further accelerated.

As of March 2007, two hundred and six corporations from non-agricultural sectors have started to engage in agriculture. They rent a total of 596 ha of farmland, which contributed to promotion of the utilization of abandoned cultivated land and prevention of the abandonment of cultivated land. The farmland that satisfies the companies’ demands should be secured and provided. In this manner, more companies are encouraged to participate in agriculture.

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Area of the Farmland Rented by New Agricultural Corporations Originally Established in Non-agricultural Sectors and Their Future Intentions

Note: The survey was conducted on the 156 agricultural corporations that were participating in agriculture as of March 1, 2006 (retrieval rate: 85.9%).
Programs of Direct Payment for Land-extensive Farming

- The farmers who were to sow wheat and barley in fall, from September to November 2006, were asked to apply for participation in this project so that the introduction of the project could be in time for the harvesting of the crops in 2007. A total of 27,700 management bodies applied for participation. Even at the time of application in fall 2006, the planned planted area reached 243,885 ha, which accounted for 90% of the planted area of four types of wheat and barley in 2006.
- Each region promotes to organize village farming collectives so that the Direct Payment for Land-extensive Farming can be introduced smoothly.

Key Points of Direct Payment for Land-extensive Farming

- Uniform measures for all farmers
  - Limited to principal farmers with motivation and ability
    - Limited to farmers and corporations that are certified by municipalities as having motivation and ability (certified farmers) and village farming collectives that satisfy certain conditions, with the following minimum farming scale:
      1. Certified farmers: 4 ha or more (in Hokkaido: 10 ha or more)
      2. Village farming collectives: 20 ha or more
      (Special treatments in terms of the minimum farming scale are applied to farmlands in mountainous regions and mixed farming businesses with disadvantageous conditions.)
  - The designated farmland is to be utilized for farming and the environmental standards defined by the Government are to be followed.

- Content of support
  - Integration of policies by shifting the product based price policies to the policies focusing on farming business as a whole
    - The following compensation payment schemes are implemented.
      1. Compensation to correct disparity in production conditions compared to other countries (Production Conditions Disparity Correction Measures)
        - Targeted commodities: Wheat and barley, soybeans, sugar beet, starch potatoes
      2. Compensation to mitigate the impact of income decrease (Income Decrease Mitigation Measures)
        - Targeted commodities: Rice, wheat and barley, soybeans, sugar beet, starch potatoes

- Effects of policy shift
  - Accelerating structural reforms of agriculture, resulting in strengthening international competitiveness also strengthened as a result
  - Manifesting farmers’ ideas and creativity and promoting production in line with consumer needs
  - Establishment of policy system that is based on the concept of “measures in Green Box,” specified by the WTO agreement, and can bear the relevant international disciplines

<Case Example: An Agricultural Producer’s Co-operative Corporation Established by All the Six Communities of Former Villages to Introduce Direct Payment for Land-extensive Farming>

In the northeast region of Kakogawa City, Hyogo Pref., farming associations were organized, in each rural community, to promote the shared use of farm machinery. The six rural communities, which have faced the problems of aging populations and the lack of principal farmers, have decided to promote the sustainable development of local farming and the improvement of management efficiency. Under the expert supervision of the local extension office, the farming associations were integrated into a single agricultural producer’s co-operative corporation. About one third of all the paddy fields in the village were concentrated in the corporation and various crops including rice, barley and soybeans are cultivated in about 100 ha of farmland. The three operators control the farming system and the operational efficiency of farm machinery has been remarkably improved. The cooperation runs farm restaurants and food-processing factories where boxed meals are cooked and Japanese and western cakes and cookie are baked. Moreover, various projects have been promoted by the corporation. For example, young people who completed the operator training program are given the opportunity of employment in the corporation.

The Direct Payment for Land-extensive Farming has been introduced in this corporation. In the future, the corporation is expected to promote programs for the improvement of the safety of farming and the innovation of farming technology, and overcome the problem of labor shortage resulting from the expansion of the contract area.

Source: Prepared by MAFF


(4) Rice Policy Reform, Production of Main Crops, and Related Policies

- From a viewpoint of consumers- and market-orientation, the desirable rice farming should be realized by FY2010 through the promotion of rice farming that responds to consumer demand.
- A new supply-demand adjustment system led by farmers and farmers’ organizations is to be adopted so that it can be applied to the rice to be harvested in 2007.
- In the future, principal farmers should be fostered and secured and the appropriate programs for adjustment of production should be introduced quickly. Furthermore, in consideration of the needs of food service industry and home-meal replacement industry, rice production that responds to consumer demand should be promoted. From a perspective of improving the food self-sufficiency ratio, it is important to promote the initiatives on increasing rice consumption through the promotion of “Shokuiku.”
- Review of the wheat and barley policy should be promoted steadily. Wheat and barley should be produced in line with demand by improving productivity and quality.
- Constant production of soybeans should be assured, and the production cost should be reduced. For these purposes, new varieties should be introduced and stable supply and demand relationship should be established between producers and actual users. In this manner, the production areas are expected to be reformed.

Promotion of Rice Policy Reform

<table>
<thead>
<tr>
<th>Before reform</th>
<th>Stage 1 (Rice harvested in 2004-2006)</th>
<th>Stage 2 (Rice to be harvested in 2007-2009)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uniform production adjustment by the Government (Crop diversion)</td>
<td>Switched to a system for distribution of the amount of production based on the sales performance</td>
<td>Shift to the new system</td>
</tr>
<tr>
<td>Obscure image of principal farmers in the community</td>
<td>Clarification of the principal farmers in the community by formulating the Future Vision of Paddy Field Farming for Local Areas</td>
<td>Foster clarified principal farmers</td>
</tr>
</tbody>
</table>
| Uniform conditions and unit prices throughout Japan | • Making the best use of inventiveness by local communities  
• Management of surplus rice resulting from abundant harvest  
[A short term loan program for surplus rice]  
[Preventing the decline in rice price  
[Rice Farming Income Stabilization Programs]  
[Measures for Business Stability of Principal Farmers] | Measures compatible with the Direct Payment for Land-extensive Farming |

Source: Prepared by MAFF

Transition and Detail of the Demand for Rice as Staple Food

<table>
<thead>
<tr>
<th>Unit: 10 thousand tonnes</th>
</tr>
</thead>
<tbody>
<tr>
<td>971</td>
</tr>
<tr>
<td>924</td>
</tr>
<tr>
<td>912</td>
</tr>
<tr>
<td>838</td>
</tr>
</tbody>
</table>

Source: Estimated by MAFF according to “Household Survey” (Ministry of Internal Affairs and Communications), “Food Balance Sheet” and “Survey of the Amount of Rice in Hand of Producers” (MAFF)

Notes: 1) The amount demanded is the net food supply (for staple food) expressed in terms of brown rice.
2) Household consumption is calculated by multiplying the purchase per member of family consisting of more than two persons (agriculture, forestry and fishery households excluded) which is expressed in terms of brown rice by total population.
3) Voluntary transfer is the amount of rice given by farmers to their relatives.
4) Consumption by food service industry and home-meal replacement industry is obtained by subtracting the total of household consumption, farmers’ consumption and voluntary transfer from the amount demanded. Rice used for processing is included in this category.
New measures for vegetable farming are introduced to assure and stabilize principal farmers’ income. For example, appropriate implementation of contract transaction and adjustment of supply and demand is promoted. Furthermore, a system for encouraging the programs for fostering and securing principal farmers is to be introduced into the price stabilization policy. The new system is to be applied to crops to be harvested in 2007.

The conventional policy of stabilization measures for fruit farm management is replaced by a new fruit farming measure. The fruit farming areas and principal farmers are advised to develop the “Structural Reform Program in Fruit Producing Area” and to make efforts to introduce positive measures such as diversion to superior crops. The Government supports such fruit farming areas and principal farmers by introducing the support measures for fruit farm management. The new support system is to be applied to crops to be harvested in 2007.

In consideration of the purposes and efficacy of previous measures for the stabilization of livestock farming, the farmers eligible for support under the measure for stabilization of beef cattle fattening operations, and the fund for stabilization of local hog production, are to be reviewed. Priority consideration is to be given to the certified farmers.

In order to facilitate the transition to the new system in FY2007, the number of certified farmers is to be increased, and the operation level of the farmers who are regarded as semi-certified farmers is to be improved. The principal farmers are expected to establish a production structure that enables production according to consumers’ needs as well as the development of profitable livestock farming.

### Outline of New Measures for Vegetables Farming

- **Assurance of income of principal farmers depending heavily on agricultural income**
- **Promotion of contract transaction**
- **Appropriate implementation of adjustment of supply and demand**
- **Creation of production areas with strong physique by principal farmers**
  - Replanting and grafting of superior items and varieties, closure of disadvantageous fruit farms
  - Improvement of small scale farms (construction of farm path, reducing slope inclines, improvement of soil layers)

### Outline of New Measures for Fruit Farming

- Replanting Mandarin orange, apple (dwarfing included), other fruit trees
- Grafting Mandarin orange, apple, other fruit trees
- Closure of disadvantageous fruit farms
- Improvement of small scale farms (construction of farm path, reducing slope inclines, improvement of soil layers)

### Reviewing Farmers Eligible for Support under the Measure for Stabilization of Livestock Farming

#### System for Offering Subsidies to Manufacturing Milk Producers

- **Producers participating in planned production**
  - **Purpose**: To realize reproduction of manufacturing milk and promote stabilization of production and supply and demand of raw milk.
  - **Effect**: Because the farmers are limited to those participating in the planned production program, planned production can be implemented in a strict manner, and the stabilization of the supply and demand for all raw milk can be promoted.

#### System for Offering Subsidies to Veal Cattle Producers

- **Producers of veal cattle**
  - **Purpose**: To introduce as a compensatory measure for beef liberalization. To enable farmers involved in breeding operations to assure cattle reproduction and to promote the stabilization of beef cattle production.
  - **Effect**: According to the system of beef cattle production in Japan, the farmers involved in fattening operations fasten and ship the breeding cattle produced by the farmers involved in breeding operations. In this situation, the system is applied to many veal cattle producers, and the stabilization of beef cattle production can be promoted.

#### Project for Stabilization of Beef Cattle Fattening Operations

- **Purpose**: In the event of a decline in the price of beef, dressed carcasses and pork, compensation is paid to the producers so that fattening operations and hog raising operations can be stabilized. Remarkable progress of reform of structure of fattening operations and hog raising operations can be expected.

### Projects

- **Project for Establishment of Fund for Stabilization of Local Hog Production**

Source: Prepared by MAFF
In order to strengthen the agricultural physique, problems related to the process from food production to food distribution should be solved, and the food supply cost should be reduced. According to “New Agricultural Administration for the 21st Century -2006” the food supply cost is to be reduced by 20% within five years. In order to achieve this target reduction, various programs formulated in line with the “Action Plan for the Reduction of Food Supply Cost” (established in September 2006) should be promoted steadily.

- Promotion of reform of economic projects by agricultural cooperatives leading to reduction of production cost and distribution cost
- Promotion of shipment and distribution of products which meet the standards reflecting the needs of the various sectors, such as distributors of fresh products, processors and the food service industry.
- Strengthening the collaborations between the food industry and agriculture

In the case of paddy field farming and the outdoor culture of vegetables, such as cabbages, the agricultural production costs consist of costs of production materials, such as fertilizers, agricultural chemicals, and farm machinery (20-30%) and labor costs (30-50%). The retail price of fresh food consists of the cost of collection and shipment, the wholesale cost, and the retail cost. The proportion of such distribution costs to the retail price is 30% in the case of rice and 50% in the case of cabbage.
According to the action plan, the supply and efficient use of inexpensive materials are promoted, so that the production cost can be reduced. More efforts are to be made to enlarge the management scale and introduce new production technology and varieties.

In order to reduce distribution costs, the wholesale market, where 60-70% of vegetables, fruits and fishery products are handled, should be reformed, and the efficiency of overall commodity distribution should be improved.

In accordance with the improvement plan, the National Federation of Agricultural Cooperative Association has been promoting the fundamental reform of the economic projects. As a part of the action plan, MAFF continuously monitors the progress of the improvement plan as well as providing advice and instruction.

**Concrete Programs for Cost Reduction**

- **Increasing Supply of Inexpensive Materials**
  - High-analysis compound fertilizers containing nitrogen (N), phosphate (P) and potash (K) (total content of the three substances is 30% and more) are imported from foreign countries, including Jordan. (The price of imported chemical fertilizer is 25% lower than that of the same domestic fertilizer.)

  Source: Investigated by National Federation of Agricultural Co-operative Associations

  Note: The penetration rate was defined as the proportion of the chemical fertilizers imported from Jordan (fertilizers as raw materials excluded) to all the high-analysis compound fertilizers handled by National Federation of Agricultural Co-operative Associations [limited to the three basic components (N, P, K)].

- **Import of high-analysis compound fertilizers**
  - Transition of penetration of imported high-analysis compound fertilizers

<table>
<thead>
<tr>
<th>Year</th>
<th>2000</th>
<th>2004</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amount (tonne)</td>
<td>88,158</td>
<td>103,401</td>
</tr>
<tr>
<td>Penetration rate (%)</td>
<td>23</td>
<td>36</td>
</tr>
</tbody>
</table>

  Source: Investigated by National Federation of Agricultural Co-operative Associations

- **Agricultural chemicals in large packages**
  - Purchasing agricultural chemicals in the large packages contributes to a reduction in the costs involved in repackaging into smaller sizes. In this manner, agricultural chemicals are available at lower costs. (The price of the product in large packages is 3-38% lower than that of the standard product.)

  Source: Investigated by National Federation of Agricultural Co-operative Associations

- **Prices of agricultural chemicals in large packages (examples)**

<table>
<thead>
<tr>
<th>Purposes</th>
<th>Standard agricultural chemicals (A)</th>
<th>Agricultural chemicals in large packages (B)</th>
<th>Price difference (A-B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Herbicides for paddy field farming</td>
<td>1kg (10ares)</td>
<td>10kg</td>
<td>-5%</td>
</tr>
<tr>
<td>Pesticides for horticulture</td>
<td>5kg (2-10ares)</td>
<td>5kg</td>
<td>-10%</td>
</tr>
<tr>
<td>Foliage applied herbicides</td>
<td>500cc (5-20ares)</td>
<td>20kg</td>
<td>-38%</td>
</tr>
</tbody>
</table>

  Source: Investigated by National Federation of Agricultural Co-operative Associations

- **Inexpensive supportive farm machinery**
  - Compared with the price of the conventional machinery, that of special farm machinery with the same basic performance but limited functions is lower by about 10%.

  Source: Investigated by MAFF

  Note: Prices are the manufacturer’s suggested retail prices (tax included).

- **Comparison between the inexpensive supportive farm machinery and the conventional farm machinery with respect to price and main specifications (example; tractor for paddy field)**

<table>
<thead>
<tr>
<th>Specifications (example)</th>
<th>Inexpensive supportive farm machinery</th>
<th>Conventional farm machinery</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price</td>
<td>2.58 million yen</td>
<td>2.93 million yen</td>
</tr>
<tr>
<td>Use</td>
<td>Limited to the rotary work in paddy fields</td>
<td>For use in the paddy and dry field farming</td>
</tr>
<tr>
<td>Shift transmission</td>
<td>12 speeds (forward and backward each)</td>
<td>16 speeds (forward and backward each)</td>
</tr>
<tr>
<td>Weight</td>
<td>965kg</td>
<td>1,300kg</td>
</tr>
</tbody>
</table>

  Source: Investigated by MAFF

- **Change in the Work Hours Involved in the Process of Distribution of Vegetables and Fruits in the Wholesale Market**

  Source: Investigated by MAFF

- **Progress of the Improvement Plan Formulated by the National Federation of Agricultural Co-operative Associations (The main programs for cost reduction, as of the end of December 2006)**

  - Reduction in production material cost of 1.8 billion yen
    - Containers for rice and wheat, carton cases, farm machinery: 0.76 billion yen (since April 2006)
    - Fertilizers: 0.51 billion yen (since July 2006)
    - Agricultural chemicals: 0.54 billion yen (since December 2006)

  Source: Prepared by MAFF according to “Progress of Reform of the National Federation of Agricultural Co-operative Associations,” and “Progress of Reform of the National Federation of Agricultural Co-operative Associations (Point Reached One Year after Formulation of “Improvement Plan” and Future Problems) (Overview Version)” (published by the National Federation of Agricultural Co-operative Associations in January 2007)
Section 4 Various Programs for Developing of New Frontiers

(1) Initiatives for Improvement of Added Value and Creation, Protection and Utilization of Intellectual Property

A. Initiatives for Enhancing Added Value

- Aiming at strengthening competitiveness, Japanese farmers consider the needs of consumers who prefer high-quality agricultural products, and attempt to heighten added value by utilizing sophisticated cultivation technology.
- Japanese consumers attach importance to the safety of food. Accordingly, the producers are expected to satisfy such consumers’ needs.

Example of High-quality Agricultural Products

<table>
<thead>
<tr>
<th>Product</th>
<th>Importance Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measurement of protein content using satellite images and appropriate adjustment of timing of harvesting (rice)</td>
<td>Important</td>
</tr>
<tr>
<td>Giving feed in accordance with the fattening stage and managing the fattening process with a focus on marbling (Japanese beef cattle)</td>
<td>Not so important</td>
</tr>
<tr>
<td>Strict control of watering, fertilizer application and temperature by using glass greenhouses and isolated bed cultivation (greenhouse melons)</td>
<td>Not important</td>
</tr>
</tbody>
</table>

New Business Attracting Farmers’ Attention and the Support Services They Intend to Use

- In order to stabilize agricultural management and strengthen competitiveness, more efforts should be directed to production, processing, distribution and the provision of service in restaurants, and the diversification of agriculture through the encouragement of new business should be promoted.
- Sufficient support should be provided to improve not only facilities and equipment but also “soft” aspects such as tax practices and financial management, advertising and marketing, so that diversification of agriculture through the encouragement of new business can be promoted. Taking such an approach has contributed to the revitalization of local economies. For example, several groups of neighboring farmers have collaborated to integrate the various secondary and tertiary industry businesses into the conventional agricultural businesses in order to promote the sextic industrialization of their agricultural activities.
B. Initiatives for the Creation, Protection and Utilization of Intellectual Property

- In Japan, the products of agriculture, forestry and fisheries and food depend on important intellectual property, including technology and cultural items. Such intellectual property should be created and utilized while being protected in an appropriate manner. By taking such an approach, we should be able to enhance our international competitiveness.
- We formulated the “Strategy for the Assurance of Intellectual Property (the Ministry of Agriculture, Forestry and Fisheries)” in March 2007. This strategy is expected to contribute to the promotion of programs for the creation, protection and utilization of intellectual property in a strategic and comprehensive manner.

**Strategic Creation, Protection, and Utilization of Intellectual Property**

- **Promotion of Creation of Intellectual Property**
  - Enhancement of advanced research and development, such as genome and nanotechnology studies, leading to the creation of new intellectual property
  - Promotion of acquisition of rights by giving support to the facilitation of patent filings in Japan and in foreign countries
  - Establishment of a database and an information system that enable the acceleration of research and development

- **Enhancement of Protection of Intellectual Property**
  - Expedited registration of varieties
  - Development of DNA based variety discrimination technology
  - Enhancement of the activities of the investigators for protection of varieties
  - Protection of Japanese beef cattle genetic resources

- **Promotion of Utilization of Intellectual Property**
  - Creation of new demand and new industry by utilizing intellectual property
  - Establishment of local brands by utilizing the trade names of local communities

- **Encouraging Asian countries to establish and enhance the system for the protection of intellectual property**

- **Dissemination of Japanese food culture**
  - Promotion of export of “Japanese brand”

Source: Prepared by MAFF

- Cases of violation of Japanese growers’ rights have been reported. For example, seedlings were illegally brought into Asian countries, and the harvest was illegally imported into Japan. The applicable laws and regulations have been revised to tighten controls, and farmers have been encouraged to acquire their rights as growers in Japan and foreign countries. In this manner, efforts have been made to prevent violation of their rights.

**Establishment of the Legal Structure for New Varieties of Plants and Cases of Violation of Growers’ Rights**

<table>
<thead>
<tr>
<th>Year</th>
<th>Establishment of legal structure</th>
<th>Field crops</th>
<th>Summary of events</th>
<th>Countermeasures</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>Promulgation of Revised Seedlings Act (The scope of growers' rights was expanded so that processed goods could be covered. The term of grower's rights was also extended.)</td>
<td>“Azuki” red beans “Kitanootome,” “Shunari”</td>
<td>Seedingd were illegally taken into China. The harvest was imported for sale in Japan.</td>
<td>The company involved was warned by the Hokkaido Government and voluntarily refrained from importing the harvest from China.</td>
</tr>
<tr>
<td>2005</td>
<td>Promulgation of Revised Seedlings Act (The scope of growers' rights was expanded so that processed goods could be covered. The term of grower's rights was also extended.)</td>
<td>Igusa (rush) “Hinomidori”</td>
<td>The harvest was illegally imported from China.</td>
<td>Nagasaki Customs Service detected the illegally imported harvest and exposed the case. The illegal importer was fined for the offense.</td>
</tr>
<tr>
<td>2006</td>
<td>Promulgation of Revised Seedlings Act (The scope of growers' rights was expanded so that processed goods could be covered. The term of grower's rights was also extended.)</td>
<td>Carnation Four varieties including “Light Pink Barbra”</td>
<td>The seedlings were brought to China for cultivation and growth without notice. The harvest was illegally imported for sale.</td>
<td>Yamagata Government filed a criminal complaint against the Australian farmer concerned.</td>
</tr>
</tbody>
</table>

Source: Investigated by MAFF
Section 4 Various Programs for Developing of New Frontiers

- Utilization of biomass has developed new fields of agriculture, forestry and fisheries. Its use, which is a project beyond the conventional concept of food production, has contributed not only to the reduction of global warming and the creation of a recyle-oriented society, but also to food security through utilization of abandoned cultivated land.
- Since the formulation of the “Biomass NIPPON Strategy” in December 2002, the rate of utilization of waste related biomass has been steadily increasing. However, the rate of utilization of un-used biomass has been improved by only 1%, and few crops for resources have been utilized.

<table>
<thead>
<tr>
<th>Generation of Biomass from Main Sources and Trends of Utilization Rates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excretion from livestock</td>
</tr>
<tr>
<td>2002: 9,100</td>
</tr>
<tr>
<td>2006: 8,700</td>
</tr>
<tr>
<td>2006: 80</td>
</tr>
<tr>
<td>Utilization as compost</td>
</tr>
<tr>
<td>2006: 90</td>
</tr>
<tr>
<td>Food waste</td>
</tr>
<tr>
<td>2002: 1,900</td>
</tr>
<tr>
<td>2006: 2,000</td>
</tr>
<tr>
<td>2006: 10</td>
</tr>
<tr>
<td>Utilization as fertilizers and feed</td>
</tr>
<tr>
<td>2006: 20</td>
</tr>
<tr>
<td>Residual wood derived from sawmills</td>
</tr>
<tr>
<td>2002: 610</td>
</tr>
<tr>
<td>2006: 430</td>
</tr>
<tr>
<td>2006: 90</td>
</tr>
<tr>
<td>Utilization as energy and compost</td>
</tr>
<tr>
<td>2006: 95</td>
</tr>
<tr>
<td>Wood derived from construction</td>
</tr>
<tr>
<td>2002: 480</td>
</tr>
<tr>
<td>2006: 470</td>
</tr>
<tr>
<td>2006: 40</td>
</tr>
<tr>
<td>Utilization as a raw material for paper manufacturing and litter</td>
</tr>
<tr>
<td>2005: 70</td>
</tr>
<tr>
<td>2005: 70</td>
</tr>
<tr>
<td>2005: 60</td>
</tr>
<tr>
<td>Utilization as building materials and compost</td>
</tr>
<tr>
<td>2005: 70</td>
</tr>
<tr>
<td>Sewage sludge</td>
</tr>
<tr>
<td>2002: 7,600</td>
</tr>
<tr>
<td>2006: 7,500</td>
</tr>
<tr>
<td>2006: 60</td>
</tr>
<tr>
<td>Utilization as a raw material for paper manufacturing</td>
</tr>
<tr>
<td>2006: 70</td>
</tr>
<tr>
<td>Logging residue</td>
</tr>
<tr>
<td>2002: 390</td>
</tr>
<tr>
<td>2006: 340</td>
</tr>
<tr>
<td>2006: 2</td>
</tr>
<tr>
<td>Utilization as a raw material for paper manufacturing</td>
</tr>
<tr>
<td>2006: 2</td>
</tr>
<tr>
<td>Non-edible parts of crops</td>
</tr>
<tr>
<td>2002: 1,300</td>
</tr>
<tr>
<td>2006: 1,400</td>
</tr>
<tr>
<td>2006: 30</td>
</tr>
<tr>
<td>Utilization as fertilizers, feed and litter</td>
</tr>
<tr>
<td>2006: 30</td>
</tr>
</tbody>
</table>

- In view of global warming and the escalation of crude oil prices, an increasing number of countries are making efforts to utilize biofuel, and the production of ethanol and biodiesel fuel (BDF) has been increasing.
- The U.S. and Brazil have been promoting the utilization of bioethanol, while the EU has been making efforts to utilize BDF. Asian countries have also been promoting their utilization.
In order to study bioethanol with respect to its production and utilization, verification tests have been conducted in six regions in Japan. Although an increasing number of local governments, NPOs and private sector enterprises have been making efforts to utilize BDF, the scale of its dissemination is rather limited.

In November 2006, the prime minister directed the concerned ministries and agencies to make concerted efforts to significantly increase the production of biofuel in Japan. In response to this direction, the ministry prepared a progress schedule to achieve a remarkable expansion in the production of domestic biofuel and submitted it to the prime minister in February 2007.

In the future, according to the progress schedule, efforts should be directed to the development of technology that enables the highly efficient production of ethanol from raw materials derived from cellulose, such as rice straw, wood, and resource crops harvested from abandoned cultivated land.

The foreign governments have presented the goals of introduction and have introduced supportive measures, including revision of the tax system and funding. In view of the domestic situation regarding the utilization of biofuel, and also overseas trends, we should examine various measures.

### Initiatives for the Introduction of Bioethanol in Various Countries

<table>
<thead>
<tr>
<th>Method of introduction</th>
<th>Brazil</th>
<th>U.S.</th>
<th>Germany</th>
<th>Japan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raw materials</td>
<td>Sugar cane</td>
<td>Corn</td>
<td>Rye, wheat</td>
<td>Sugar cane molasses, discarded wood</td>
</tr>
<tr>
<td>Mixing ratio</td>
<td>20-25% (Mandatory) Partial introduction of pure bioethanol (E100)</td>
<td>10% (Mandatory in some states) Partial introduction of a blend of 85% bioethanol and 15% petrol (E85)</td>
<td>About 5% (upper limit of ethanol content)</td>
<td>3% (upper limit of ethanol content)</td>
</tr>
</tbody>
</table>

Source: Investigated by MAFF
Notes: 1) Ethyl-tertiary-butyl-ether (ETBE) is a fuel additive for conventional gasoline made from isobutene, a byproduct generated in the process of gasoline production, and bioethanol.
2) Furthermore, the U.S. determined that about 28 million kl of bioethanol would be supplied as automobile fuel in 2012. According to the State of the Union address in January 2007, this assigned amount should be increased up to about 130 million kl by 2017. Regarding ethanol mixed gasoline, commodity tax relief is given at a rate of about 16 yen per 1 liter of ethanol. The EU has established a plan to increase the proportion of biofuel in transportation fuel to up to 5.75% by the end of 2010.

The emission of large quantities of greenhouse gases in the atmosphere may result in excessive global warming, and there is increasing concern about the serious consequences on the environment. In Japan, the mean annual temperature increases by 1.07°C every 100 years.

Japan is committed to reducing GHGs by 6% compared to the base year (1990 in principle) under the Kyoto Protocol to the United Nations Framework Convention on Climate Change (UNFCCC). GHGs, however, increased by 8.1% in FY2005 (preliminary figure). In this situation, Japan should promote effective measures to control emissions of greenhouse gases and mitigate global warming by Forest carbon sink.

Because agriculture has a cyclical function of nature and affects biodiversity in various ways, Japan are promoting efforts of programs aimed at the preservation of biodiversity, including programs for the promotion of sustainable agriculture.

### Transition of Mean Surface Temperature Anomalies in Japan

![Transition of Mean Surface Temperature Anomalies in Japan](image)

Note: The normal temperature was defined as the mean of the temperatures recorded for the 30 years from 1971 to 2000.
(3) Further Promotion of Exports of Agricultural Products

- Amid the recent boom in Japanese food in foreign countries, the exports of Japanese agriculture, forestry and fishery products and foods have been increasing, and the value of exports in 2006 reached 373.9 billion yen, a 50% increase compared with the figure for 2001.
- There is increasing concern about the progress of low birthrates and aging leading to a reduction of the domestic market scale. In this situation, we should pay attention to foreign markets and promote exports by developing new frontiers.
- We set the goal for the export value of agriculture, forestry and fishery products, and foods, at about one trillion yen by 2013.

Transition of the Export Value of Agriculture, Forestry and Fishery Products, and Food in Japan

**Transition of the Export Value of Agriculture, Forestry and Fishery Products, and Food in Japan**

(Unit: 1 billion yen)

Source: Prepared by MAFF according to "Trade Statistics" (Ministry of Finance)
Notes: 1) The agricultural products did not include tobacco and alcoholic beverages. The fishery products did not include pearls.
2) The values shown above the bars indicate the total of exports of agricultural, forestry and fishery products.
3) Both agricultural and fishery products included processed goods.

- These products are exported mainly to the U.S. and Asia. Exports to Asian countries, including China, where more people are included in the high income bracket due to rapid economic development, are increasing dramatically. According to the data on the importers of Japanese agricultural, forestry and fishery products, and foods, the proportion of Asian countries in the top 20 has increased from 66% in 2001 to 71% in 2006.

Distribution of Top 20 Importers of Japanese Agricultural, Forestry and Fishery Products, and Food

**Distribution of Top 20 Importers of Japanese Agricultural, Forestry and Fishery Products, and Food**

Source: "Trade Statistics" (Ministry of Finance)
• The exports of processed foods, including green tea and soy sauce, as well as apples and Chinese yams, increased in 2006.
• Various programs have been promoted to find new markets and increase exports. For example, we have conducted foreign market researches and analyses, opened permanent shops, and held exhibitions and business meetings around the world.
• In order to further increase the demand for Japanese foods and foodstuffs, the Japanese food campaign should be actively promoted, and more information about them should be provided in foreign countries. The “Proposal for Japanese Restaurant Recommendation Program” proposed by the Council of Advisors for the Recommendation of Japanese Restaurants outside Japan in March 2007 will be put into practice with support from the government.

| Main items Whose Value of Export Were Drastically Expanded and Their Destinations (2006) | (Unit: 1 million yen) |
|---|---|---|---|
| Apples | Taiwan | Thailand | Hong Kong |
| Value of exports | 5,697 | 5,280 | 98 | 137 |
| Ratio to year 2001 (%) | 929 | 1,297 | 192 | 181 |
| Green tea | U.S. | Taiwan | EU |
| Value of exports | 3,063 | 1,469 | 128 | 582 |
| Ratio to year 2001 (%) | 266 | 475 | 317 | 175 |
| Chinese yams | U.S. | Taiwan | Singapore |
| Value of exports | 1,795 | 292 | 1,492 | 2 |
| Ratio to year 2001 (%) | 172 | 271 | 163 | 113 |
| Soy sauce | China | Australia | EU |
| Value of exports | 3,482 | 484 | 225 | 768 |
| Ratio to year 2001 (%) | 139 | 185 | 179 | 158 |
| Soybean paste | Australia | EU | Korea |
| Value of exports | 1,771 | 95 | 265 | 152 |
| Ratio to year 2001 (%) | 138 | 207 | 163 | 148 |

Source: “Trade Statistics” (Ministry of Finance)

Notes:
1) The EU as mentioned in this table includes the 25 member states as of May 2004.
2) Among the top five importers of respective Japanese foods, the countries whose rates of increase of import value compared with the import value in 2001 ranked in the top three places were selected.

• Japanese agricultural products are highly evaluated in foreign countries. For example, in Shanghai, Japanese apples are well appreciated because of their high quality and safety.
• We should clarify and formulate a comprehensive strategy, including concrete solutions to possible importers by product, and enhance the platforms of production, distribution and processing.

| Evaluation of Imported Apples in Shanghai | (Unit: %) |
|---|---|---|---|---|---|---|
| | Quality | Freshness | Price | Safety | Packaging |
| Produced in: | Japan | Other countries | Japan | Other countries | Japan | Other countries | Japan | Other countries |
| Highly satisfied | 40.0 | 17.3 | 8.6 | 2.7 | 8.6 | 8.0 | 34.3 | 13.3 | 48.6 | 38.7 |
| Fairly satisfied | 60.0 | 80.0 | 42.9 | 34.7 | 45.7 | 36.0 | 42.9 | 40.0 | 34.3 | 44.0 |
| No opinion | — | 2.7 | 42.9 | 57.3 | 31.4 | 40.0 | 22.9 | 46.7 | 17.1 | 16.0 |
| Fairly dissatisfied | — | — | 5.7 | 5.3 | 14.3 | 16.0 | — | — | — | 1.3 |
| Highly dissatisfied | — | — | — | — | — | — | — | — | — | — |

Source: "Market in Shanghai, China, and Future Prospect of Foods Produced in Fukushima Pref." (Published by Institute of Developing Economies, Japan External Trade Organization in March 2005)
Section 4  Various Programs for Developing of New Frontiers

(4) Promotion of Sustainable Agriculture

- In agricultural production activities, an excessive quest for efficiency and inappropriate utilization and management of materials may impose a burden on the environment.
- We should promote sustainable agriculture, aiming at the conservation and enhancement of the natural cyclical functions concerning agriculture, the fostering of sustainable production activities, and the reduction of the burden on the environment.

Main Environmental Risk by Agricultural Production Activity

<table>
<thead>
<tr>
<th>Main agricultural activity</th>
<th>Rivers, lakes, groundwater, sea areas</th>
<th>Air, warming, ozone layer</th>
<th>Soil, ecosystem</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fertilizer application</td>
<td>• Excessive fertilizer application leading to water pollution and eutrophication</td>
<td>• Generation of greenhouse gases derived from the ingredients of fertilizers (dinitrogen monoxide)</td>
<td>• Use of low quality fertilizers leading to possible accumulation of heavy metals</td>
</tr>
<tr>
<td>Pest control</td>
<td>• Use of inappropriate pesticides leading to deterioration of water quality</td>
<td>• Use of methyl bromide as a soil sterilizer leading to destruction of the ozone layer</td>
<td>• Inappropriate use of pesticides leading to possible deterioration of circumferential natural ecosystem</td>
</tr>
<tr>
<td>Irrigation</td>
<td>• Outflow of contaminated water during soil puddling in the paddy field leading to water pollution and eutrophication</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heating facilities and farm machinery</td>
<td>• Use of fossil fuels leading to the generation of greenhouse gases (carbon dioxide)</td>
<td>• Use of farm machinery in farming leading to soil packing</td>
<td></td>
</tr>
<tr>
<td>Plastic materials</td>
<td>• Inappropriate treatment of wastewater from animal barns and livestock excretion, leading to water pollution and eutrophication</td>
<td>• Combustion in fields leading to the generation of toxic substances</td>
<td>• Inappropriate landfills leading to disturbance of the ecosystem</td>
</tr>
<tr>
<td>Livestock farming</td>
<td>• Repellent odors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Field control</td>
<td>• Soil particle loss leading to water pollution and eutrophication</td>
<td>• Generation of greenhouse gas (methane) from the paddy soil</td>
<td></td>
</tr>
</tbody>
</table>

The number of commercial farm households engaged in sustainable agriculture was 919 thousand, accounting for 47% of the total in 2005. The number of certified eco-farmers has been increasing steadily, and reached 111 thousand (as of the end of September 2006). The agricultural products that satisfy the requirements of the Certification System for Organic JAS (Japanese Agricultural Standard) Standards are qualified as organic agricultural products. The production of such qualified agricultural products has been increasing.

- More farmers have made efforts to introduce sustainable agriculture because the consumers’ needs for environmentally-friendly agricultural products have been increasing. The farmers, however, face various problems, including increased work, reduced yield and decline in quality.
- In the future, whole rural communities are expected to make efforts to increase farmlands for such production. Introduction of “Measures to Conserve and Improve Land, Water and Environment” is also expected to contribute to improvement of the present conditions.

Number of Certifications as Eco-farmers

<table>
<thead>
<tr>
<th>Year</th>
<th>Certification</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999</td>
<td>1.2</td>
</tr>
<tr>
<td>2000</td>
<td>2.4</td>
</tr>
<tr>
<td>2001</td>
<td>3.4</td>
</tr>
<tr>
<td>2002</td>
<td>4.4</td>
</tr>
<tr>
<td>2003</td>
<td>4.6</td>
</tr>
<tr>
<td>2004</td>
<td>4.7</td>
</tr>
<tr>
<td>2005</td>
<td>4.8</td>
</tr>
</tbody>
</table>

Source: Investigated by MAFF

Note: The figure as of the end of September 2006 was listed as that for 2006.

Volume of Agricultural Products Qualified as Organic Products under the Certification System for Organic JAS Standards

<table>
<thead>
<tr>
<th>Year</th>
<th>Volume (Unit: 10 thousand tonnes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>3.4</td>
</tr>
<tr>
<td>2002</td>
<td>4.4</td>
</tr>
<tr>
<td>2003</td>
<td>4.6</td>
</tr>
<tr>
<td>2004</td>
<td>4.7</td>
</tr>
<tr>
<td>2005</td>
<td>4.8</td>
</tr>
</tbody>
</table>

Source: Investigated by MAFF
Chapter III Revitalization of Rural Areas and Promotion of Complementarities and Interrelationships

Section 1 Present Situation of Rural Areas

(1) Population Trend

- The Japanese population moves into a downward phase and the possibility of long-term decline is suggested. Japan has a rapidly aging population, especially in the rural areas, and the number of elderly people is expected to increase continuously all over the country.
- In recent years, the rate of natural population increase is lowering and the trend of the population in the countryside moves into the phase of natural reduction.

Population Movement

Source: Prepared by MAFF according to "Population Handbook, the Basic Resident Register" (Ministry of Internal Affairs and Communications)
Note: The rate of population increase in each fiscal year was shown.

- The excessive migration to the Tokyo area and the Nagoya area from the rural areas calmed down after the collapse of the financial bubble. In recent years, however, the population inflow into the metropolitan areas has been escalating. The excessive migration into the central city in each area has been clearly recognized, and this phenomenon reflects the increasing difference in population depending on the location.

Migration of Population between Regions

Notes:
1) The number of excessive migrations into each area in a year was shown.
2) Kanto was defined as the area consisting of Ibaraki Pref., Tochigi Pref., Gunma Pref., Yamanashi Pref., Nagano Pref., and Shizuoka Pref. The Tokyo area (Saitama Pref., Chiba Pref., Tokyo Metropolitan, Kanagawa Pref.) was not included in Kanto. Kinki was defined as the area consisting of Shiga Pref. and Wakayama Pref. The Osaka area (Kyoto Pref., Osaka Pref., Hyogo Pref., Nara Pref.) was not included in Kinki. The Nagoya area included Gifu Pref., Aichi Pref., and Mie Pref.

Migration of Population into the Central Cities in the Areas

Note: The number of excessive migrations into the central cities within the areas in a year was shown.
# Section 1  Present Situation of Rural Areas

## A. Influences of Changes in the Rural Community Structure on Community Activities

- The rural communities have contributed to various local activities, including agricultural production. There were 139 thousand rural communities around Japan in 2005.
- The reduction of farm households has affected various activities for revitalization of local communities. In the areas to which people migrate from different areas, the increase in population contributes to revitalization of local communities.

### State of Various Activities for Revitalization of Rural Communities
(Data by farm household number or scale and local community type, 2005)

<table>
<thead>
<tr>
<th>Proportion of the areas to which people migrate from different areas</th>
<th>Mountainous farming area</th>
<th>Hilly farming area</th>
<th>Flat farming area</th>
<th>Urban area</th>
</tr>
</thead>
<tbody>
<tr>
<td>9 or less</td>
<td>67</td>
<td>56</td>
<td>56</td>
<td>34</td>
</tr>
<tr>
<td>10-19</td>
<td>43</td>
<td>44</td>
<td>36</td>
<td>30</td>
</tr>
<tr>
<td>20-29</td>
<td>19</td>
<td>15</td>
<td>18</td>
<td>15</td>
</tr>
<tr>
<td>30-39</td>
<td>0</td>
<td>10</td>
<td>9</td>
<td>0</td>
</tr>
<tr>
<td>40-49</td>
<td>0</td>
<td>1</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>50 and over</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

### State of Various Activities for Local Revitalization in Rural Communities
(Data by condition of migration, 2005)

<table>
<thead>
<tr>
<th>Commnities to which no people migrate</th>
<th>Holding festivals</th>
<th>Conservation of traditional culture</th>
<th>Holding various events</th>
<th>Promoting welfare activities for the elderly</th>
</tr>
</thead>
<tbody>
<tr>
<td>76.4</td>
<td>79.0</td>
<td>79.4</td>
<td>82.6</td>
<td>62.6</td>
</tr>
<tr>
<td>26.3</td>
<td>31.0</td>
<td>35.4</td>
<td>53.2</td>
<td>43.9</td>
</tr>
<tr>
<td>31.0</td>
<td>37.9</td>
<td>44.2</td>
<td>62.6</td>
<td>53.2</td>
</tr>
</tbody>
</table>

Source: “Agriculture and Forestry Census Accompanying Survey, Rural Community Survey” (reclassification counting, MAFF)

- There are both concerns and hopes regarding the influence of municipal mergers on the programs for local revitalization. It is necessary to take advantage of municipal mergers to promote creation of local brands and make effective use of expanded communities.

### Influences of Municipal Mergers on Programs for Local Revitalization

<table>
<thead>
<tr>
<th>Hopes</th>
<th>Concerns</th>
</tr>
</thead>
<tbody>
<tr>
<td>Promotion of efficiency in administrative services leading</td>
<td>Increase in geographical and emotional distance between local areas</td>
</tr>
<tr>
<td>to improved quality of administrative services, including</td>
<td>(local communities) and administrations (local governments) and weakening</td>
</tr>
<tr>
<td>local support programs</td>
<td>of their relationships, including the collaboration and support systems</td>
</tr>
<tr>
<td>Securing of human resources with expertise and excellent</td>
<td>Decrease in administrative officers who are familiar with the local</td>
</tr>
<tr>
<td>abilities</td>
<td>areas (local communities)</td>
</tr>
<tr>
<td>Planning and implementation of local programs for broader</td>
<td>Difficulty in formulating policies reflecting the specific situations</td>
</tr>
<tr>
<td>areas. The expansion of financial scale leading to</td>
<td>and requests of the local areas (local communities). Prioritization of</td>
</tr>
<tr>
<td>facilitation of big project introduction</td>
<td>policies leading to enlargement of the differences between local areas.</td>
</tr>
<tr>
<td>Increase in popularity and improved image of the entire</td>
<td>Loss of the traditional culture in the local areas (local communities),</td>
</tr>
<tr>
<td>local community (strategy for creation of local brands)</td>
<td>reduced value of identity in the resident's consciousness, weakening of community activities.</td>
</tr>
</tbody>
</table>

Source: Prepared by MAFF according to the results of the local-resident survey on municipal mergers in the local governments
B. State of Bird and Animal Damages

- Recently, in the countryside, especially in the hilly and mountainous farming areas, serious bird and animal damages have increased because of the decline in community activities resulting from shrinking populations and aging, the increase in abandoned cultivated land, and insufficient functioning of animal capturing systems resulting from a decrease in hunters and aging.
- The local community residents should make concerted efforts to prevent such damages. Furthermore, in cooperation with the central government, the local governments should provide appropriate support for the local communities. For example, the central government should promote development of a plan to control animal populations, provide necessary support, cultivate human resources including technical advisers, and develop methods for preventing bird and animal damages.

![Changes in the Number of People Who Obtained the Hunting Licenses](image)

![State of Bird and Animal Damages to Agricultural Products (FY2005)](image)

Basic Concept of Countermeasures for Bird and Animal Damages

[Adjustment of Bird and Animal Populations]
- Control of the bird and animal populations according to a prefectural plan
- Capturing the harmful species and capturing by hunting
- Collecting data on the distribution of birds and animals

[Control of Habitat Environment]
- Promotion of programs for improvement of the village fields and mountains around the residential area
  (Pruning the bushes where birds and animals hide)
- Promotion of appropriate management and conservation of forests, with due consideration for the habitat environment of birds and animals

[Prevention and Avoidance of Damages]
- Promotion of programs that keep animals away from the human habitat
  (Removal of fruits remaining after a harvest and reduction of abandoned cultivated land)
- Prevention of animal intrusion into farmland
  (Building fences for security and introduction of a system for driving animals away from farmland)

![<Case Example: Countermeasure for Bird and Animal Damages>](image)

(1) Management of Abandoned Cultivated Land by Introduction of Livestock Grazing
   (This countermeasure has been adopted by farmers in Kinomoto-cho, Shiga Pref. and other farmers in Shimane Pref. and Yamaguchi Pref.)
   One ha of abandoned cultivated land near the mountains was used as pastureland by pruning bushes and building barriers and electric fences around the land. The farmers grazed Japanese beef cattle for breeding from 2001 to 2006, and sheep and goats from 2001 to 2002. As a result of utilization of the abandoned cultivated land, few wild boars appear in the farmland.

(2) Planting Crops That Are Rarely Affected by Animals (animal repellent crops)
   (Agricultural Technology Promotion Center, Shiga Prefecture)
   In FY2001, the center conducted a survey on the conditions of animal damages and identified the crops that were rejected by wild boars and monkeys (chili pepper, mint). The farmers used such crops in combination with protective fences and demonstrated that the animal damages were reduced to some degree after planting them.

(3) Establishment of an NPO to Control Monkeys’ Access to the Human Habitat (Odai-cho, Mie Pref.)
   The farmers, administrative officers and hunters established an NPO to control the monkey damages. They set radio transmitters on the monkeys to identify the location of the group. Their location information is distributed to all the members via e-mail. The members can drive the monkeys away from the human habitat by firing off bottle rockets simultaneously.

Source: Investigated by Ministry of the Environment

Source: Investigated by MAFF

Source: Prepared by MAFF
### Section 1: Present Situation of Rural Areas

**• Although community facilities have steadily improved in the rural areas, the sewage facilities in the countryside need further improvement, compared with those in urban areas.**

![State of Community Facility Establishment (FY2005)](image)

**Source:** “Survey on the State of Community Facilities” (Ministry of Internal Affairs and Communications)

**Notes:**
1. All the municipalities were categorized into the following four groups according to their sizes: large cities (designated cities, special wards), medium-sized cities (hub cities, special cities, cities with populations of 100 thousand or more), small cities (cities with populations below 100 thousand) and towns or villages. The total number by size of city was obtained as a provisional value.
2. The road improvement ratio indicated the proportion of road extensions in compliance with the specifications defined by the Road Construction Ordinance.
3. The ratio of sewage facility introduction indicated the proportion of introduction of the facilities established as public-works projects, including public sewerage and rural community sewerage facilities.

**• The construction of information and telecommunication infrastructures such as broadband networks has been delayed in the municipalities with small populations. Rapid penetration of information and communications services into the rural communities is indispensable for promoting the initiatives for complementarities and interrelationships between urban and rural areas.**

**• In the future, information technology should increasingly be utilized to improve the efficiency of agricultural management and promote various activities, including development of new businesses, transmission of information and complementarities and interrelationships programs. In this manner, the local communities should be revitalized.**

**State of Broadband Construction (Data by size of city, 2006)**

**Purposes for PC Use in Agricultural Management by Farmers (Multiple answers allowed)**

**Source:** “Survey on the Conditions of Utilization of PCs by the People Involved in Agriculture, Forestry and Fisheries” (published by MAFF in March 2006)
(1) Present Situation of Agriculture from the Local Economy Aspect

- Agri-fisheries and food industries (food processors, food distribution industry, food service industry), which are closely related to each other, act as an inseparable pair in supporting the local community.
- Especially in the local areas including Hokkaido, Tohoku, Shikoku and Kyushu, the proportion of agri-fisheries and the food industries’ contribution to the entire local economy is high.

Local Industrial Structure in Japan (Data based on GDP, 2000)

<table>
<thead>
<tr>
<th></th>
<th>Proportion of agri-fisheries</th>
<th>Proportion of the food industries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hokkaido</td>
<td>14.8</td>
<td>3.9</td>
</tr>
<tr>
<td>Tohoku</td>
<td>13.1</td>
<td>4.3</td>
</tr>
<tr>
<td>Kanto</td>
<td>9.6</td>
<td>2.7</td>
</tr>
<tr>
<td>Chubu</td>
<td>10.0</td>
<td>2.8</td>
</tr>
<tr>
<td>Kinki</td>
<td>9.4</td>
<td>2.8</td>
</tr>
<tr>
<td>Chugoku</td>
<td>9.8</td>
<td>1.4</td>
</tr>
<tr>
<td>Shikoku</td>
<td>12.7</td>
<td>3.1</td>
</tr>
<tr>
<td>Okinawa</td>
<td>12.6</td>
<td>3.0</td>
</tr>
<tr>
<td>Kyushu</td>
<td>10.8</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Source: Estimated by MAFF according to “Input-Output Tables” (Ministry of Internal Affairs and Communications and nine other ministries and agencies) and “Local Input-Output Tables” (Ministry of Economy, Trade and Industry)

2) The production inducement effect is defined here as the increase in the production of the agriculture, forestry and fishery within a single local community through the procurement of foodstuffs by the local food processors in the event of increase of their final demand by a unit (e.g., 100 million yen).

In recent years, the food industries increasingly procure agricultural products from different production areas in Japan and foreign countries. This phenomenon promotes loosening of the tie between agriculture and food industries in the local economy. Because of this situation, in the event of generation of the final demand for food processors, the effect of stimulating the production of agriculture, forestry and fishery in a single local community through procuring local foodstuffs is likely to be lowered in all the local areas in Japan.
Section 2  Initiatives for Revitalization of Agriculture and Rural Areas

• Collaborations between agriculture and food industry should be strengthened to revitalize local agriculture and economy. Such a joint approach brings benefits to farmers and the food industries. Farmers can be assured of constant customers and the food industries can promote differential marketing by taking the community-based approach.

• There are common elements in successful collaborations between the food industry and agriculture. Generally, the joint projects have been promoted from a long-term perspective. For example, the traditional agricultural products are utilized and the food industries are involved in cultivation and quality control of crops.

Successful Cases of Collaborations between the Food Industry and Agriculture

<table>
<thead>
<tr>
<th>Cases</th>
<th>Summary</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Production of dietary oil from the traditional local sesame (P. frutescens var. frutescens) seeds [Nihonmatsu, Fukushima Pref.] Initiation of program: FY2004</td>
<td>A miller started to produce dietary oil by using the traditional local sesame (P. frutescens var. frutescens) seeds. The miller contracted with the local farmers, advised them to grow the plant (P. frutescens var. frutescens) without agricultural chemicals and purchased all the harvested seeds.</td>
<td>The special sesame seed oil sells well because of health food boom. The number of contract farmers and the acreage under sesame (P. frutescens var. frutescens) cultivation have been increasing from 40 farm households and 2 ha in FY2004 to 90 farm households and 7 ha in FY2006.</td>
</tr>
<tr>
<td>Production of ketchup from locally-produced tomatoes [Toyohashi, Aichi Pref.] Initiation of program: FY2002</td>
<td>A ketchup manufacturer considered the trend of safety-oriented food selection and contracted with local farmers to procure tomatoes as raw materials. The manufacturer checks for residual agricultural chemicals and purchases all the passed tomatoes.</td>
<td>The farmers could increase their income by growing tomatoes, under contract, as the off-season crop of cabbage in winter. The number of contract farm households increased from 32 households in FY2002 to 55 households in FY2006.</td>
</tr>
<tr>
<td>Production of ice cream using local products [Ino-cho, Kochi Pref.] Initiation of program: FY1995</td>
<td>An ice cream manufacturer contracted with the local farmers involved in production of Kochi’s famous fruits (Japanese lime, buntan orange) and rice using the technique of rice-duck farming, and purchased the harvested crops. The manufacturer processes such local products into ice cream for sale.</td>
<td>The ice cream manufacturer gradually increased its sales from 30 million yen in FY1995 to 320 million yen in FY2006. The local farmers, who accepted the primary processing of squeezing juice from fruits, could sell their products at higher prices. The number of contract farm households increases in the course of time.</td>
</tr>
</tbody>
</table>

Source: Investigated by MAFF

• According to the estimation of economic effects resulting from collaborations between the food industry and agriculture, the increase in the proportion of locally-produced foodstuffs procured by food processors contributes not only to increased production in local agricultural, forestry and fishery industries, but also to stimulation of production of related industries involved in production materials. The people engaged in such industries can receive additional income, which may lead to production of economic results such as increased consumption.

• Relatively remarkable results are produced in the local areas where greater importance is given to food processors and agricultural, forestry and fishery industries.

Economic Effects Achieved by the Collaboration between the Food Industry and Agriculture

The percentage increase in the local GDP in the case where the food processor increases the proportion of local agricultural, forestry and fishery products procured by one percent.

In the case of a 5% increase in procurement of local products

In the case of a 10% increase in procurement of local products

Source: Estimated by MAFF according to “Local Input-Output Tables” (Ministry of Economy, Trade and Industry, 2000)

Notes: 1) (Proportion of the products procured from a single area) = ([Agricultural, forestry and fishery products procured from a single area] / [The total agricultural, forestry and fishery products procured (including those procured from different areas)]) × 100

2) The prefectures were classified according to the local classification used in the figure on the previous page.
(1) Various Rural Resources and Multifunctionality of Agriculture

- Rural communities have a large variety of local resources. Among others, farmland and agricultural water are the common social capital that is indispensable for assurance of a stable food supply and fulfillment of multifunctionality.

There is growing concern about fulfillment of the multifunctionality of agriculture due to stagnation of agricultural production activities and the decline in community functions. More efforts should be directed to further promotion of understanding the multifunctionality of agriculture.
(2) Activities for Maintenance and Preservation of Rural Resources and Conservation of Local Environments

- In rural communities consisting of small numbers of farm households or communities characterized by a higher ratio of mixed-living of farm and nonfarm households, maintenance and preservation of farm roads and agricultural irrigation and drainage canals are less frequently conducted as community tasks. The structural change of rural communities, such as reduction of farm households and acceleration of mixed-living of farm and nonfarm households, makes it difficult to perform the agricultural activities, including maintenance and preservation, as community tasks.

State of Maintenance and Preservation of Farm Roads and Agricultural Irrigation and Drainage Canals in Agricultural Communities (2005)

<table>
<thead>
<tr>
<th>(Data by the number of farm households and scale)</th>
<th>Proportion of rural communities where several communities are involved in maintenance and preservation (right scale)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural irrigation and drainage canals</td>
<td>18.8 Farm roads 13.8</td>
</tr>
<tr>
<td>Farm roads</td>
<td>10.9</td>
</tr>
<tr>
<td>Proportion of rural communities that are involved in maintenance and preservation</td>
<td></td>
</tr>
</tbody>
</table>
| 50 households or less                          | 52.5 50.4%
| 10-19                                          | 54.8 |
| 20-29                                          | 64.7 |
| 30-39                                          | 66.4 |
| 40-49                                          | 64.7|
| 50 households and over                         | 65.0 |

Source: “Agriculture and Forestry Census Accompanying Survey, Rural Community Survey” (reclassification counting, MAFF)

Notes: 1) The proportion of rural communities where maintenance and preservation of farm roads and agricultural irrigation and drainage canals are performed as community tasks was shown.

2) Proportion of rural communities where several communities are involved in maintenance and preservation indicated the proportion of rural communities where such agricultural activities are performed by several communities to the rural communities where they are performed as community tasks.

3) “The ratio of mixed-living of farm and nonfarm households” indicated the proportion of nonfarm households to the total households in the rural community.

- Participation of nonfarm sectors in the maintenance and preservation of agricultural irrigation and drainage canals results in a reduction of cooperative work hours. The range of their participation affects the work hours. The increasing difficulty in their maintenance and preservation by the community results in significant reduction of farmland and increase in ruined areas.

- As part of the activity for conservation of local environments, the preservation and creation of beautiful landscape and preservation of natural animals and plants are increasingly promoted in recent years. The local communities should make concerted efforts to preserve and utilize the resources, including farmland and agricultural water.

Range of Participation in Cooperative Works and State of Implementation of Maintenance and Management (2005)

<table>
<thead>
<tr>
<th>Communities where only farm households are involved</th>
<th>Communities where nonfarm households are also involved</th>
<th>Proportion of communities where more than two hours are required for completion of a task</th>
</tr>
</thead>
<tbody>
<tr>
<td>16.8</td>
<td>16.0</td>
<td>23.7</td>
</tr>
</tbody>
</table>

Changes in Forms of Maintenance and Management of Agricultural Irrigation and Drainage Canals (Indicated by paddy field area)

<table>
<thead>
<tr>
<th>From management by the external sector to community</th>
<th>From management by the community to management by the external sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>21.2</td>
<td>24.5</td>
</tr>
<tr>
<td>21.1</td>
<td>22.9</td>
</tr>
</tbody>
</table>

Source: “Survey on the Influence of Changes of Agricultural Communities on Rural Society” (Policy Research Institute, Ministry of Agriculture, Forestry and Fisheries, July 2006)

Note: The cases of management by external sectors include those of management by the municipalities or management as part of the land improvement district program. In some communities, the collaborative management program is implemented by several members alone, and the community itself has no concern with the program.
(3) Initiatives of Measures to Conserve and Improve Land, Water and Environment

- It is important to promote thorough understanding, on the side of the Japanese people, of the resources, including farmland and agricultural water, which are regarded as assets shared by the entire nation, and the agricultural activities conducted by using such resources, and improve and conserve the quality of agricultural environment into the future. For this purpose, we introduced “Measures to Conserve and Improve Land, Water and Environment in FY2007.

- The introduction of such programs has been promoted as pilot projects in some districts. An increasing number of sectors, including farmers, agricultural organizations, neighborhood community associations and schools, have been encouraged to participate in these programs. In this manner, the range of activities for promoting conservation of local environments has been expanding.

- Their full-scale introduction is expected to contribute to development of such programs as effective local collaborative programs and promotion of a wider range of activities for revitalization, supported by a large variety of participants.

State of Participation of Various Sectors in the Programs for Promoting Preservation of Local Resources

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Neighborhood community associations</td>
<td>13.6</td>
<td>46.0</td>
</tr>
<tr>
<td>Schools and PTAs</td>
<td>23.4</td>
<td>63.0</td>
</tr>
<tr>
<td>Volunteer fire companies</td>
<td>10.6</td>
<td>63.0</td>
</tr>
<tr>
<td>NPOs</td>
<td>8.8</td>
<td>10.6</td>
</tr>
</tbody>
</table>

Increase in Participating Sectors and Changes of Contents of Activities

- Increase by more than 4 items
- Increase by 2-3 items
- Increase by 1 item
- Maintaining the current condition

Source: “Experimental Project for Supporting the Activities for Promotion of Conservation and Improvement of Land, Water and Environment” (MAFF, 2006)

Notes: 1) The data were collected from 568 districts around Japan where the system for implementation of joint activities was experimentally introduced. The relationship between the number of the sectors other than agricultural sectors that participated in the activities for the first time in FY2006 and the increase in the activities for promoting conservation of local environments compared with the data obtained in FY2005 was shown in the figure.

2) The activities included planting in the gardens of facilities for creation of beautiful landscape, regular patrol, maintenance and cleaning of facilities, collecting the data on the living conditions of organisms, and monitoring of water quality.

The rural community in the paddy field area of Aira-cho, Kagoshima Pref., faces the problems of aging and acceleration of mixed-living of farm and nonfarm households. Furthermore, the rich natural environment, which had been conserved before around 1965, was destroyed, as demonstrated by the disappearance of fireflies in summer. The group of the neighborhood community association, consisting of middle-aged and young farmers and local residents in the community, established a new organization in 2000 to recover as much as possible of the unspoiled nature. The organization is involved in joint programs with the neighborhood community association, such as the program for preservation of farmland, agricultural water canals and farm roads. The organization is divided into small groups to promote various local activities: 1) a group involved in the program for conservation of fireflies (firefly group), 2) a group involved in astragalus cultivation in the idle farmland for recovery of beautiful landscape and soil fertility (astragalus group), 3) a group involved in water decontamination using bamboo charcoal, a product produced from local bamboo (bamboo charcoal group and pond group), 4) a group involved in growing rice without using agricultural chemicals (rice growing group). In the early spring when astragalus flowers are in full bloom, the group holds an event of walking in the natural environment to promote the exchange between local residents and visitors. In the future, these groups will expand their ranges of activity to reduce fallow fields and revitalize the local community. They expect that their efforts may get young people interested in agriculture and that more young people will be engaged in farming.

The members of the rural community make efforts to preserve this irrigation canal.

The members of the rural community make efforts to preserve this irrigation canal.
Revitalization of Rural Communities by Promoting Complementrities and Interrelationships

(1) Importance of Urban Agriculture

- The farmers in the urban and adjacent areas contribute to 30% of the total agricultural output (2.8 trillion yen, 2005). They play an important role in supplying agricultural products to the residents in the cities.
- According to the data on the output by crop, the output of vegetables, including tomatoes and onions, is large in the urban areas. The representative crops are the green vegetable named komatsuna in Tokyo (3.6 billion yen), radishes in Kanagawa Pref. 7.8 billion yen), and grapes in Osaka Pref. (3.3 billion yen).

Agricultural Output in Urban Areas and the Comparison with the Total Agricultural Output (Data by crop, 2005)

• Urban agriculture plays various important roles other than production of agricultural products. For example, it provides opportunities for exchange between the farmers and citizens through agricultural experiences. The agricultural fields can be used as open spaces in the event of disaster.
• The consumers, who recognize the importance of farmland maintenance, intend to preferentially purchase local agricultural products.
• Continuous efforts should be directed toward promotion of urban agriculture by improving the farmland and establishing direct sales outlets.

Consumer Attitudes toward Urban Agriculture and Farmland

Source: “Current Situation of Consumer Awareness of Agriculture” (published by Tokyo District Agriculture Office, Kanto Regional Agricultural Administration Office in February 2007)
Note: The survey was conducted on visitors to agricultural festivals held in Tokyo from July to November 2006. (2,479 responses in total)
The number of allotment gardens is increasing year by year. Eighty percent of these gardens are located in urban areas and they help promote exchanges between urban residents. The sponsors expect to promote understanding of agriculture on the side of users and prevent abandonment of farmland.

An increasing number of urban residents are interested in growing vegetables in allotment gardens, and all of the applicants cannot get their gardens in the urban areas. The allotment gardens should be secured in response to the demands of urban residents.

Advantages of Opening Allotment Gardens (Multiple answers allowed. Top five advantages)

Attracting the users’ interest in agriculture, rural communities and local areas and promoting their understanding of agriculture through the experience of farming

Prevention of abandonment of farmland and effective utilization of abandoned cultivated land

Enhancement of interaction and exchanges among the users, consumers, producers, agricultural cooperatives, and local residents

Retention of satisfactory urban and local environments and assurance of evacuation shelters by preserving the green land areas

Improvement of landowners’ income through farm management by collecting rent for the land

Number of Allotment Gardens by Local Type and Distribution of Competition Rates

Source: Investigated by MAFF
Notes: 1) As of March 2006
2) The competition rate was defined as the proportion of applicants to the number of newly released gardens counted immediately before the survey.

<Case Example: Allotment Garden Program to Promote Participation of Citizens in Farm Work>

In Yokohama City, Kanagawa Pref., programs for preserving and promoting urban agriculture have been fostered and farmers opened allotment gardens in April 1993. The farmers, who are the owners of the gardens, adopted the garden utilization system for management of the farm for experiences in cultivation and harvest. Introduction of the garden utilization system allows even users without sufficient agricultural knowledge to constantly harvest crops with the help of farmers, while, at the time of contract, the farmers can receive the registration fee and the harvest proceeds, which contribute to stabilization of farm management. As of the end of FY2006, such gardens have been opened at 85 sites (11.5 ha), and some applicants are recorded in the waiting list every year. Opening of allotment gardens lags behind the large demand of urban residents.

In addition to farmers, users with much experience in farming give advice about cultivation to new participants. In this manner, the interaction between the farmers and users has been actively encouraged and such gardens are used as places for promoting an understanding of agriculture.
(2) Further Promotion of Complementarities and Interrelationships between Urban and Rural Areas

- An increasing number of young people and baby-boomers are interested in programs for complementarities and interrelationships between urban and rural areas and request implementation of such programs. Some people in their 50s, including baby-boomers, are willing to settle in the rural areas for farming.

- The people who consider settlement in rural communities insist on provision of sufficient medical services and procurement of houses and land at reasonable prices. They also request information and counseling services.

- Agricultural cooperatives make efforts to promote various programs for improvement of local medical and welfare services.

- The local governments expect that the baby-boomers take advantage of retirement to settle in the countryside. In addition to the local government, various sectors, including related organizations and private companies, promote a large variety of programs to provide support to candidates for local residents.

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**Awareness of Complementarities and Interrelationships**


Notes: 1) The survey was conducted on 3,000 males and females, 20 years old and over, around Japan (retrieval rate 58.2%).

2) The people who said that they lived in the “urban area” or the “area very close to an urban area” were selected and asked whether they were “willing to own residences in the urban area or the rural, mountainous or fishing village” or “willing to live in the rural, mountainous or fishing village.”

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**Conditions for Realization of the Desire for Settlement (Multiple answers allowed)**

- Provision of medical services (medical institutions)
- Procurement of lands and houses for living in the rural, mountainous or fishing village at reasonable prices
- Collection of the overall information necessary for determining the location of residence
- Collection of the information necessary for working


Note: The survey was conducted on 3,000 males and females, 20 years old and over, around Japan (retrieval rate 58.2%).

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**Support for Promotion of Settlement Provided by Local Governments**

- **Support for settlement**
  - Provision of information about local life
  - Provision of opportunities for experiencing local life and culture in the communities
  - Provision of information about the real estate (vacant houses), provision of necessary support for finding lands and houses

- **Support for promoting being engaged in job and farming**
  - Introduction of programs for agricultural experiences and training in agricultural technology
  - Provision of counseling service for those who are interested in farming, provision of financial support
  - Provision of information about job offers and applications in the local area
  - Provision of support for entrepreneurial activities (training, counseling by experts, special assistance)
  - Promotion of job creation by attracting companies to the region
  - Giving advice about management of farms after being engaged in farming
  - Giving support to facilitate participation in local activities, including volunteer programs

- **Continued support after migration into the region**
  - Providing one-stop services for those in need of a large variety of support
  - Clarification of the needs of those who are willing to settle in the countryside and provision of support in response to their needs

Source: Prepared by MAFF
• The residents in the urban area have their own images of agriculture and rural community. They would like to find comfortableness, relaxation, safety and fresh and delicious agricultural products in the countryside. In order to meet their needs, more effort should be directed to promote green tourism by making the best use of inventiveness in the local community and providing attractive programs for exchanges and practical experiences.

Attractive Activities in Rural Community (Multiple answers allowed. 2006)

- Willing to renew physically and mentally by having contact with fresh air: 61.6%
- Willing to have fresh and delicious foods in the countryside: 56.6%
- Willing to have a relaxed time in the countryside: 44.6%
- Willing to purchase safe agricultural products directly from farmers: 35.7%
- Willing to enjoy leisure and experiences through trips around the rural area: 24.6%
- Willing to give children and grandchildren the opportunities to experience agriculture and rural life: 22.9%
- Willing to enjoy both urban and rural life: 22.9%
- Willing to give the opportunity to get acquainted with farmers and promote mutual understanding: 22.3%
- Willing to participate in the allotment garden program and grow crops: 21.8%

Source: “Survey on Intentions of Interchange” (conducted by the Organization for Urban-Rural Interchange Revitalization in February 2006)
Note: The survey was conducted on 850 males and females, ranging from 40 to 70 years in age, living in the area within 30 km of Tokyo (retrieval rate 93.2%).

• Most of the Japanese people are aware that children should learn agriculture and rural life that promote understanding of the delights of harvests and importance of nature and food. Various programs have been promoted so that children can experience agriculture and rural life. However, such programs should overcome the following problems: lack of sufficient time, and difficulty in securing farms. Furthermore, it is difficult for schoolteachers to collect technical information about agriculture.
• Agriculture and rural communities contribute to recovery of humanity and social rehabilitation of disabled people. The new programs have been introduced by utilizing such welfare aspects of agriculture and rural communities.

Problems that Make It Difficult to Implement Programs for Practical Learning of Agriculture

- Lack of time: 56.5%
- Lack of appropriate places: 17.3%
- Lack of skill, knowledge and information on agriculture on the side of school teachers: 38.2%
- Requiring much time for preparation: 26.2%

Source: “Questionnaire Survey on the State of Introduction of Practical Learning of Agriculture in Elementary and Junior High Schools” (Japanese Organization for Promotion of Rural Community Education for Young People)
Note: The survey was conducted on 1,649 randomly extracted public elementary and junior high schools around Japan (retrieval rate 44.1%).

<Case Example: Collaboration between a University and a City for Developing Awareness of Agriculture, Environment and Medicine and Promoting Local Agriculture by Utilizing Medicinal Plants>

Kitasato University considers the concept of collaboration between agriculture and medicine significant and promotes a joint project with Sagamihara City. In this botanical garden project, medicinal plants are grown in idle farmland under the supervision of university staff. The citizens are allowed to cultivate herbs, participate in the educational programs and have counseling with the experts. Symposia are also held as a part of the project. In this manner, penetration and understanding of herbal cultivation have been promoted. The results of studies on medicinal plants are utilized to develop the cultivation techniques and the systems for processing and distribution so that new business models can be created. In this project, various activities have been promoted by utilizing the university-based technology and knowledge. Such activities are expected to contribute toward heightening citizen interest in farming and their awareness of the importance of cooperation between agriculture, environment and medicine and further development of local agriculture.
Section 4 Revitalization of Rural Communities by Promoting Complementarities and Interrelationships

- NPOs have played active roles in maintaining the bridges between cities and rural communities and promoting complementarities and interrelationships. Women also have contributed significantly to promotion of such activities. The residents in the countryside expect that complementarities and interrelationships can be realized through collaboration between the local government, neighborhood community associations and NPOs.
- People in each generation have been deeply interested in participation in NPO and volunteer activities. More efforts should be made to develop local brands and new community businesses by promoting the participation of females and elderly people in such activities.

**State of Activities Promoted by Civic Organizations**

<table>
<thead>
<tr>
<th>Activity Fields</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Promoting welfare of the elderly</td>
<td>32.0</td>
</tr>
<tr>
<td>Building the town and village community</td>
<td>26.5</td>
</tr>
<tr>
<td>Promoting welfare of the disabled</td>
<td>26.2</td>
</tr>
<tr>
<td>Protecting the natural environment</td>
<td>18.0</td>
</tr>
<tr>
<td>Promoting educational programs and assisting in lifelong learning</td>
<td>17.4</td>
</tr>
<tr>
<td>Promoting the development of young people</td>
<td>16.4</td>
</tr>
<tr>
<td>Promoting child welfare</td>
<td>16.1</td>
</tr>
<tr>
<td>Other activities related to social welfare</td>
<td>13.5</td>
</tr>
<tr>
<td>Promoting art and culture</td>
<td>13.3</td>
</tr>
<tr>
<td>Promoting health</td>
<td>12.6</td>
</tr>
</tbody>
</table>

Note: The questionnaire was conducted on 10 thousand organizations (3 thousand voluntary organizations, 7 thousand NPOs) randomly extracted from the organizations known to the prefectural governments and the governments of ordinance-designated cities (retrieval rate 43.6%).

- The human resources, knowledge and technology accumulating in cities should be incorporated, into the rural community as the force for local revitalization by promoting collaboration with universities and companies. The rural community should be revitalized by making the most of external sophisticated management methods and new ideas in the processes of farm management efficiency improvement, creation of high added value agricultural products and development of efficient marketing.
- By taking such approaches that enable developing of new frontiers in agriculture and rural community, including stabilization of farm management, fostering and securing of new farmers leading to enhancement of the physique of domestic agriculture, acceleration of biomass utilization and expansion of agricultural product exports, agriculture should be improved and established as a strategic industry appropriate to the 21st century.

**Revitalization of Local Community by Promoting Complementarities and Interrelationships between Urban and Rural Areas**

- More young people and baby-boomers are interested in and desire complementarities and Interrelationships.
- They need support for their settlement in the rural community.
- There are a large variety of citizens’ needs because they would like to find comfortableness and relaxation in the rural life and get agricultural products from farmers.

Source: Prepared by MAFF
Policies on Food, Agriculture and Rural Areas in Japan

FY2007
1 Background of the Measures

As analyzed in the Report on Food, Agriculture and Rural Areas in Japan in FY2006, agriculture and rural areas in Japan have reached a crucial turning point.

The Basic Plan for Food, Agriculture and Rural Areas formulated in March 2005 specifies measures to improve the food self-sufficiency ratio, as well as other measures related to food, agriculture, and rural areas that must be implemented in a comprehensive and systematic manner, such as the ensuring of food safety and consumer confidence, the establishment of new farm management stabilization programs, an “aggressive approach to agricultural policy,” and the promotion of complementarities and interrelationships between urban and rural areas. In addition, the progress schedule was also prepared to define the procedures for the promotion of the measures, the timing and techniques of the implementation of the measures, and the achievement goals of each measure. The measures have been managed appropriately according to the progress schedule, and reviewed when necessary.

The measures on food, agriculture and rural areas deal with issues directly affecting farmers, and deeply concern the everyday life of the nation. Therefore, the measures need to be implemented in a highly transparent way and in such a manner as to be able to win the people's trust and support, by actively reflecting the efforts of farmers and the voices of consumers in the course of the promotion of agricultural administration.

2 Focus Points of the Measures

To achieve the goals and solve the issues set forth in the Basic Plan, the measures related to consumption and production with a view to improved food self-sufficiency, the measures to ensure a stable supply of food, the measures related to the sustainable development of agriculture, and the measures related to the promotion of rural areas, will be implemented in a comprehensive manner.

To be more specific, particular efforts will be made to ensure that the policy reform, which consists of three main actions: the introduction of new farm management stabilization programs targeted at principal farmers, review of the Rice Policy Reform Promotion Measures, and introduction of the Measures to Conserve and Improve Land, Water and Environment, will be implemented smoothly. The government will also proactively implement such measures as the promotion of exports of agricultural products and food as well as the utilization of biomass, while making further efforts to secure food safety and consumer confidence, and promote complementarities and interrelationships between urban and rural areas.

3 Measures Related to Consumption and Production with a View to Improved Food Self-Sufficiency

The Food Self-Sufficiency Ratio Improvement Council will formulate action plans to improve the food self-sufficiency ratio, and all those concerned will make united efforts to attain the purpose according to the plan.

(Measures focused on with regard to food consumption)

• Particular focus will be placed on the promotion of easy-to-understand and practical “Shokuiku,” local consumption of local produce throughout the country, as well as measures to secure consumer confidence in domestic agricultural products.

(Measures focused on with regard to agricultural production)

• Particular focus will be placed on the concentration and prioritization of various measures for principal farmers, the strengthening of the collaborations between the food industry and agriculture, as well as the promotion of the efficient use of farmland through such means as the intensive use of farmland by principal farmers, and the collaboration of crop and livestock farmers in the production of feed and forage crops.

4 Measures to Ensure a Stable Supply of Food

(Ensuring food safety and consumer confidence)

• Conducting appropriate risk assessment, and risk management through the food chain, and promotion of risk communication, will be carried out to ensure food safety based on risk analysis. In addition, current food labeling practices and the Japanese Agricultural Standard (JAS) will be reviewed to meet current social needs, labels will be monitored, and guidance will be given wherever necessary, to ensure that labels satisfy the relevant standards.
(Promotion of Shokuiku and the local consumption of local produce)

• The “Japanese dietary pattern” will be promoted by utilizing the “Japanese Food Guide Spinning Top” at each phase of production, distribution and consumption, in accordance with the Basic Program for “Shokuiku” promotion, while support will be given to the “Educational Farm” activities. In addition, the formulation of a practical plan for the local consumption of local produce in each region, as well as activities based on the plan, will be promoted.

(Enhancement of the competitiveness of the food industry)

• The supply of high added-value food products will be promoted through stronger collaborations between the food industry and agriculture. The international competitiveness of the Japanese food industry will be enhanced by, for example, increasing investment in East Asian countries. Food supply costs, such as production material costs and distribution costs, will be reduced. Environmental measures, as well as measures to increase the efficiency of food distribution, will be promoted in a comprehensive manner.

(Stable imports of food and food security)

• Efforts will be made to ensure that food is imported steadily from multiple sources and that major agricultural products are appropriately stored, to secure stable importation of food, and to maximize food security as a contingency measure. Furthermore, the manuals created for securing a stable supply of food in a contingency situation will be reviewed, and information on food demand and supply inside and outside Japan will be collected and analyzed.

(Promotion of international cooperation)

• Technical and financial cooperation, and food aid will be offered to developing countries to vitalize their agriculture and rural areas in order to reduce hunger and poverty, tackle global environmental problems, and promote their understanding and support for our claims in agricultural negotiations and other occasions.

5 Measures Related to the Sustainable Development of Agriculture

(Fostering and securing of principal farmers to establish a desirable agricultural structure)

• Measures for fostering and securing motivated farmers will be implemented, and the certified farmer system will be appropriately operated. In addition, to ensure the concentration and prioritization of measures for principal farmers, the development of a no interest loan program for funds for certified farmers, the integration of contacts for farm management support services provided by various organizations, and other farm management support measures will be promoted in a comprehensive manner.

(Fostering and securing of human resources, promotion of women's participation)

• Detailed support will be provided at each phase of nurturing of farmers – information provision, consultation, hands-on experience, training, preparation for engagement in farming, and post-engagement support – to encourage baby-boomers, young people, and others with no farming experience to become farmers.

• Females will be encouraged to participate in a policy decision-making process for their regional agriculture and regional community, as well as in farm management. Activities by aged farmers will also be promoted.

(Promotion of effective use of farmland)

• Focus will be placed on promoting the consolidation of farmland among principal farmers in a form in which the farmland cultivated by them is parceled together to realize true cost reduction. In addition, the area of abandonment of cultivation will be controlled to prevent its increase and ultimately eliminated. The participation of motivated corporations and other organizations in farm management, as well as the systematic utilization of land to secure superior farmland, will also be promoted.

(Establishment of farm management stabilization programs)

• The “Direct Payment for Land-extensive Farming” will be implemented thoroughly to accelerate structural reforms of agriculture in Japan. The scheme is targeted at motivated competent principal farmers, and covers five land-extensive agricultural products, namely, rice, wheat and barley, soybeans, beets, and starch potatoes. The new commodity-specific measures for vegetables, fruits, livestock and others will also be implemented for principal farmers.

(Active promotion of exports)

• Specific measures, such as the development of the export environment, detailed export support for each commodity, and the promotion of Japanese foods and foodstuffs abroad, will be performed to achieve the goal of increasing the exports of agricultural, forestry and fishery products and foods to approximately one trillion
yen by 2013.

(Collaborations between the food industry and agriculture, reduction of food supply costs)

• The formation of food industry clusters will be promoted, and support will be given to the creation of new strategic food made of local ingredients, the stable procurement of domestic agricultural products, and other activities.

• Efforts will be made to reduce food supply costs during production, distribution and at all other phases of food supply, in accordance with the “Action Plan for the Reduction of Food Supply Cost”.

(Establishment of fundamental conditions for farm management development)

• The development of new technologies directly meeting the needs of producers, as well as the introduction of various technologies into producing areas, will be promoted. Support will also be given to activities relating to the protection and utilization of intellectual property rights on new varieties and other inventions.

• New industrial fields will be cultivated by promoting the development of new food and ingredients based on Japan’s technological prowess, and creating new demands through the utilization of intellectual property rights.

• The agricultural production base will be improved through such measures as large-size farmland consolidations, the creation of multipurpose paddy fields, and the upgrading and maintenance of irrigation facilities and other facilities.

(Enhancement of the cyclical function of nature, promotion of the use of biomass)

• The adoption of and compliance with the Codes for Agricultural Practice in Harmony with the Environment (Agricultural Environment Code), the introduction of highly sustainable agricultural production methods, and measures for improving the livestock environment will be promoted. In addition, the global environmental protection measures in the area of agriculture, such as the reduction of global warming and the conservation of biodiversity, will be upgraded.

• The use of biomass will be accelerated in accordance with the Biomass Nippon Strategy. As regards domestic biofuel in particular, efforts will be made, in accordance with the progress schedule to expand domestic biofuel production formulated in February 2007, to develop and perform technical verification for regional biofuel production models, and promote the development of technologies for efficiently producing ethanol from rice straw, wood, resource crops and other sources.

6 Measures Related to the Promotion of Rural Areas

(Formulation of local resource conservation policies)

• Support will be given to collaborative activities conducted in community to effectively and appropriately conserve land, water and other resources, as well as the rural environment. Support will also be given to improved farm practices by farmers aimed at environmental conservation, such as a great reduction in the use of chemical fertilizers and pesticides.

(Promotion of integrated efforts toward the revitalization of agricultural, forestry and fishery communities)

• Applicable laws and regulations will be modified to revitalize agricultural, forestry and fishery communities through the promotion of the settlement of people in rural communities and multi-habitations, as well as exchange among agricultural, forestry and fishery communities. In addition, a new grant will be established to support various activities, such as the upgrading of facilities, in an integrated and flexible manner, irrespective of their categorization within agriculture, forestry and fisheries.

(Revitalization of rural economies)

• Communities will be encouraged to act according to their own decisions made on the basis of past successful cases provided and recommended by the government, and the development of infrastructure necessary for revitalizing rural economies, such as roads and distribution centers, will be promoted. Furthermore, the Direct Payment in Hilly and Mountainous Areas will be implemented, and measures against damage caused by animals will be strengthened through the collaboration of the concerned ministries.

(Promotion of complementarities and interrelationships between urban and rural areas)

• A national campaign will be implemented in collaboration with various organizations to promote complementarities and interrelationships between urban and rural areas. The campaign will include the promotion of measures through the united efforts of all the concerned ministries, the support for the activities of the “Orai-Nippon Council,” and the commendation for successful cases. In addition, the spread of farms
for farm-work experience throughout the country, as well as the development of citizens’ farms, will be promoted, taking into consideration the diversified roles of urban agriculture.

(Improvement of the living environment)

• Roads, sewage treatment plants, information and telecommunication infrastructure and other facilities in the living environment will be constructed; medical care, welfare and other services will be upgraded, and various disaster prevention measures will be promoted, to realize safer and more comfortable living environments in rural areas.

7 International Negotiations

(WTO negotiations)

• Japan will be actively involved in the negotiations with a view to establishing flexible trade rules with a good balance between exporting and importing countries, and ensuring that Japanese claims are reflected as far as possible, based on the principle of “coexistence of various types of agriculture.”

(EPA and FTA negotiations)

• Japan will strategically conduct negotiations with other countries based on the policy of “protecting whenever necessary,” by fully taking into account the impact of the results on domestic agriculture, and with due consideration for the progress of structural reforms of domestic agriculture.

8 Measures Related to Reorganization and Improvement of Organizations

• Agricultural co-operatives-affiliated organizations, Committee on Agriculture (COAG)-affiliated organizations, agricultural mutual relief associations, and land improvement districts will be reorganized. Agricultural co-operatives-affiliated organizations in particular will undergo amelioration with focus on economic business reform.

• Collaboration between the organizations will be promoted by establishing a one-stop contact point and a joint secretariat to centrally manage support activities for principal farmers, as well as through other measures.

9 Measures for Implementing the Policies in a Comprehensive and Systematic Manner

(Schedule management of the measures)

• The progress of the measures will be managed appropriately, and the measures will be realized, in accordance with the progress schedule. In addition, the effects of each measure will be examined by policy evaluation, and the measures will be reviewed accordingly whenever necessary.

(Securing of transparency through appropriate information disclosure)

• Information on the policies will be disclosed and communicated in an easy-to-understand manner to maximize transparency concerning how the policies have been decided and are being implemented. In addition to providing information, the government will also ensure that feedback from the public will be reflected in the policies.
GLOSSARY

Abandoned cultivated land
A land which has not been cultivated for more than one year and will not be cultivated again within the coming few years, excluding that has been kept fallow for crop rotation and that with plans for cultivation.

Certified farmer
A farmer who makes a plan for the improvement of his farm management which is certified by the municipality. The plan needs to pursue farm management objectives raised by a municipal basic master-plan for the reinforcement of agricultural management framework in accordance with the Agricultural Management Framework Reinforcement Law. This farmer is eligible to receive the Direct Payment for Land-extensive Farming.

Educational farming
An activity where farmers provide opportunities whereby non-farmers can experience stints as farmers, for the purpose of gaining an understanding of the blessing of nature and the various activities in which people involved in food production engage.

Family business agreement
A written agreement concerning a family farm management policy such as a farm management plan and working conditions including salary and days off and on work sharing, decided after discussions among family members engaged in farm management. Spouses and successors who conclude this agreement with a head of farm management and participate in management will be regarded as a target of the aid policy and eligible to receive the Government's subsidy for their insurance expenses.

Japanese Food Guide Spinning Top
A dietary guideline offering an idea on what and how much to eat a day to keep people healthy physically and mentally using the illustration of a spinning top. It divides food into five groups such as grain dishes and vegetable dishes, showing the appropriate amount of food from each group a day with serving suggestions.

Shokuiku
An educational activity that encourages people to acquire the knowledge about food and nutrition as well as the ability to make appropriate food choices through various experience related to food, in order to develop people in the ability to practice a healthy diet.

Sextic industrialization
An activity where farmers actively and comprehensively engage in the secondary industry (e.g., food processing industry) and the tertiary industry (e.g., food distribution industry) in order to create products and services with high added value, which are usually obtained by the secondary and tertiary industry businesses. This expression was derived from the result of multiplying one, two and three, implying an industrialization integrating the primary, secondary and tertiary industries.

UJI-turn
A generic term used to refer to the movement of emigration from metropolitan areas to rural areas. U-turn is defined as the emigration back to one’s hometown; J-turn is the emigration to the local city close to one’s hometown; and I turn is the emigration to the rural area unrelated to one’s hometown.

Village farming
A farming conducted as a unit of a rural community, under agreements with participating farms with regard to items related to farming based on a well-organized community, such as organization forms, plans to utilize agricultural land and agricultural machinery, selection of board members and operators, and cultivation methods, etc.