Annual Report on Food, Agriculture and Rural Areas in Japan FY 2007

Summary
(Provisional Translation)
Preface

The Annual Report on Food, Agriculture, and Rural Area in Japan (FY 2007) was endorsed by the Cabinet and published on 16th May, 2008.

We hope that this report will facilitate a better understanding of the current state of Japanese agriculture.

Should you have any questions or comments on this report, please contact the following office:

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To Ensure the Future of Food – message from the strategy council for envisioning the future of food
## Acronyms and abbreviations

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABARE</td>
<td>The Australian Bureau of Agricultural and Resource Economics</td>
</tr>
<tr>
<td>BRIcs</td>
<td>Brazil, Russia, India and China</td>
</tr>
<tr>
<td>EPA</td>
<td>Economic Partnership Agreement</td>
</tr>
<tr>
<td>EU</td>
<td>European Union</td>
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<tr>
<td>FAMIC</td>
<td>Food and Agricultural Materials Inspection Center</td>
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<td>FAO</td>
<td>Food and Agriculture Organization</td>
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<tr>
<td>FTA</td>
<td>Free Trade Agreement</td>
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<tr>
<td>GHG</td>
<td>Greenhouse Gas</td>
</tr>
<tr>
<td>GM</td>
<td>Genetically Modified Organism</td>
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<tr>
<td>HPAI</td>
<td>Highly Pathogenic Avian Influenza</td>
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<tr>
<td>IPCC</td>
<td>Intergovernmental Panel on Climate Change</td>
</tr>
<tr>
<td>JFGST</td>
<td>Japanese Food Guide Spinning Top</td>
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<tr>
<td>JMA</td>
<td>Japan Meteorological Agency</td>
</tr>
<tr>
<td>MAFF</td>
<td>Ministry of Agriculture, Forestry and Fisheries</td>
</tr>
<tr>
<td>METI</td>
<td>Ministry of Economy, Trade and Industry</td>
</tr>
<tr>
<td>MEXT</td>
<td>Ministry of Education, Culture, Sports, Science and Technology</td>
</tr>
<tr>
<td>MHLW</td>
<td>Ministry of Health, Labour and Welfare</td>
</tr>
<tr>
<td>MIA</td>
<td>Ministry of Internal Affairs and Communications</td>
</tr>
<tr>
<td>MLIT</td>
<td>Ministry of Land, Infrastructure, Transport and Tourism</td>
</tr>
<tr>
<td>MOF</td>
<td>Ministry of Finance Japan</td>
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<tr>
<td>OECD</td>
<td>Organization for Economic Co-operation and Development</td>
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<td>OIE</td>
<td>International Epizootic Office</td>
</tr>
<tr>
<td>PS&amp;D</td>
<td>Production, Supply &amp; Distribution</td>
</tr>
<tr>
<td>QE</td>
<td>Quick Estimation</td>
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<tr>
<td>UK</td>
<td>The United Kingdom</td>
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<tr>
<td>UN</td>
<td>The United Nations</td>
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<tr>
<td>UNFCCC</td>
<td>United Nations Framework Convention on Climate Change</td>
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<tr>
<td>US</td>
<td>The United States</td>
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<tr>
<td>USDA</td>
<td>United States Department of Agriculture</td>
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<tr>
<td>WCS</td>
<td>Whole Crop Silage</td>
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<td>WTO</td>
<td>World Trade Organization</td>
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## Symbols

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
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<tbody>
<tr>
<td>ha</td>
<td>Hectare</td>
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<tr>
<td>kl</td>
<td>Kilolitre</td>
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<tr>
<td>a</td>
<td>Are</td>
</tr>
<tr>
<td>kg</td>
<td>Kilogram</td>
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<td>t</td>
<td>tons</td>
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</table>
Key Messages of the 2007 Annual Report

◆ Reconsider today’s dietary pattern that depends heavily on imports and generates a lot of food waste; and establish a system for the stable supply of safe food on a long–term basis as soon as possible.

- Amid significant changes in the global food situation and global food markets are likely to remain tight for the medium to long term, the immediate establishment of a system for the stable supply of food is an important national issue for Japan – a country relying on foreign countries for 60% of its food supply. It is important from not just the standpoints of food and agriculture but also those of the conservation of the environment and national lands and, by extension, the lives of the people of Japan.
- It is important that the government as well as farmers, agricultural cooperatives and food industries share a common understanding of the various issues concerning food as issues of ourselves and effectively utilize limited agricultural lands in Japan to increase domestic agricultural production. It is to be carried out by a policy that combines fundamental efforts to increase domestic production with import and food stockpiles.
- With a view to attaining our target of the food self-sufficiency ratio, it is necessary for consumers and food industries to actively use domestic agricultural products by expanding the consumption of rice, including the promotion of the use of rice flour, and actively engaging in Shokuiku (food education) and local consumption of local produce. It is necessary for all the parties concerned to come together and deal with issues encompassing both production and consumption. It will also be necessary to secure agricultural land and water for agricultural uses, to foster principal farmers, and develop and promote the spread of agricultural technologies through such efforts and consequently to reinforce our food supply capability.
- It is important to aim for safe lives by securing food safety and restoring the confidence of consumers through having relevant government agencies share information and further fortifying their links to one another.

◆ Immediately establish a strong agricultural structure by reinforcing the nature of agricultural management including human resource development of motivated farmers.

- It is necessary to disseminate and settle firmly the Programs of Direct Payment for Land-extensive Farming and other measures introduced in April 2007. These measures will need to continue to respond appropriately to challenges based in part on the opinions of producers on site even as they have been reviewed to date in line with local conditions while core systemic features have been maintained in accordance with the demands and opinions of on site producers.
- In particular, it is important to adjust rice production reliably to increase the production of wheat, barley, soybeans, feed crops, and other products in paddy fields. These crops are required to produce to increase Japan’s food self-sufficiency ratio. Moreover, it will also be necessary to maintain paddy field functions—such as the growing of feed-use and bio-fuel crops—in regions where the non-rice crop production is difficult.
- Agricultural land policies will need to be realized steadily in line with the policy entitled Towards the Deployment of Agricultural Land (November 2007). According to the results of a survey on farmers’ attitude towards farmland area changes, the main reasons why farmers expanded their farmland were as follows: a request from other farmers to take care of their farmland; and availability of adjoining land for farmland expansion. The development of favorable environments for promoting farmland liquidity where farmland owners and borrowers can easily lease or borrow land is important. It is also required to promote the intensive use without dispersion of farmland.
- Our recent study revealed that a decrease in farmland area among rice-monocropping farmers is likely to be led by a lack of successors on the farms, aging workforces, and the weakness in rice sales per unit of land. The government thus needs to support motivated farmers who aim to expand their farmland through stabilizing their agricultural management and securing a stable source of labor for them.
Develop agriculture as an industry that plays a leading role in regional economies, attracting young people, thereby endeavoring to revitalize rural areas.

- Direct sales of agricultural products to consumers through farmers markets and other channels have become quite popular in recent years. More efforts should be undertaken to diversify agricultural management by getting involved in processing and distribution and promote greater agricultural value augmentation by way of the development of organic agriculture and new food products and materials and to stabilize and fortify the competitiveness of agricultural managements.
- It is necessary to make efforts to save labor and to reduce production cost by developing new production systems and robots. Furthermore, research and development need to be promoted through the integration of relevant organizations while actively and strategically utilizing and properly protecting intellectual properties.
- To diversify agricultural management and to increase value-added of agricultural products, the stereotype of perceiving domestic food products as goods for domestic consumption should be broken down and overseas markets need to be cultivated. Exports of food products have risen considerably in recent years against the backdrop of a global boom in Japanese food. The further promotion of exports, which contributes to strengthen the vitality of Japanese agriculture, is expected to be carried out by collective efforts of all the parties concerned.

Promote resource and environmental measures as well as build a recycle-based society in order to deal with global warming and biodiversity loss.

- The acceleration of the utilization of biomass is important from the standpoint of the prevention of global warming and the formation of a recycle-based society as well as the development of a new frontier in agriculture, forestry, and fisheries. This can contribute to increase food security through the use of abandoned arable land in a manner that goes beyond the framework of conventional food production.
- Amid increasing overseas demand for grain-based bio-fuel, competition between the use of crops for food and for bio-fuel has become a significant problem. To cope with this problem, we have to develop highly efficient bio-fuel production technologies, which use cellulosic materials, including rice straw and thinned wood, which does not affect food supply stability.
- Preparing for the establishment of global post-2012 climate regime, it is important to develop the methods of managing agricultural land to reduce greenhouse gas emissions and to be used as carbon sinks.

Revitalize rural areas by ensuring multi-functionality of agriculture and promote harmonious co-existence and interactions between urban and rural areas, while utilizing and conserving rural resources.

- While we can see signs of some efforts to undertake community development using regional resources by taking advantage of municipal mergers, amid the fear that village functions will deteriorate and villages themselves will become extinct, It is important that efforts to develop regional specialty goods and achieve other benefits are promoted while reinforcing links between agriculture, commerce, and manufacturing industry and harnessing the young and baby-boomer generations as well as the knowledge, technologies concentrated in cities.
- To encourage coexistence and interactions between urban and rural areas, it is important that green-tourism initiatives are promoted with an emphasis on reaching out to the children who will grow up to become leaders of the next generation, after positioning rural areas as places where agriculture and rural areas can be experienced directly.

Engage strategically in WTO agricultural negotiations and EPA/FTA negotiations; and take special care to avoid undermining efforts to reform the agricultural structure.
Topical subjects during the year 2007

1. Frequent occurrence of incidents undermining consumer confidence in food

- A series of incidents undermining consumer confidence in food have occurred. These include cases in terms of imported foods tainted by chemical poisons, and improper labels and production methods used by food industries.
- Food industries should ensure compliance with acceptable food handling, storage, and distribution practices to secure consumer confidence.
- Proper and easy-to-understand food labels are required to ensure consumer confidence. Food labels then should be monitored by administrative agencies and consumers.
- The Secure Living Project: Specific Measures to be Urgently Adopted was decreed in December 2007. It entails efforts to establish links with relevant bodies and the reinforcement of a system for monitoring food labeling. In addition, it recommends the voluntary provision of information on the indication of origin of the ingredients in imported processed foods by food industries.

Recent significant food related Incidents undermining consumer confidence

<table>
<thead>
<tr>
<th>Date of administrative measures</th>
<th>Outline of case</th>
</tr>
</thead>
<tbody>
<tr>
<td>August 2007</td>
<td>Company I falsified best-before while coliform bacteria were detected in its products through voluntary inspection. A non-publicized recall was undertaken.</td>
</tr>
<tr>
<td>September</td>
<td>*Company M used fraudulent labeling of raw materials, deliberating mixing in of different raw materials, falsifying use-by date and perpetrating a deception as to place of origin, etc. *Upon recognizing the impropriety of the above actions, a return to normal practices was effected pursuant to instructions issued by the president.</td>
</tr>
<tr>
<td>October</td>
<td>Company A thawed and repackaged its products, falsifying production and use-by date resulting in improper labeling of raw materials.</td>
</tr>
<tr>
<td>November</td>
<td>Company S falsified product use-by date and other markings, perpetrating a deception as to place of origin.</td>
</tr>
<tr>
<td></td>
<td>Company H sold its products featuring fraudulent labeling of raw materials.</td>
</tr>
</tbody>
</table>

Source: MAFF

Use-by date and best-before

Use-by date indicates the most likely date from which it is advisable to refrain from consuming the product. While best-before indicates the most likely date up to which the product will retain its ideal taste, but not meaning the date from which the product is no longer edible.

These dates are set based on scientific and rational grounds. The public should be aware that they are valid as long as products are unopened: they no longer apply to any opened products. Once opened, a food product should be consumed reasonably quickly. It is important to understand the meanings of these dates to reduce food waste by storing and preparing food commodities appropriately.

Use-by date is used for perishable products with shorter shelf lives, such as stuffed bread and unbaked cakes.

Best-before is used for preserved products with relatively longer shelf lives, such as canned goods and instant noodles.
2. Exceptional increases in prices for crude oil, grain, and soybean

- Recent world prices for grain and soybean have risen to unprecedented record-high levels. This is partly the result of adverse weather conditions in major grain-producing countries amid an increase in food demand in developing countries including China and a biofuel demand increase. This situation results in increases in the prices of food products. In addition, a rise in crude oil prices resulted in price increases in feed and agricultural production materials, devastating the livestock and horticultural businesses.
- More than 60% of the total calorie intake for people in Japan comes from foreign-produced food. Against this backdrop, the food self-sufficiency ratio in Japan should be raised by increasing domestic production as a basis with an appropriate combination of imports and stockpiles.

### World market prices for grains and soybeans 2000 – 2008

#### Dollars per bushel

- **Soybeans**
  - High heat and aridity in US and rapid increase in imports by China

- **Wheat**
  - Severe drought conditions in Australia

- **Corn**
  - US hurricanes

#### Dollars per ton

- **Rice**
  - Record price of 875 dollars per ton set on April 23, 2008

- **Soybeans**
  - Record price of 13.3 dollars per bushel set on March 3, 2008

- **Wheat**
  - Record price of 8.0 dollars per bushel set on February 27, 2008

- **Corn**
  - Record price of 5.8 dollars per bushel set on April 15, 2008 (As of April 25, 2008)

Source: Reuters Economic News Service

Notes:
1) Near-term prices on the last Friday of each month as reported by the Chicago Board of Trade. Rice is stated at FOB prices for non-glutinous rice with a broken-rice ratio of less than 10% on the first Wednesday of each month as reported by the Thai Trade Commission.
2) 1 bushel equals 27.2155 kg of soybeans/wheat and 25.4012 kg of corn.

### Rising food product prices due to world price increases on agricultural products

- **Tightening of demand and supply balance for grains and soybeans reflecting economic development in developing countries and other factors**
- **Increasing demand for bio-fuels against a backdrop of soaring crude oil prices and other factors**
- **Bio-ethanol**
  - Increases in unrefined sugar (sugarcane) prices
  - Increases in corn prices
  - Increases in compound feed prices
  - Increases in prices of cornstarch and isomized sugar
  - Increases in stock farm products (meat, chicken eggs, dairy products, etc.)
  - Bread, noodles, etc.
  - Miso paste, soy sauce, tofu, etc.
  - Mayonnaise, cooking oil
- **Bio-diesel**
  - Increases in rapeseed prices
  - Increases in vegetable oil prices

Source: MAFF

Note: The increase in demand for feed-use wheat (as projected by USDA in May 2007) was revised downward based on the sharp rise in the price of wheat (February 2008).
3. Damages caused by natural disasters including the Niigataken Chuetsu-oki earthquake

- Damage caused by natural disasters for agriculture, forestry, and fisheries amounted to 192.5 billion yen in FY 2007. This amount is mainly attributed to the massive damage caused by the Niigataken Chuetsu-oki earthquake in 2007, typhoons, and torrential rains.
- The earthquake caused serious damage in several locations, including Nagaoka City, which required considerable restoration costs. The government then designated these areas as serious disaster areas, increasing government subsidy rates for restoration projects for agricultural land and facilities.
- The government also applied the *Agricultural Disaster Compensation System* to affected farmers to compensate for economic losses and to stabilize farm management.

### Amount of damage to agriculture, forestry, and fisheries: all natural disasters, 2007

<table>
<thead>
<tr>
<th>Damage to agriculture, forestry, and fisheries</th>
<th>Amount (billion yen)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Niigataken Chuetsu-oki earthquake (July 16)</td>
<td>214</td>
</tr>
<tr>
<td>Torrential rains in the Tohoku region (September 15–18)</td>
<td>600</td>
</tr>
<tr>
<td>Typhoon No. 4 and torrential rains (June 12 – July 17)</td>
<td>205</td>
</tr>
<tr>
<td>Typhoon No. 5 (August 2-4)</td>
<td>103</td>
</tr>
<tr>
<td>Typhoon No. 9 (September 5-8)</td>
<td>279</td>
</tr>
<tr>
<td>Low-pressure tidal waves, etc. (February 23-24)</td>
<td>277</td>
</tr>
<tr>
<td>Other typhoons, torrential rains, etc.</td>
<td>247</td>
</tr>
</tbody>
</table>

Source: MAFF (as of April 18, 2008; survey is ongoing)

Note: "Typhoon No. 4 and torrential rains" refers to the torrential rains caused by a seasonal rain front that remained stationary off the coast of Japan and by Typhoon No. 4 while "torrential rains in the Tohoku region" refers to the rain that fell from the evening of September 15 to September 18 as a result of a low-pressure system that originally arrived as an autumnal rain front and Typhoon No. 11.

Agricultural roads became blocked and landslides reached paddy fields in the wake of the Niigataken Chuetsu-oki earthquake.

An agricultural road lies in an elevated state as a result of the Niigataken Chuetsu-oki earthquake.

### Outline of Natural Severe Disaster Relief System (with respect to the agriculture, forestry, and fisheries)

- **Disaster occurs**
  - Agricultural land, agricultural facilities, forestry roads, facilities used jointly by the agriculture, forestry, and fisheries
- **Government subsidy program for disaster recovery**
  - Approx. 80% subsidies (generally 20% for joint-use facilities)
- **Severe disaster designation**
- **Measure to increase the government subsidy rates**

Source: Cabinet Office.
4. Exports of agricultural, forestry and fishery products and foods exceeding 400 billion yen

- Exports of agricultural, forestry and fishery products and foods have increased significantly against the backdrop of a global boom in Japanese food. The exports in 2007 reached 433.7 billion yen, up 16% from the previous year. The major export markets are Asian countries and the United States.
- The government set a target of reaching the exports of 1 trillion yen by 2013. To achieve this target, the government has comprehensively promoted measures in accordance with the Comprehensive Strategy for Exporting Agricultural, Forestry and Fishery Products and Foods. Such measures include the acceleration of consultations regarding quarantine issues in export markets, Strategic efforts specific to respective major categories of exportable products, and support for highly-motivated producers and exporters, as well as dissemination of information on Japanese food to overseas.
- Since 2007, the government has conducted export promotion seminars and other orientation sessions in Japan, in addition to participating in overseas exhibitions and trade fairs and running pilot stores. These supportive activities received high acclaim from the concerned parties.

<table>
<thead>
<tr>
<th>Year</th>
<th>Agricultural Products</th>
<th>Forestry Products</th>
<th>Fishery Products</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>2,759</td>
<td>1,111</td>
<td>1,032</td>
</tr>
<tr>
<td>2003</td>
<td>2,789</td>
<td>1,207</td>
<td>1,111</td>
</tr>
<tr>
<td>2004</td>
<td>2,954</td>
<td>1,298</td>
<td>1,207</td>
</tr>
<tr>
<td>2005</td>
<td>3,310</td>
<td>1,447</td>
<td>1,392</td>
</tr>
<tr>
<td>2006</td>
<td>3,739</td>
<td>1,771</td>
<td>1,946</td>
</tr>
<tr>
<td>2007</td>
<td>4,337</td>
<td>2,013</td>
<td>2,220</td>
</tr>
</tbody>
</table>

Source: Trade Statistics (MOF)
Note: The export value for agricultural products are exclusive of alcoholic beverages and tobacco products; the export value for fishery products are exclusive of pearls; processed foods are classified as agricultural products or fishery products according to their raw ingredients.

An export orientation session held in Okayama Prefecture.
Chapter 1: Feature stories: sustainable development of agriculture and rural areas; and establishment of a recycle-based society

Section 1: Strengthening agricultural structure and revitalizing rural areas

(1) Trends in agricultural structure and agricultural managements

- Japanese agricultural structure is weakening resulting from a reduction in agricultural land area, and a shrinkage and aging of the agricultural workforce. The agricultural land area per farm household is 1.8 hectares (2006), being equal to 1/9 the corresponding figure for the EU, 1/99 of the figure for the US and 1/1,902 of Australia.
- According to the results of a survey on farmers’ attitudes toward agricultural land use change, the main reasons why farmers expanded their agricultural land include a request from other farmers to take care of their agricultural land, and availability of adjoining land for agricultural land expansion. In contrast, the main reasons why farmers reduced their land include a decrease in agricultural labor input due to aging workforces, and a weakness of agricultural product prices and a stagnation of income per unit of agricultural land.
- Even among rice-monocropping farmers, the agricultural land decrease is likely to be led by aging workforces, a weakness of agricultural product prices, and a lack of successors on the farms.

<table>
<thead>
<tr>
<th>Changes in the area of cultivated land, the size of the agricultural workforce, and other variables</th>
</tr>
</thead>
<tbody>
<tr>
<td>CULTIVATED LAND AREA (TEN THOUSAND HECTARES)</td>
</tr>
<tr>
<td>600</td>
</tr>
<tr>
<td>AREA OF ABANDONED CULTIVATED LAND (TEN THOUSAND HECTARES)</td>
</tr>
<tr>
<td>TOTAL NUMBER OF FARM HOUSEHOLDS (TEN THOUSAND HOUSEHOLDS)</td>
</tr>
<tr>
<td>POPULATION MAINLY ENGAGED IN FARMING (TEN THOUSAND PERSONS)</td>
</tr>
<tr>
<td>CORE PERSONS MAINLY ENGAGED IN FARMING (TEN THOUSAND PERSONS)</td>
</tr>
<tr>
<td>65 YEARS OLD OR OLDER (%)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>International comparison of agricultural land area per farm household</th>
</tr>
</thead>
<tbody>
<tr>
<td>COUNTRY</td>
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<tr>
<td>Japan (2006)</td>
</tr>
<tr>
<td>US (2005)</td>
</tr>
<tr>
<td>EU (2005)</td>
</tr>
<tr>
<td>Australia (2004)</td>
</tr>
</tbody>
</table>

Reasons for expanding or reducing agricultural land area (multiple responses)

- Requested from other farmers to take care of their agricultural land: 73.5%
- Availability of adjoining land for agricultural land expansion: 47.7%
- Increase in productivity due to advancements pertaining to breeds, machinery, cultivation technologies, etc.: 35.6%
- Existence of a successor: 29.4%
- Young and physically healthy: 29.3%
- Decrease in agricultural labor input due to aging workforces: 44.5%
- Weakness of agricultural product prices and stagnation of income per unit of land area: 43.5%
- Poor conditions in terms of the dispersion of agricultural land and small plots of land: 24.6%
- Non-existence of a successor: 23.0%
- Conclusion of a lease term or site acquisition: 20.9%

Sources: Census of Agriculture and Forestry, Statistics on Cultivated Land and Planted Area (MAFF)
Notes: 1) The base year for rates of increase/decrease is 1965. (The base year for area of abandoned cultivated land is 1975.)
2) The size of the population mainly engaged in farming and number of core persons mainly engaged in farming since 1985 are figures corresponding to commercial farm households.

Source: MAFF
Note: Result of awareness and opinion survey administered to 1,505 farmer monitors nationwide engaged in land-extensive farming (87.6% response rate).
751 respondents indicated that they have expanded the scale of their agricultural managements and 191 respondents indicated that they have reduced the scale of their agricultural managements in the last 10 years.
Section 1: Strengthening agricultural structure and revitalizing rural areas

- Around 40% of the gross output of the paddy farming sector is generated by business farm households. Since this figure is lower than those of other farming sectors (e.g., 80% for the vegetable sector), the agricultural land expansion in the paddy farming sector should be promoted.
- In the paddy farming sector, the average total income of semi-business farm households is lower than that of business farm households. The agricultural income of business farm households, that of semi-business farm households and that of side-business farm households account for 70%, 10%, and 3% of the total income, respectively.
- The agricultural income of paddy farmers has decreased in aggregate due to a long-term stagnation in rice prices; meanwhile, some paddy farmers have raised their agricultural income levels through expanding their agricultural lands and diversifying their agricultural businesses.
- More than half of the total income of paddy farmers who manage 5 hectares of agricultural land or more comes from agricultural activities. Their average agricultural income per household increases with the expansion of agricultural land areas. This is because labor productivity can be increased by land extension, despite the decrease in land productivity.

**Composition of total income derived from individual paddy managements (2006, by main and side business-type managements)**

<table>
<thead>
<tr>
<th>Business farm households</th>
<th>Semi-business farm households</th>
<th>Side-business farm households</th>
</tr>
</thead>
<tbody>
<tr>
<td>468</td>
<td>478</td>
<td>490</td>
</tr>
<tr>
<td>Ag. Income</td>
<td>Pension, etc.</td>
<td>Non-agricultural income</td>
</tr>
<tr>
<td>326</td>
<td>326</td>
<td>49</td>
</tr>
</tbody>
</table>

Source: Statistical Survey on Farm Management and Economy (Statistics on Type of Agricultural Management) (MAFF)

**Changes in total income in the same farming household (paddy managements)**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Farm households</td>
<td>6.0</td>
<td>8.0</td>
<td>8.6</td>
<td>14.4</td>
</tr>
</tbody>
</table>

Source: MAFF

Note: Calculation is based on 114 management entities that had been business farm households in 1995. Total income is calculated based on the average of all management entities for each survey year.

**Composition of total income derived from individual paddy managements (2006, by total area under paddy cultivation)**

<table>
<thead>
<tr>
<th>Planted area</th>
<th>Less than 0.5 ha</th>
<th>0.5 ~ 1</th>
<th>1 ~ 2</th>
<th>2 ~ 3</th>
<th>3 ~ 5</th>
<th>5 ~ 7</th>
<th>7 ~ 10</th>
<th>10 ~ 15</th>
<th>15 ~ 20 / 20 ha or above</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of rice planting farm households (percentage)</td>
<td>581,000 households (42.2%)</td>
<td>432 (30.8)</td>
<td>246 (17.5)</td>
<td>67 (4.7)</td>
<td>39 (2.8)</td>
<td>21 (1.5)</td>
<td>5 (0.4)</td>
<td>2 (0.1)</td>
<td>1,402 (100.0)</td>
<td></td>
</tr>
<tr>
<td>Average age of chief operator</td>
<td>66.7 years old</td>
<td>65.7</td>
<td>64.6</td>
<td>62.3</td>
<td>61.4</td>
<td>58.3</td>
<td>58.7</td>
<td>55.7</td>
<td>52.6</td>
<td>53.3</td>
</tr>
</tbody>
</table>

Sources: Statistical Survey on Farm Management and Economy (Statistics on Type of Agricultural Management), Census of Agriculture and Forestry (MAFF)
(2) Rice policy reforms

- Due to excess cultivation by 70 thousand hectares, rice production exceeded projected rice demand by 210 thousand tons in 2007. Rice prices dropped sharply, with some brand-name rice prices declining by approximately 7% to 11% in October 2007 from the comparable period a year earlier.
- While rice prices dropped significantly, the rice situation index (nationwide) read at only 99 in 2007. This unusual situation made the government implement the Urgent Rice Measures in October 2007. These measures stopped the slide in rice prices.
- In addition, the government reviewed the current rice production adjustment program to stabilize rice prices from the aspect of securing the effectiveness of the program. At the same time, the government maintained its basic position established by the Staple Food Law.
- To adjust rice production accurately, the government let local farmers and relevant agencies use the subsidy system for cultivating growing centers for specific agricultural products. With this system, they can take the initiative in using the subsidy to develop a suitable agricultural system in each region.

Changes in average prices by annual production of breeds and brands in all production areas

Main background behind the decline in rice prices and key points of Urgent Rice Measures

- **Main background behind the decline in rice prices**
  - The effectiveness of production adjustments cannot be secured against the backdrop of year-on-year reductions in rice consumption.
  - The National Federation of Agricultural Cooperative Associations (Zen-Noh) as main purchaser reviewed the handling of rough estimates.
  - The structure of the distribution sector lends itself to a state of cutthroat competition.
  - There is an increasing inclination to purchase low-priced rice as a rice-purchasing trend among consumers.

- **Key points of Urgent Rice Measures**
  - With the aim of raising stockpile levels up to an appropriate level (1 million tons), the government will purchase 340 thousand tons in 2007; the release of stockpiled rice to the market shall be restricted for the time being.
  - With Zen-Noh to process an amount equivalent to the amount of unsold non-glutinous rice produced in 2006 into rice used mainly for non-consumption purposes (feed), the government shall provide appropriate assistance to Zen-Noh.
  - To effect a production adjustment for 2008, the agricultural co-op system and administrative bodies shall be appropriately linked, and every effort will be made by prefectures and regions nationwide to attain the relevant targets in order to secure a balance between demand and supply for rice used mainly for consumption purposes.
**Key Points of Reviewing the Implementation of Production Adjustments**

1. The government, the agricultural cooperative system, shipping and marketing sectors, and other stakeholders shall connect and interact with one another, make every possible effort to attain production adjustment targets, and—where necessary—conclude agreements on the attainment of production adjustment targets with relevant organizations.
2. In order to appropriately set production adjustment targets by prefecture, the government will introduce systems for undertaking inter-prefectural adjustments utilizing a portion of the subsidies for creating production areas.
3. The government will introduce a format for counting feed-use rice, bio-ethanol rice, and other types of new-demand rice towards production adjustments.
4. In addition to subsidies for creating production areas, Urgent Measures for the Revitalizing of Paddy Field Farming for Local Areas under which emergency lump-sum payments of the following will be made as advantageous measures for the expansion of new production adjustments:
   a) 50 thousand yen per 10 a (30 thousand yen per 10 a for persons who failed to reach production adjustment targets in 2007), subject to the conclusion of a 5-year agreement with a regional council, as support in cases of crop shifting to wheat, barley, soybeans, feed crops, or other alternatives;
   b) 50 thousand yen per 10 a, subject to the conclusion of a 3-year agreement with a regional council, support for the establishment of low-cost production technologies for feed rice, bio-ethanol rice and other non-consumption rice.
5. Actions taken towards the attainment of targets at each stage of production adjustments—allocation of targets, cultivation, and harvest—shall be reinforced.

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**State of the use of subsidies for creating production areas (multiple responses)**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Promotion of production of non-rice crops</td>
<td>○ Fostering of principal farmer 30 thousand yen per 10 a for buckwheat, wheat, barley, soybeans, and feed crops&lt;br&gt; ○ 100 yen per kilogram for buckwheat shipping</td>
<td>○ Expansion of the production of buckwheat 0 ha to 72 ha&lt;br&gt; ○ Increase in the number of principal farmers from 46 to 97 and in the share of integrated agricultural land from 39% to 62%&lt;br&gt; ○ Supplied to buckwheat stores in the city, independent certification system established, development of buckwheat shochu</td>
<td>○ Buckwheat planted area 85 ha&lt;br&gt; ○ Number of principal farmers 120&lt;br&gt; ○ Share of integrated agricultural land held by principal farmers 80%</td>
</tr>
<tr>
<td>Aid for the liquidation of agricultural land</td>
<td>○ Aid for vesting land-utilization rights in principal farmers (aid provided to landowners and leaseholders) 20 thousand yen per 10 a for terms between three years and less than five years/30 thousand yen per 10 a for terms of no less than five years&lt;br&gt; ○ 51 thousand yen per 10 a for the promotion of wheat, barley, soybeans, etc. (collective plots of 3 ha or larger)&lt;br&gt; ○ 4 thousand yen per 10 a for adding a principal farmers for wheat, barley, soybeans, etc.</td>
<td>○ Integrated agricultural land to principal farmers increased from 713 ha to 1,365 ha&lt;br&gt; ○ Increase in the number of principal farmers Certified farmers, etc. 133 households to 217 households Community based farm cooperatives increased from 1 cooperative to 11 cooperatives</td>
<td>○ Integrated agricultural land to principal farmers 1,500 ha&lt;br&gt; ○ Number of principal farmers Certified farmers, etc. 285 households&lt;br&gt; ○ Community based farm cooperatives 15 cooperatives</td>
</tr>
<tr>
<td>Systemization and corporatization</td>
<td>○ Aid for the establishment of community based farm cooperatives 2,000 yen per 10 a&lt;br&gt; ○ Promoted crops grown by collective organizations: Wheat/Barley 50 thousand yen per 10 a&lt;br&gt; Feed crops 45 thousand yen per 10 a&lt;br&gt; Soybeans 50 thousand yen per 10 a</td>
<td>○ Establishment of community based farm cooperatives / 0 cooperatives to 17 cooperatives&lt;br&gt; ○ Expansion of the production of rice WCS by collective organizations 45 ha to 66 ha&lt;br&gt; ○ Area of rice WSCS by collective organizations 100 ha</td>
<td>○ Corporatization of community based farm cooperatives 17 cooperatives&lt;br&gt; ○ Area of rice WSCS by collective organizations 100 ha</td>
</tr>
</tbody>
</table>
(3) Implementation of the New Program to Stabilize Farmers’ Income

- The New Program to Stabilize Farmers’ Income had participation by 72,431 agricultural management entities nationwide in 2007 comprising 67,045 certificated farmers and 5,386 community based farm cooperatives.
- Among them, community based farm cooperatives tend to grow a greater variety of crops than certified farmers.
- The planned rice acreage by participants in the program in 2007 was larger than the rice acreage by participants in the Program to Stabilize Farmers’ Income in 2006, meaning that the government achieved an immediate goal of rice acreage under the 2007 program reaching one-half that under the Rice Farming Income Stabilization Program.*1.
- Coverage rate for rice equals the planned area of cultivation as a percentage of the area subject to soybean subsidies in 2006 (99,156 ha); for beets, the coverage equals the planned area of cultivation as a percentage of the area indexed for cultivation in 2007 (68,000 ha); and for potatoes for starch, the coverage equals the planned area of cultivation as a percentage of the area indexed for cultivation in 2007 (22,400 ha).

Number of applications for participation in 2007 and percentages by action item

<table>
<thead>
<tr>
<th>Type of management</th>
<th>Number of management entities</th>
<th>Percentage of whole</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>72,431</td>
<td>100.0%</td>
</tr>
<tr>
<td>Certified farmer</td>
<td>67,045</td>
<td>92.6%</td>
</tr>
<tr>
<td>Individuals</td>
<td>63,415</td>
<td>87.6%</td>
</tr>
<tr>
<td>Corporations</td>
<td>3,630</td>
<td>5.0%</td>
</tr>
<tr>
<td>Community based farm cooperatives</td>
<td>5,386</td>
<td>7.4%</td>
</tr>
<tr>
<td>Specified agricultural associations</td>
<td>1,696</td>
<td>2.3%</td>
</tr>
<tr>
<td>Others</td>
<td>3,690</td>
<td>5.1%</td>
</tr>
</tbody>
</table>

Source: MAFF

2007 planned area of cultivation and coverage rates by item

<table>
<thead>
<tr>
<th></th>
<th>Rice</th>
<th>Wheat/barley</th>
<th>Soybeans</th>
<th>Beets</th>
<th>Potatoes for starch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Certified farmers</td>
<td>330,538</td>
<td>187,293</td>
<td>70,353</td>
<td>65,963</td>
<td>22,189</td>
</tr>
<tr>
<td>Community based farm cooperatives</td>
<td>106,331</td>
<td>66,567</td>
<td>39,721</td>
<td>63</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>436,869</td>
<td>253,860</td>
<td>110,073</td>
<td>66,027</td>
<td>22,191</td>
</tr>
</tbody>
</table>

Coverage rate by item

|                      | 58.1%    | 97.7%        | 111.0%   | 97.1%    | 99.1%               |

Source: MAFF

Note: Coverage rate for rice equals the planned area of cultivation as a percentage of the area subject to participation in Rice Farming Income Stabilization Program in 2006 (752,047 ha); for wheat/barley, the coverage equals the planned area of cultivation as a percentage of the area under cultivation for grains to be distributed in the private sector in 2006 (259,742 ha); for soybeans, the coverage equals the planned area of cultivation as a percentage of the area subject to soybean subsidies in 2006 (99,156 ha); for beets, the coverage equals the planned area of cultivation as a percentage of the area indexed for cultivation in 2007 (68,000 ha); and for potatoes for starch, the coverage equals the planned area of cultivation as a percentage of the area indexed for cultivation in 2007 (22,400 ha).

*1: This program was designed to compensate eligible farmers for a fixed amount when rice prices fall below a standard price level. The eligible farmers for this program needed to participate in the production adjustment program.
Key points of a review of new measures to stabilize the farmers’ income

| <Name change>| (old) Programs of Direct Payment for Land-extensive Farming | → (new) Programs of Direct Payment for Paddy-Field Farming and Upland-Field Farming (for Hokkaido) Programs of Direct Payment for Paddy-Field Farming (other prefectures) |
|<Review of area requirements (establishment of a special municipal licensing system)| A special municipal licensing system has been established in order to provide a means of participating in these measures for persons that otherwise cannot participate despite using a physical exception, income exception, or other existing exception where such persons have been accepted as leaders of regional agriculture in their community and are passionately engaged in farming. |
|<Rescinding or introducing flexibility into the age limit on certified farmers | Guidance has been provided to rescind age limits or ensure flexible operations in order to prevent older motivated farmers from being excluded where a municipality has established age limits as a criterion applicable to certified farmers. |
|<Incorporating flexibility into the provision of guidance on the corporatization of community based farm cooperatives> | As community based farm cooperatives conform to a variety of different forms and stages, the provision of on-site guidance on requirements for corporatization, the income targets of main workers, and other matters should be clearly outlined in a manner that is neither standardized nor excessive based on the actual circumstances surrounding the given organization. |
|<Promotion of advanced production areas for wheat and other crops> | In recent years, support has been provided for stable production in advanced wheat and beet production areas where significant yield improvements have been achieved. |
|<Enhancing measures to mitigate the impact of declines in revenue> | A special measure was taken to compensate for reductions in revenue exceeding 10% in 2007. Under this measure, the government compensated for the portion of its income reduction in excess of a 10% reduction without requiring a contribution to a reserve fund. Beginning in 2008, a farm household may opt to contribute to a reserve fund to provide for income reductions in excess of 10%. |
|<Consolidating payments to farm households, reducing and simplifying application documents, and focusing the application period> | With respect to payments made to farm households, consolidated payments to farm households shall be facilitated through the provision of advance payments by the agricultural co-op system as before where necessary, and the government will bring forward subsidy grant periods in order to enable advance payments to be made smoothly. Documents to be submitted have been significantly reduced and simplified while the application period has been focused to correspond to a fixed period. |

Source: MAFF

Case study: The challenge of organizing community based farm cooperatives by small-scale farm households

A community-based farm cooperative situated in paddy-field areas of the eastern part of Saga-Hirano in Saga City, Saga Prefecture, consists of 33 farm households from two communities. The average farming area under management per household is approximately 1.3 ha. An association for the use of joint machinery was established in 2004 to enable rice, wheat, barley, and soybeans to be efficiently produced in paddy fields with an aggregate area under management of 43 ha.

Initially, there were many farm households that harbored a negative attitude towards participating in community-based farm cooperatives and that were opposed to disposing of their own agricultural machinery, which impeded the process of systematization. However, efforts were made to build a consensus towards organization, such as by presenting estimated revenues and expenditures that could be expected by participating in the new programs to stabilize farmers’ income. In addition, each farm household came to be convinced of the advantages of introducing joint-use-based, large-scale agricultural machinery by having agricultural implements manufacturers accept agricultural machinery used in individual farm households.

After the association was established, efforts were undertaken to promote the streamlining of managements through the joint use of machinery and results has been emerged consisting of shorter labor hours and increased revenues compared to a time when individualized managements. In the future, the association hopes to make preparations for corporatization and develop favorable environment for the young and women in the organization.

Harvesting rice by joint-use-based, large-scale agricultural machinery
(4) Promoting the intensive use of farmland

- In recent years, the number of established land-use rights and the area of farmland with those rights has increased. In particular, 2006 saw a significant increase thanks to new programs to stabilize farmers’ income introduced in 2007.
- The area of farmland managed by principal farmers accounted for 40% of the total farmland in 2007. Further acceleration of the intensive use of farmland among principal farmers should be promoted to reach the target of 70%–80% as projected in Outlook for Agricultural Structure will be necessary.
- Various factors are related to the slow progress of the intensive use of farmland among principal farmers, including the volatility of agricultural income and prices, scattered patches of usable farmland, the lack of principal farmers in an agricultural community, and the farmers’ strong asset-ownership consciousness with respect to their farmland.
- Our recent study shows that some relationships between rice production cost and farmland conditions, including the area of land under management, the agricultural land is dispersed (fields are small and remote).

### Changes in the area of farmland used for cultivation in terms of shifting land-use rights

<table>
<thead>
<tr>
<th>Year</th>
<th>Leased</th>
<th>Purchased</th>
</tr>
</thead>
<tbody>
<tr>
<td>1965</td>
<td>7.6</td>
<td>7.4</td>
</tr>
<tr>
<td>1975</td>
<td>5.3</td>
<td>4.8</td>
</tr>
<tr>
<td>1985</td>
<td>4.7</td>
<td>3.8</td>
</tr>
<tr>
<td>1995</td>
<td>6.8</td>
<td>2.7</td>
</tr>
<tr>
<td>2005</td>
<td>12.5</td>
<td>3.1</td>
</tr>
<tr>
<td>2006</td>
<td>16.9</td>
<td>3.1</td>
</tr>
</tbody>
</table>

Source: Survey on Gathering and Analysis of Land Management Information (MAFF)
Note: “Leased” figures equal the sum of leaseholds established under the Agricultural Land Act and exploitation rights established under the Agricultural Management Framework Reinforcement Act. “Purchased” figures equal the sum of transferred ownership over owned land for compensation under the Agricultural Land Act and transferred ownership over owned land for compensation under the Agricultural Management Framework Reinforcement Act.

### Reasons for lack of progress in the intensive use of farmland among principal farmers (multiple responses)

- Agricultural income is unstable
- Prices of agricultural products are unstable
- Agricultural land is dispersed
- No principal farmers exist in community
- Asset-ownership consciousness with respect to farmland is strong
- Part-time farmer will not relinquish farmland
- Basic infrastructure is lacking
- Increase in absentee landlords
- Few parties offering farmland
- Parties offering farmland select the other party with whom they will deal
- Other reasons

Source: MAFF, survey conducted between July and August 2004
Note: This is the result of surveys administered to 118 municipalities. Responses were provided by 64 municipalities where the intensive use of farmland in the hands of principal farmers was flat or in decline over the previous three years.

### State of dispersion of farmland under management by principal farmers

- Even if the area of land under management is large, the agricultural land is dispersed (fields are small and remote).
- Average management area: 14.8 ha
- Average number of collective plots: 28.5
- Average area per collective plot: 0.52 ha
- Average distance between most remote agricultural plots: 3.7 km
- Large collective plot (2 ha or larger)
- Number of collective plots: 1.2 (41.1% of total)
- Area of farmland: 3.94 ha (26.6% of total)

Source: MAFF, Survey conducted between September and October 2006
Note: Result of questionnaire survey administered to 230 management entities, of which averages were calculated corresponding to 202 management entities, exclusive of Hokkaido (invalid responses were excluded).

### Link between distance between fields and the labor hours and production costs per 10 a (2006; excluding farmers in hilly and mountainous areas)

Source: Statistical Survey on Farm Management and Economy (Rice Production Statistics) (MAFF)
Note: A farm household for whom the longest distance between fields is less than the average for distances between fields coming within the same range by area is classified as a “field-integrated farm household” whereas a farm household for whom the longest distance between fields is greater than the average for distances between fields coming within the same range by area is classified as a “field-dispersed farm household,” exclusive of hilly and mountainous areas.
Section 1: Strengthening agricultural structure and revitalizing rural areas

- Farmland is the most basic production factor for producing food and is an important foundation for agricultural management. However, amid the weakening of the structure of agriculture, a number of farmlands with scattered plots can still be found, despite progress in intensive use of farmland among principal farmers. Those farmlands cannot make farmers achieve efficient agricultural management.

- The government, therefore, reviewed farmland policies comprehensively in the spirit of effective farmland use as a necessary agricultural resource. In particular, the government will introduce the following five new measures gradually in response to the realities of the circumstances surrounding farmland: (1) gather farmland data nationwide as mapping information and develop a database; (2) implement detailed approaches for cleaning abandoned farmlands; (3) enhance the measures to secure superior farmlands, such as tightening of regulations of farmland conversions; (4) promote farmland consolidation; and (5) promote the change from farmland possession to use among farmers.

Direction of reviewed farmland policies

### Develop farmland information database
- Develop farmland information database containing information on ownership and the state of use of farmland as part of a database to be shared and used on a reciprocal basis by the relevant bodies.
- Develop a system for facilitating nationwide access to information on leased out farmland, lease rates, and information needed for entering a market for the first time.

### Implement detailed approaches for clearing abandoned farmlands
- Intend to dissolve the abandoned farmlands problems within five years through grasping the accurate current situation and implementing detailed measures for each case.

### Enhance the measures to secure superior farmlands
- Strengthen the system of conversion authorization and the agricultural promotion areas through tightening exclusions of farmland from arable land zones and including public conversion to make hospitals and schools into the system of conversion authorization.

### Deploy a nationwide framework for promoting farmland consolidation
- Promote farmland consolidation nationwide by deploying at the municipal level a framework for approaching sites, bringing together farmland through delegation and agency, and reallocating such land to farmers in accordance with farmland consolidation.

### Promote the change from farmland possession to use
- Endeavor to effect a change from farmland possession to use and disengage regulations on possession and utilization rights.
  1. Maintain strict regulations on possession.
  2. Review regulations on utilization rights from the standpoint of the effective use of farmland.
- Promote the effective use of farmland through the corporatization of community-based farm cooperatives, the development of management for agricultural production corporations, and the entry of motivated persons into agricultural managements.
- Review measures, the standard tenant rent system, and other matters with a view to eliminating such measures and systems in order to facilitate long-term farmland leasing.

Source: MAFF

Note: The system of agricultural promotion areas is a system under which superior farmlands is secured and protected and measures of agricultural promotion are implemented in a focused and planned manner. Arable land zones as referred to in this system are areas designated by a municipality as land on which agricultural use should be secured for generally 10 years or more. The conversion of farmland in such zones is, as a general rule, not permitted.
(5) Undertakings toward development of diversified types of agricultural managements

- It is important to develop diversified types of agricultural management, including principal farmers and community-based farm cooperatives, through business diversification and production of high-value-added commodities.
- For this purpose, the use of IT, the popularization of organic farming and agricultural exportation, and the cooperation between farmers and the food industry should be promoted. In addition, it is necessary to develop and ensure younger farmers, inter alia, who possess leadership qualities; and collaborations among municipal governments, regional agricultural extension centers, and agencies concerned are also required.
- The number of farmers who sold their agricultural products at local farmers markets increased four-fold between 2000 and 2005. In addition, incorporated farmers are highly motivated to diversify their business beyond agricultural production: they tend to extend their business to direct sales, processing, and tourism. The more they diversify their businesses, the more sales they make in rice and fruit sectors.
- Some small-scale farmers, female, or senior farmers are involved in the processing and selling of agricultural products and run farmers’ restaurants, which help to maintain and revitalize rural communities.

### State of engagement in the selling of agricultural products at local farmers markets and through other such channels (commercial farm households, by size of cultivated land under management)

<table>
<thead>
<tr>
<th>Year</th>
<th>Less than 0.5 ha</th>
<th>0.5~1.0</th>
<th>1.0~2.0</th>
<th>2.0~3.0</th>
<th>3.0~5.0</th>
<th>5.0 ha or greater</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>14.4 (12,089 households)</td>
<td>27.1 (22,666 households)</td>
<td>26.8 (24,093 households)</td>
<td>8.9 (10,142 households)</td>
<td>6.1 (7,419 households)</td>
<td>5.6 (7,296 households)</td>
</tr>
<tr>
<td>2005</td>
<td>18.4 (89,573 households)</td>
<td>34.4 (111,593 households)</td>
<td>26.7 (86,512 households)</td>
<td>6.1 (29,001 households)</td>
<td>5.6 (19,738 households)</td>
<td>5.6 (18,050 households)</td>
</tr>
</tbody>
</table>

Source: Census of Agriculture and Forestry (MAFF)

### Corporate management percentages by size of sales amounts (2005)

#### Single farming for rice

<table>
<thead>
<tr>
<th></th>
<th>Less than 10 million yen</th>
<th>10~30</th>
<th>30~50</th>
<th>50 million yen or more</th>
</tr>
</thead>
<tbody>
<tr>
<td>Production only</td>
<td>77.2</td>
<td>18.7</td>
<td>4.1</td>
<td>1.0</td>
</tr>
<tr>
<td>Production + direct sales</td>
<td>48.6</td>
<td>32.4</td>
<td>18.1</td>
<td>1.0</td>
</tr>
<tr>
<td>Production + direct sales + processing</td>
<td>25.0</td>
<td>38.9</td>
<td>22.2</td>
<td>13.9</td>
</tr>
<tr>
<td>Production + direct sales + tourism, etc.</td>
<td>14.3</td>
<td>42.9</td>
<td>28.6</td>
<td>14.3</td>
</tr>
</tbody>
</table>

#### Single plantation for fruits and nuts

<table>
<thead>
<tr>
<th></th>
<th>Less than 10 million yen</th>
<th>10~30</th>
<th>30~50</th>
<th>50 million yen or more</th>
</tr>
</thead>
<tbody>
<tr>
<td>Production only</td>
<td>70.3</td>
<td>27.5</td>
<td>2.2</td>
<td>1.7</td>
</tr>
<tr>
<td>Production + direct sales</td>
<td>49.2</td>
<td>44.1</td>
<td>5.1</td>
<td>1.7</td>
</tr>
<tr>
<td>Production + direct sales + processing</td>
<td>37.0</td>
<td>44.4</td>
<td>7.4</td>
<td>11.1</td>
</tr>
<tr>
<td>Production + direct sales + tourism, etc.</td>
<td>21.1</td>
<td>42.1</td>
<td>21.1</td>
<td>15.8</td>
</tr>
</tbody>
</table>

Source: Census of Agriculture and Forestry (MAFF)

Note: Tallied with respect to agricultural holdings other than farm households, consisting of agricultural producers’ cooperative corporations whose purpose of managements is sales and 355 management entities corresponding to incorporated single farming for rice and 279 management entities corresponding to incorporated single plantation for fruits and nuts.
Section 1: Strengthening agricultural structure and revitalizing rural areas

Illustration of the diversification of agricultural operations and the bolstering of high added value

Case study: Amaou strawberries exported to Hong Kong, Taiwan, and elsewhere

The name given to Amaou strawberries, a specialty product locally grown in Fukuoka Prefecture, consists of a four-character acronym (formed from the initial characters of the Japanese words for red, round, big, and delicious). Actions to promote sales and popularize this product—such as by holding Amaou Fairs primarily in Hong Kong and Taiwan—are being taken, with the result that this product has gained broad appeal among wealthy people and others in Asia as an upscale fruit. In 2006, sales channels were also expanded into Thailand and Singapore. This product was exported in 2006 for the first time to the continental US, where it has garnered favorable notice. In addition, a Marufuku Mark was designed for use as a brand mark for exports of agricultural products grown in the prefecture. This mark has been registered as a trademark in Hong Kong, Taiwan, South Korea, and Singapore. Various other actions have also been taken, such as by designating production areas that proactively export as model production areas and inviting foreign buyers to visit such areas.

Case study: Senior farm households manage private accommodation by farmer and accept students on school trips

The Higashi-Kubiki area that extends over Joetsu City and Tokamachi City in Niigata Prefecture is an area subject to harsh natural conditions—the area is snowed in for a third of the year—and its residents are aging at a considerate rate, with 40% of the population consisting of people aged 65 years and older. In the past, the area relied primarily on tourism by attracting skiers and hot spring visitors. The Echigo Council for the Promotion of Rural Experiences was established by premerger six municipalities in 1998. By creating guesthouse experience programs to enable participants to gain first-hand exposure to agriculture, forestry, and fisheries and to living in a rural area and accepting students on school trips and others, efforts were undertaken to ensure the survival of a tourism industry. By taking advantage of the municipal amalgamation, the area covered by these initiatives was expanded, such that there are now over a hundred different experience programs. Fifty groups and 4,913 participants were accepted in 2006, with the bulk of them associated with junior high schools and high schools from urban areas. Encouraged by the laughter of children and letters of appreciation, local senior farmers are exercising their ingenuity in providing guidance as instructors.
Section 2: Measures against global environmental problems and maintenance and utilization of rural resources

(1) Accelerating global warming countermeasures

- In recent years, global warming has progressed with a rise in global temperatures. This resulted from absorption and re-emission of infrared rays due to an increase in the concentration of greenhouse gases (e.g., carbon dioxide and methane) in the atmosphere with the expansion of human activity.
- The IPCC Fourth Assessment Report (November 2007) identified the following global warming issues: ① global average air temperatures have risen by about 0.74 degrees Celsius over the last 100 years; ② eleven of the last 12 years (1995 to 2006)—the exception being 1996—rank among the 12 warmest years on record since 1850; ③ global average sea level had risen about 17 centimeters during the twentieth century; and ④ various forms of highly unusual weather have occurred worldwide.

Global warming mechanism

The earth 200 years ago
Concentration of carbon dioxide: approx. 280 ppm

The earth today (2006)
Concentration of carbon dioxide: approx. 381 ppm

Water
- Increasing possibility of using water in humid, tropical zone areas and high-latitude areas.
- Decreasing possibility of using water and increasing droughts in mid-latitude areas and semi-arid, low-latitude areas.
- Hundreds of millions of people face an escalation of water shortages.

Food
- Multiple localized negative effects on small-scale farm households, subsistence farmers, and fishery operators.
- Decline in productivity for grain production in low-latitude areas.
- Increase in productivity for some grain production in mid to high latitude areas.
- Decline in productivity for all grain production in low-latitude areas.
- Decline in productivity for grain production in some areas.

Impact of global warming on water and food production

The report also predicts that a fossil fuel-oriented world with high economic growth would cause a 2.4–6.4 degrees Celsius increase in average global surface temperature and a 26–59 centimeter rise in average sea level by the end of the 21st century. With respect to the impact on food production due to an increase in global average temperature, the report estimates that a 1–3 degree Celsius increase would cause a global possible food production increase as a whole with an increase in some areas and a decrease in other areas. It also predicts that an excess of the 1–3 degree Celsius increase would result in a global food production decrease.

In Japan, global warming has an impact on agricultural production, such as high temperature injuries in certain agricultural products. A potential rice yield reduction and the shift of suitable locations for fruit production are also predicted as the future impacts due to global warming.

### Impact of global warming on agricultural production in Japan

<table>
<thead>
<tr>
<th>2010</th>
<th>2030</th>
<th>2050</th>
<th>+250ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rice</td>
<td>1°C</td>
<td>2°C</td>
<td>3°C</td>
</tr>
<tr>
<td>15% increase in yield due to an increase in CO₂</td>
<td>8 to 15% decrease in yield in the Tohoku region and areas south thereof due to a rise in temperatures</td>
<td>13% increase in yield in Hokkaido due to a rise in temperatures</td>
<td></td>
</tr>
<tr>
<td>0 to 10% decrease in yield in the Tohoku region and areas south thereof due to a rise in temperatures</td>
<td>Increase in yield by optimizing transplantation dates</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 to 20% increase in yield by optimizing transplantation dates</td>
<td>Increase in sterility rate due to an increase in CO₂</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Occurrence of high-temperature injuries in some parts of Japan</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Source:** MAFF

**Notes:** 1) This diagram was produced by incorporating the results of an impact assessment based on multiple scenarios into a timetable based on the following assumptions: average temperatures will rise by 1 degree Celsius in the 2030s and by 3 degrees Celsius (with an attendant rise in the concentration of CO₂ by 250 ppm) in the 2060s. 2) This timetable is based on a rise in temperatures as stated in “Scenario of high-growth societies that are reliant on fossil energy sources (biggest rise in temperatures)” of the IPCC report.

The target of developed countries to reduce greenhouse gas (GHG) emissions is 5% against 1990 level over the five-year period (2008 to 2012) under the Kyoto Protocol. The emission of GHG by Japan is 1.341 billion tons (carbon dioxide equivalent) in 2006, which represents a 6.4% increase from the baseline (1990 in principle). To reach the 6% reduction target, it will be necessary to implement forest sink measures and utilize the Kyoto Mechanisms (emissions trading) as well as reduce emissions by 7%. Carbon dioxide, which accounts for 90% of the total GHG emissions, has increased by 11.4% against the baseline, chiefly because of a sharp rise in emissions by business and household activities.

### Volume of GHG emissions in Japan and emissions reduction commitment

![Graph showing the volume of GHG emissions in Japan and emissions reduction commitment](image)

**Source:** Greenhouse Gas Inventory Data (UNFCCC) and Preliminary Figures on Greenhouse Gas Emissions for FY 2006 (the Ministry of the Environment).

**Note:** The US has not yet ratified the Kyoto Protocol.
To accelerate global warming countermeasures in the sectors of agriculture, forestry, and fisheries, MAFF established Ministry of Agriculture, Forestry and Fisheries (MAFF)’s Strategy for Preventing Global Warming in June 2007.

This strategy stipulates numerical targets for individual measures including forest sink projects, a reduction in GHG emissions from horticultural production and operations of agricultural machineries, a promotion of sustainable agriculture to optimize and reduce the amount of applied fertilizer, a energy saving in fishing boats. These targets will contribute to the accomplishment of the 6% emissions reduction commitment.

In addition, the strategy includes the adaptation measures such as the development of heat resistant varieties of crop and impact forecasts of global warming on the agriculture, forestry, and fisheries sector, and international cooperation based on the use of Japanese human resources and technologies.

**Key Points of MAFF’s Strategy for Preventing Global Warming**

Mitigation measures for global warming

1. Accelerate measures towards the attainment of reduction targets
   - Forest sink measures
   - Utilization of biomass resources
   - Voluntary action plans for the food industry and other sectors

2. Promote measures towards the setting and attainment of new reduction targets
   - Reduction in GHG emissions by greenhouse horticultural production and operation of agricultural machineries (Reduce by approx. 174 thousand tons of CO₂ per year by FY2010)
   - Promotion of sustainable agriculture to optimize and reduce the amount of fertilizer (Reduce by approx. 181 thousand tons of CO₂ per year by FY2010)
   - Energy saving in fishing boats (Reduce by approx. 47 thousand tons of CO₂ per year by FY2010)

3. Promote other measures to reduce GHG emissions (Including improvement projects for agriculture and rural areas, the promotion of local consumption of local produce, and the development of technologies)

Adaptation measures to tackle/cope with global warming

1. Promote adaptation measures for global warming
   - Apply and provide guidance on existing technologies to production sites
   - Introduce and demonstrate the viability of new technologies
   - Promote adaptive measures based on impact assessments

2. Promote the development of technologies
   - Develop production stability technologies (including the cultivation of high-temperature-tolerant breeds)
   - Projection research pertaining to the impact on the agriculture, forestry, and fisheries sector
   - Development of adaptive technologies based on impact projections

International cooperation on agricultural, forestry, and fisheries fields

1. Promote illegal logging measures and other sustainable forest management
2. Cooperate by harnessing Japanese human resources and technologies

Comprehensively promote global warming countermeasures in agriculture, forestry, and fisheries sector and realize agriculture, forestry, and fisheries industry to contribute to global environmental protection in a positive manner.

Soil carbon plays an important role in the global carbon cycle and carbon reservoir. It is pointed out that 40% of the carbon storage in soil (2 trillion tons) is under the influence of agricultural and forestry activities.

Preparing for the establishment of global post-2012 climate regime, it is important to develop the methods of managing agricultural land to reduce greenhouse gas emissions and to be used as carbon sinks.

**Estimated volume of global carbon stock in the soil and air**

- Carbon stock in the atmosphere 760 billion tons
- Plant biomass 500 billion tons
- Soil organic carbon stock 2 trillion tons (1 meter surface layer) (40% of which is under the influence of agricultural and forestry activities)
- Emitted in the course of burning fossil fuels
- Volume of carbon dioxide emitted globally 7.23 billion tons

60 billion tons of carbon per year exchanged between the soil and the atmosphere

Source: Soil Organic Carbon and Agriculture: Developing Indicators for Policy Analysis (OECD, 2002); EDMC Handbook of Energy & Economic database in Japan (Energy Data and Modeling Center, the Institute of Energy Economics, Japan, 2007)

Note: The weight on the graph applies carbon equivalent
The government developed the Roadmap for the Significant Boosting the Production of Domestic Bio-Fuel in February 2007, aiming to produce 50 thousand kl of domestic biomass fuel per year in 2011. Accelerating widespread biomass use, the government promotes the technological development of the efficient methods for producing ethanol from nonfood and cellulosic material such as rice straw and thinned wood, and resource crops including high-yield rice varieties. It also advances measures to reduce the costs of collecting and transporting biomass.

### Key Points of the Roadmap for the Significant Boosting the Production of Domestic Bio-Fuel

**Technology development**
1. Reduce collection and transportation costs
2. Develop machinery and equipment to transport trees inexpensively from hillside forests and efficiently gather rice straw.
3. Improvement the efficiency of ethanol conversion
4. Develop technologies to produce ethanol from rice straw, thinned wood, and other materials in large volumes.

**Raw materials and potential yield**
- Carbohydrates, starch (substandard agricultural products and byproducts)
- Cellulosic materials (including rice straw and thinned wood)
- Resource crops

**System**

**Research foreign policies**

**Adopting lifestyles with a reduced environmental load**

We emit a significant amount of carbon dioxide indirectly through the consumption of food. By reducing our food mileage and volume of fuel energy consumption, we can reduce carbon dioxide emissions. To adopt lifestyles with a reduced environmental load, it is also important for each individual to review his or her own dietary pattern.

**Food mileage**

Japan is the biggest agricultural product-importing country in the world. Japan’s food mileage is estimated to equal approximately 900 billion tons-kilometer as calculated based on a concept according to which food mileage equals the volume of transported food multiplied by the distance transported, a figure that is dramatically higher than for any other country. Consequently, it is estimated that 17 million tons of CO\textsubscript{2}, which is equal to approximately 1.9 times the volume of carbon dioxide emissions from domestic transportation (9 million tons of carbon dioxide), is emitted from importing food.

**Life-cycle assessment**

An analysis of the total volume of fuel energy required for all processes from the production of food (agriculture, forestry, and fisheries) to the consumption of food and the processing of waste based on the Life Cycle Assessment (LCA) method reveals that rice equals 6,330 kcal/kg, bread equals 9,510 kcal/kg, and noodles equal 15,040 kcal/kg.

1. With respect to food mileage, some experts argue that non-transportation factors should also be included when assessing the environmental load by putting forth an illustrative case in which the volume of carbon dioxide emissions generated from domestic production based on the use of greenhouse cultivation is greater than the volume of emissions generated from the importing of food from overseas (Department for Environment, Food and Rural Affairs in the United Kingdom).
2. LCA is a method by which one ascertains the input and output of energy (fuel) and resources at all stages from the procurement of materials for products to the disposition of waste, analyzes and assesses the environmental load of products and services, and investigates shifts to production with a reduced load. (Source: Fujio Hisamori, Energy Analysis of a Satiation-Based Economy)
According to the Convention on Biological Diversity that was adopted at the Earth Summit in 1992 (United Nations Conference on the Environment and Development), biodiversity is defined as the variability among living organisms from all sources. It is also divisible into three levels: ecological, taxonomic, and genetic.

To promote agriculture, forestry, and fisheries that emphasize the conservation of biodiversity, the government formulated Ministry of Agriculture, Forestry and Fisheries (MAFF)'s Biodiversity Strategy in July 2007.

This strategy promotes the conservation of biodiversity in national land through joint efforts by agriculture, forestry, and fisheries, including the conservation of forests, pastoral areas, satochi-satoyama areas (community-based forest areas and the surrounding countryside), satoumi areas (community-based inshore areas), and marine zones and the conservation of biodiversity throughout entire forest-, river-, and ocean-based ecosystems. This strategy was incorporated in the Third National Biodiversity Strategy of Japan.

### Three levels of biodiversity

#### Ecological diversity

Refers to the existence of a variety of ecosystems, including an agricultural ecosystem, forest ecosystem, and marine ecosystem.

![Agricultural land](Image)

![Grassland](Image)

![Forest](Image)

![Ocean](Image)

#### Taxonomic diversity

Refers to the diversity of species of animals, plants, and other life forms that live and breed in a given location.

![Stork](Image)

![Frog](Image)

![Cedar trees](Image)

![Grunts](Image)

For example, Genjibotaru fireflies differ in terms of their light-emitting cycle among individuals living on different sides of a border corresponding to the mountainous area in the Chubu region, with the cycle of those living to the west of this border timed at 2 seconds and the cycle of those living to the east of this border timed at 4 seconds.

All organisms retain a unique set of genes and are of potential practical value to the improvement of crops. For this reason, they are also referred to as a genetic resource.

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### Key Points of MAFF’s Biodiversity Strategy

#### Basic principles

1. Promote agricultural, forestry, and fishery measures with a greater emphasis on conserving biodiversity;
2. Promote an understanding of agriculture, forestry, and fisheries and biodiversity among the people;
3. Promote actions that harness the local ingenuity of diverse actors;
4. Contribute to the conservation of the global environment through agriculture, forestry, and fisheries.

#### To date

- Negative impact on biodiversity generated by activities of the agriculture, forestry, and fisheries
- Inappropriate use of agricultural chemicals and fertilizers
- Development of agricultural land and waterways with a priority placed on economy and efficiency
- Shrinking seaweed beds and tidelands due to reclamation projects and other activities
- Reduction of species
- Escalation of bird and animal damage

#### Going forward

- Conservation of pastoral areas and satochi-satoyama areas
  - Promote organic farming and other sustainable agriculture (conservation of biodiversity through winter flooding), etc.
  - Develop a production infrastructure based on considerations of biodiversity (waterways built based on considerations of maintaining a state of harmony with the environment), etc.
  - Measures to deal with damage sustained by wildlife (clear thickets adjacent to agricultural land used by wildlife as a location for concealment), etc.
- Conservation of forests
  - Develop and conserve suitable forests, such as by thinning
  - Conserve and manage forests with a superior natural environment, etc.
- Conservation of satoumi areas and marine zones
  - Conserve seaweed beds and mudflats
  - Preserve and manage marine life and resources based on considerations of biodiversity, etc.
- Conservation of forests
  - Conserve and manage forests with a superior natural environment, etc.
- Promote the conservation of biodiversity through forests, rivers, and the ocean.
- Promote the sound and sustainable use of genetic resources.
- Contribute to the conservation of the global environment in the areas of agriculture, forestry, and fisheries.
- Develop biodiversity indicators for the agriculture, forestry, and fisheries.

Source: MAFF
Section 2: Measures against global environmental problems and maintenance and utilization of rural resources

- Inappropriate use of agricultural chemicals and fertilizers is concerned of having a broad impact on biodiversity, such as causing environmental damage not only to pastoral and satochi-satoyama areas but also to water quality through water systems damaging fishing grounds.
- To tackle the problem, it is necessary to promote sustainable agricultural practices emphasizing the biodiversity of pastoral areas and satochi-satoyama areas. The number of eco-farmers has steadily increased, reaching 155 thousand eco-farmers by the end of September 2007, up 40% from the previous year. In addition, measures to significantly reduce the effects on the environment have been promoted based on the Act on the Promotion of Organic Agriculture.
- At the same time, agricultural and rural development projects need to keep in harmony with the environment.

Agricultural production with an emphasis on environmental conservation

Case study: Developing a natural habitat for food organisms with a view to reintegrating Japanese ibises into the wild

Japanese ibises have been emblematic of endangered species in Japan, and a program to release it into the wild is being carried out in Sado City, Niigata. The population of Japanese ibises raised by humans has been steadily increasing due in part to the establishment of breeding technologies and a test release is scheduled for autumn 2008.

In order to enable Japanese ibises to live in nature after they are released into the wild, it is necessary to set up a natural environment for Japanese ibises and the organisms on which they feed (including loaches, montane brown frogs, and small river crabs) consisting of such elements as rivers, rice paddies, water channels, and nesting trees while ensuring a sufficient level of understanding among local residents.

In particular, rice paddies and other locations in hilly and mountainous areas are important as feeding places for Japanese ibises. The need to establish rice paddy fish channels to secure a state of continuity between water channels and rice paddies and catch drains to serve as habitats and breeding grounds for food organisms has been taken into account when developing fields. In addition, the management of rice paddies as biotopes where Japanese ibises can brood over chicks and other actions has also been undertaken through such initiatives as winter flooding and sustainable agricultural practices.
(3) Conserving agricultural land and other rural resources and improving rural environment

- Adding to the food supply, agriculture plays various roles, including land conservation, water resource conservation, and environmental conservation. It is closely linked to the forestry and fisheries in rural communities, especially, the agricultural land, forests, and marine zones carry out multifunctional roles under close mutual cooperation.
- Rural areas retain basic resources for agriculture, including agricultural land and agricultural water. The appropriate maintenance and management of these resources conserves biodiversity, contributing to the local environmental conservation. In particular, paddy fields demonstrate various roles along with associated agricultural water and waterway, including land conservation, water resource conservation, and landscape preservation. They need to be conserved by local residents cooperatively.

Multiple functions carried out by the agriculture, forestry and fisheries

Outline of rural area resources

Source: MAFF

Agricultural land
- Paddy fields, upland fields etc.
- Field paths at ends of fields developed
- Roles
  - Stable food supply, conservation of national lands, organic decomposition and the circulation of matter, formation of beautiful landscapes

Environment and landscapes in rural areas
- Natural environment, biodiversity, beautiful rural area landscapes, etc.
- Roles
  - Provision of a habitat for organisms
  - Provision of freedom and comfort

Rural community
- Roles
  - Main actor in the engagement of cooperative community activities
  - Main actor in the maintenance of cultural traditions

Rural areas
- Natural cyclical function of agriculture
- Roles
  - Matter recycling through organisms
  - Promotion of the cyclical use of water, air, and matter
  - Reduction of environmental load in connection with agricultural production

Agricultural-use water
- Agricultural-use water, irrigation canals, etc.
- Roles
  - Contribution to the staple food supply
  - Formation of sound water circulation system
  - Domestic noncommercial water, ecosystem conservation, close contact with water, water for melting snow, formation of landscapes

Organic resources
- Livestock manure, community discharged water and sewage, food waste, etc.
- Roles
  - Formation of a part of the matter cycle

Source: MAFF
The part of resources in the rural communities that have been defunct since 1999 are made maintenance by former residents and administrative officials. Former residents have mainly maintained farmland; and administrative officials have maintained roads and irrigation canals. However, 30% to 40% of the rural resources are left abandoned.

The abandonment of rural resources impedes the fulfillment of multifunctional roles of agriculture, such as land conservation. It is important to consider the development of a resource management system in a broader context, such as through cooperation with surrounding communities and the participation of people involved.

The Measures to Conserve and Improve Land, Water, and Environment came into effect in 2007 in order to improve and conserve the rural resources as shared possession of the nation, such as canals and roads, and the farming activities.

In FY2007, 17,144 organizations were established to implement the measure (in 46 prefectures). The measure covered an area of 1.16 million ha, which was a quarter of the total farmland. The application process for the measure was significantly simplified in FY2008, such as halving the volume of application forms for the measure, which is expected to increase the number of applicants.

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**Applications for the Measures to Conserve and Improve Land, Water, and Environment (2007)**

(State of the establishment of activity organizations)

<table>
<thead>
<tr>
<th>Item</th>
<th>Number of organizations, area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of activity organizations</td>
<td>17,144 (2,042)</td>
</tr>
<tr>
<td>Cover area</td>
<td>1,163,000 ha (46,000 ha)</td>
</tr>
</tbody>
</table>

(State of the establishment of regional councils)

<table>
<thead>
<tr>
<th>At a prefectural unit</th>
<th>At a prefectural block unit</th>
<th>At a municipal unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>38 councils</td>
<td>32 councils</td>
<td>61 councils</td>
</tr>
<tr>
<td>Ibaraki Prefecture (4)</td>
<td>Aichi Prefecture (9)</td>
<td>Niigata Prefecture (31)</td>
</tr>
<tr>
<td>Hyogo Prefecture (9)</td>
<td>Kagawa Prefecture (3)</td>
<td>Toyama Prefecture (13)</td>
</tr>
<tr>
<td>Nagasaki Prefecture (7)</td>
<td></td>
<td>Fukui Prefecture (17)</td>
</tr>
</tbody>
</table>

Source: MAFF

Note: Figures in parentheses in the left table refer to the number of activity organizations and the cover area corresponding to the provision of support for farming activity.
Section 1: Improving the food self-sufficiency ratio and stable food supply

(1) Global food situation and agricultural trade negotiations

While demand for grain worldwide is increasing in line with expanding population and rising in income level, production of primary grains continued less than demand, due to poor harvests in recent years. As a result, the ending stocks ratio has declined to a low level since the food crisis of the early 1970s.

Demand for food is forecasted to increase furthermore, as population in developing countries increase. On the other hand, a shortage of water resources, continued global warming, and many other factors of instability exist in grain production. In particular, it is possible that increasing demand for bio-fuel in such places as the US, which accounts for 60% of global exports of corn, will have a huge impact on the supply and demand for food in the world.

In such a food situation, the production of genetically modified organism (GM) crops is increasing in order to secure the amount of production. While more than 100 million hectares of GM soybeans, corn, and other crops were grown in 2006, such grains accounted for 15% of the planted area worldwide. For Japan, where demand for non-GM crops is high, it is possible that it will become more difficult to ensure a stable supply of such products in the future.

Sources: World Population Prospects: The 2006 Revision (UN), Grain: World markets and Trade (April 2008), PS&D (USDA)

Note: The figure constitutes the amount used for bio-ethanol as a percentage of the volume of production.
The total value of imported agricultural products by Japan increased to a record high level of 5,530.4 billion yen in 2007 in the context of a diversification in dietary pattern in an appreciating yen and the liberalization of global trade.

In addition, the top 5 countries and regions from which Japan imports agricultural products accounted for just over 70% of the total value (with the United States accounting for 31% of the total value of imported agricultural products, the EU accounting for 13%, China accounting for 13%, Australia accounting for 9%, and Canada accounting for 6%), resulting in a framework of reliance on certain countries.

Japan relies on 12.45 million hectares of agricultural land overseas, which is equivalent to 2.7 times the total area of agricultural land in the country. At the same time, the production of imported agricultural products requires foreign water in excess of the amount of water used for domestic agriculture (55.2 billion cubic meters). Sixty-eight percent of the amount of water required to produce a regular-sized beef bowl is dependent on foreign sources.

In preparing for emergencies on food, we will need to reinforce our ability to supply food by securing agricultural land and water for agricultural purposes endeavoring to foster and secure principal farmers and improving the level of agricultural technologies under normal circumstances.

<table>
<thead>
<tr>
<th>Country</th>
<th>(Imported value)</th>
<th>(Exported value)</th>
<th>(Net imported value)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan</td>
<td>391</td>
<td>16</td>
<td>(376)</td>
</tr>
<tr>
<td>U.K.</td>
<td>373</td>
<td>166</td>
<td>(206)</td>
</tr>
<tr>
<td>Germany</td>
<td>471</td>
<td>93</td>
<td>(91)</td>
</tr>
<tr>
<td>South Korea</td>
<td>287</td>
<td>17</td>
<td>(76)</td>
</tr>
<tr>
<td>China</td>
<td>572</td>
<td>276</td>
<td>(11)</td>
</tr>
<tr>
<td>U.S.</td>
<td>572</td>
<td>70</td>
<td>(11)</td>
</tr>
<tr>
<td>India</td>
<td>44</td>
<td>189</td>
<td>(145)</td>
</tr>
<tr>
<td>Australia</td>
<td>33</td>
<td>269</td>
<td>(145)</td>
</tr>
<tr>
<td>Brazil</td>
<td></td>
<td></td>
<td>(236)</td>
</tr>
</tbody>
</table>

**Total value of trade in agricultural products by Japan and key countries (2005)**

**Planted area overseas required for the production of key imported agricultural products**

<table>
<thead>
<tr>
<th>Crop</th>
<th>Area (1,000 hectares)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wheat</td>
<td>208 (21)</td>
</tr>
<tr>
<td>Corn</td>
<td>182 (0)</td>
</tr>
<tr>
<td>Soybeans</td>
<td>176 (14)</td>
</tr>
<tr>
<td>Rapeseed</td>
<td>279 (7)</td>
</tr>
<tr>
<td>Livestock</td>
<td>399 (90)</td>
</tr>
<tr>
<td>Paddy field</td>
<td>253</td>
</tr>
<tr>
<td>Upland field</td>
<td>212</td>
</tr>
</tbody>
</table>

**Amount of virtual water required per menu item (for 1 person)**

<table>
<thead>
<tr>
<th>Menu item</th>
<th>Virtual water (L)</th>
<th>Imported virtual water (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beef bowl (regular)</td>
<td>1,887 (10.5)</td>
<td>68</td>
</tr>
<tr>
<td>Curry rice</td>
<td>1,095 (6.1)</td>
<td>69</td>
</tr>
<tr>
<td>Orange juice (200mL)</td>
<td>168 (0.9)</td>
<td>89</td>
</tr>
<tr>
<td>Ice cream</td>
<td>396 (2.2)</td>
<td>79</td>
</tr>
</tbody>
</table>

**Sources:**
- FAOSTAT (FAO); Annual report on export and import of agricultural products (China)
- Food Balance Sheet, Statistics on Cultivated Land and of Planted Land, and Japanese Feeding Standards (MAFF); Trade Statistics (MOF); FAOSTAT (FAO); Yearbook Feed Grains (USDA); NRC Feeding Standards (the US National Research Council’s (NRC))

**Notes:**
1) For yield, the weighted averages for the top three countries from which Japan imported products between 2003 and 2005 as stated in FAOSTAT (FAO) have been used. However, figures for yield corresponding to coarse feed for livestock are averages for the years between 2003 and 2005 as stated in Yearbook Feed Grains (USDA).
2) Import volumes are averages for the years between 2003 and 2005 as stated in Food Balance Sheet (MAFF).
3) In order to moderate the impact of short-term fluctuations, 3-year averages for both unit crop yields and import volumes were utilized.
4) Figures in parentheses denote the planted area in Japan (2007).
Section 1: Improving the food self-sufficiency ratio and stable food supply

If the import of agricultural products were disrupted completely, it has been estimated that 2,020 kilocalories per day per person could be supplied by domestic production alone by shifting production from meat and vegetables to highly calorie-efficient crops such as potatoes. While this supply of calories would be enough to secure the minimally required level of calorie needs for people, the contents of one’s diet would be quite different from what we have today.

### Examples of a 2,020 kcal meal

**Breakfast**
- Rice bowl – 1
- Pickled vegetables – 1 bowl
- Choking potatoes – 1 bowl

**Lunch**
- Steamed potato – 1
- Fruit (equivalent to ¼ of an apple)
- Baked sweet potatoes – 2
- Grilled fish – 1 serving

**Supper**
- Rice bowl – 1
- Baked sweet potato – 1

In addition: 1 bowl of udon noodles every 2 days, 1 bowl of miso soup every 2 days, 2 packs of natto (fermented soybeans) every 3 days, 1 cup of milk every 6 days, 1 egg every 7 days, and 1 serving of meat every 9 days

Source: When the Need Arises – Guaranteeing Food Security in Emergencies (pamphlet) (MAFF)

### The strategy council for envisioning the future of food

Meetings of the strategy council for envisioning the future of food (organized by Minister of MAFF according to a decree issued by the head of the Headquarters for the Promotion of Food, Agriculture, and Rural Area Policies (Prime Minister)) were held from July 2007 to May 2008, in order to share awareness of food issues nationwide. At the Strategy Council, in addition to ascertaining accurately the indispensable food situation in the world, in the context of signs of changes in world affairs surrounding food, discussions were held on the direction that should be taken to endeavor to secure a stable supply of food for the people. Members of the Strategy Council consist of experts on food-related production, distribution, and consumption, as well as experienced people from academic circles.

Through a total of 5 sessions, discussions were held on a variety of topics—including the current state and outlook for global demand and supply of food and the impact on the supply of food in Japan, which imports 60% of its food needs on the calorie basis—and the matters that people concerned should cope with in order to ensure food in the future were summed up as a message for Japanese citizen. At the end, chairperson Shogenji submitted the message to Prime Minister Fukuda.

In addition, “New Agricultural Administration for the 21st Century-2008”, as a policy direction for FY 2008, was decided upon the receipt of this message, and relevant ministries and agencies have come to act in concert towards securing a stable supply of food, including the reinforcement of food supply capabilities.

### Significant changes in circumstances surrounding the global balance of supply and demand for food

**Exporting countries**
- Domestic production
  - Domestic supply is prioritized
  - In general, surplus amounts are exported

**Global markets**
- As exporting countries are limited to certain countries, international prices fluctuate significantly

**Japan**
- Domestic production
- No choice but to import at high prices to secure food
- Self-sufficiency ratio 39%

**Domestic consumption**

**Other importing countries**
- Demand for food expands as the levels of population and income rise primarily in developing countries

Source: MAFF
Note: See also “To Ensure the Future of Food – A message issued by the strategy council for envisioning the future of food,” pp. 55-56 hereof.
The WTO agricultural negotiation is just at a crucial moment. For example, Mr. Falconer, chair of the agricultural negotiations, is set to present a revised version of the negotiating texts in February 2008 with a view to establishing modalities.

The government aims to establish trade rules well balanced between importing countries and exporting countries, according to the fundamental principle of ensuring the coexistence of diverse forms of agriculture. Considering the progress in reforming the structure of domestic agriculture, the government copes with strategically and constructively, based on the attitude of taking the offensive whenever required and protecting whenever necessary.

### Reviewing developments in the WTO agricultural negotiations

#### Negotiations on modalities

<table>
<thead>
<tr>
<th>Month</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>March</td>
<td></td>
</tr>
<tr>
<td>April</td>
<td></td>
</tr>
<tr>
<td>May</td>
<td></td>
</tr>
<tr>
<td>June</td>
<td></td>
</tr>
<tr>
<td>July</td>
<td></td>
</tr>
<tr>
<td>August</td>
<td></td>
</tr>
<tr>
<td>September</td>
<td></td>
</tr>
<tr>
<td>October</td>
<td></td>
</tr>
<tr>
<td>November</td>
<td></td>
</tr>
<tr>
<td>December</td>
<td></td>
</tr>
</tbody>
</table>

Source: MAFF

Notes:
1. The framework is a broad framework predicated the determination of specific rules governing tariff reduction rates and other figures, detailed requirements, and other matters.
2. Modalities are rules commonly applicable to all countries, including with respect to rules that govern domestic subsidies and specific tariff reduction rates.
   - (Example: The number of key goods is equal to X percent; the broadening of tariff quotas is equal to Y percent of the volume of domestic consumption.)
3. The schedule of concessions is a table produced by individually and specifically determining tariff rates and other variables for each country and regions engage in negotiations in this round negotiation with the aim of ultimately reaching an agreement on these schedules of concessions.
   - (Example: Designate Goods A and Goods B as key goods, reduce the tariff rate on Goods A by M percent, and expand tariff quotas by N tons)

The government promotes negotiations for Economic Partnership Agreements (EPA) and Free Trade Agreements (FTA), which complement the WTO multilateral trade system. In particular, EPAs with Asian countries are negotiated by combining improvements in market access with cooperation in the agriculture, forestry, and fisheries.

The government in one body strategically approaches negotiations with concerned countries and regions, based on the principle of protecting whenever necessary, considering the progress in reforming the structure of domestic agriculture.

### Negotiations of EPA and FTA concerned with Japan

<table>
<thead>
<tr>
<th>Country</th>
<th>EPA Signed</th>
<th>FTA Signed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Singapore</td>
<td>2002</td>
<td>2003</td>
</tr>
<tr>
<td>Mexico</td>
<td>2004</td>
<td>2005</td>
</tr>
<tr>
<td>Malaysia</td>
<td>2005</td>
<td>2006</td>
</tr>
<tr>
<td>Chile</td>
<td>2006</td>
<td>2007</td>
</tr>
<tr>
<td>Thailand</td>
<td>2007</td>
<td>2008</td>
</tr>
<tr>
<td>Philippines</td>
<td>2008</td>
<td>2009</td>
</tr>
<tr>
<td>Brunei</td>
<td>2009</td>
<td>2010</td>
</tr>
<tr>
<td>Indonesia</td>
<td>2010</td>
<td>2011</td>
</tr>
<tr>
<td>ASEAN</td>
<td>2011</td>
<td>2012</td>
</tr>
<tr>
<td>South Korea</td>
<td>2012</td>
<td>2013</td>
</tr>
<tr>
<td>GCC</td>
<td>2013</td>
<td>2014</td>
</tr>
<tr>
<td>Vietnam</td>
<td>2014</td>
<td>2015</td>
</tr>
<tr>
<td>India</td>
<td>2015</td>
<td>2016</td>
</tr>
<tr>
<td>Australia</td>
<td>2016</td>
<td>2017</td>
</tr>
<tr>
<td>Switzerland</td>
<td>2017</td>
<td>2018</td>
</tr>
</tbody>
</table>

Source: MAFF

Notes:
1. Negotiations with South Korea have been suspended since November 2004.
2. Gulf Cooperation Council (GCC) member countries: Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, United Arab Emirates
(2) Improving the food self-sufficiency ratio and stable supply of safe food

- A long-term decline in the calorie-based food self-sufficiency ratio has been influenced by significant changes in dietary patterns and by an increase in imports of agricultural products that are difficult to supply through domestic production.
- Looking at changes in calories supplied per day per capita, the percentage of livestock products and oils and fats has been increasing, while the percentage of rice, which can be self-supplied, has been declining.

### Food self-sufficiency ratio in Japan and other countries
*(on a calorie basis)*

![Graph showing food self-sufficiency ratio in Japan and other countries](image)

Source: *Food Balance Sheet (MAFF), Food Balance Sheets (FAO)*.

### Composition of calories supplied and the rate of self-sufficiency by food item
*(on a calorie basis)*

![Diagram showing composition of calories supplied and self-sufficiency](image)

Total supplied calories: 2,459 kcal/person/day

<table>
<thead>
<tr>
<th>Food Item</th>
<th>Percentage of Volume of Calories Supplied (1965)</th>
<th>Rate of Self-sufficiency by Item (2006)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Others</td>
<td>68%</td>
<td>68%</td>
</tr>
<tr>
<td>Fruits</td>
<td>86%</td>
<td>23%</td>
</tr>
<tr>
<td>Meat</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Sugars</td>
<td>31%</td>
<td>32%</td>
</tr>
<tr>
<td>Wheat</td>
<td>28%</td>
<td>13%</td>
</tr>
<tr>
<td>Oils and fats</td>
<td>33%</td>
<td>5%</td>
</tr>
<tr>
<td>Livestock</td>
<td>7%</td>
<td>45%</td>
</tr>
<tr>
<td>Self-sufficiency component</td>
<td>100%</td>
<td>94%</td>
</tr>
</tbody>
</table>

Note: Figures in square brackets denote calories supplied by domestic production.

Source: *Food Balance Sheet (MAFF)*
Chapter 2

A diminishment in domestic production too has led to a decline in the food self-sufficiency ratio. While a reduction in production connected to a reduced consumption of rice has been a contributing factor, the fact that domestic production could not adequately respond to the increasing demand in the food industries, such as dining-out, home-meal replacement, and food-processing sectors, in the stream of the externalization of our diet.

Beginning in around 1985, a continuing appreciation of the yen helped to increase the rate of imports of fruits, meats, milk and dairy products, and vegetables. In the case of vegetables, the discrepancy between domestic production and supplies for domestic consumption has expanded. And also imports of processed foods have increased. The total value of imported food products and groceries is now equivalent to half the output of the domestic agriculture and fisheries.

At the same time, the rate of self-sufficiency in livestock products on a calorie basis is noted for being affected by the feed self-sufficiency ratio, since livestock produced using imported feed is not included in calculations of domestically produced calories. In particular, over the course of a ten-year period beginning in 1965, increasing demand for imported feed in line with an expansion in the domestic production of livestock led to a sharp decline in the feed self-sufficiency ratio (from 55% in 1965 to 34% in 1975 on a weight basis) as well as to a decline in the rate of self-sufficiency in livestock products (from 90% to 77%).

### Average import rate for key agricultural products

![Graph showing the average import rate for key agricultural products](image)

**Source:** Food Balance Sheet (MAFF)

**Notes:**
1. Import rate = Import quantity / (domestic production + import quantity) x 100
2. Figures for import quantity reflect conversions to freshness-equivalent values where applicable.

### Domestic production and domestic consumption of vegetables

![Graph showing domestic production and domestic consumption of vegetables](image)

**Source:** Food Balance Sheet (MAFF)

### Value of imported food products and the share of processed food products

![Graph showing the value of imported food products and the share of processed food products](image)

**Source:** Trade Statistics (MOF)
Section 1: Improving the food self-sufficiency ratio and stable food supply

The Basic Plan for Food, Agriculture, and Rural Areas aims to have the domestic production of food supply at no less than 50% of all calories supplied to the people and, in consideration of the near-term feasibility of this objective, has set a target of 45% as the food self-sufficiency ratio on a calorie basis by 2015.

In order to improve the food self-sufficiency ratio, the following points are regarded as priority matters:

1. Expanding the consumption of rice, including through the promotion of using rice flour and expand the consumption of rice through the provision of support for “Rice-based breakfast businesses” and so on (link with related industries and other stakeholders).
2. Improving the feed self-sufficiency ratio:
   - Shift to feed from green manure crops and disseminate and promote the planting of feed crops in abandoned cultivated lands and drained off-season paddy fields.
   - Increase the production of eco-feed by utilizing a recycling loop.
   - Expand the planted area of rice whole crop silage (rice WCS) and the use of feed-use rice.
3. Restricting and moderating the excessive intake of oils and fats:
   - Approach the food industry with a view to disseminating fryers for food service use that can significantly curtail the use of oils and fats.
4. Expanding the production of vegetables to meet demand in the processing and food service sectors:
   - Promote the formation of model vegetable production areas for processing and food service sectors and reinforce the ability to accommodate demand by adding new items and so on.
   - Reinforce the deploying of joint-use facilities in vegetable production areas for processing and food service sectors.
5. Further promoting Shokuiku (food education):
   - Further promote Shokuiku by disseminating “Japanese Food Guide Spinning Top (balanced meal guide)” and “Educational Farm”.
6. Promoting strategic advertising to develop a national movement:
   - Implement strategic advertising activities, such as by utilizing a mixed-media (advertising that effectively combines a diverse range of media) approach in order to raise the people’s interest in increasing the food self-sufficiency ratio.

Reinforcing strategic efforts toward improving the food self-sufficiency ratio

- Expand the consumption of rice, including through the promotion of using rice flour
- Improve the feed self-sufficiency ratio
- Restrict and moderate the excessive intake of oils and fats
- Expand the production of vegetables to meet demand in the processing and food service sectors
- Further promote Shokuiku (food education)
- Promote strategic advertising to develop a national movement

Source: MAFF

Case study: Approach to the production of rice Whole Crop Silage (WCS)

Some agricultural corporation in Fukui City, Fukui Prefecture supplies rice WCS, produced as a crop on the diverted land, to livestock farmers in the city. Consultations concerning the production of rice WCS with livestock farmers began three years ago and production was launched on 4 hectares of land in 2006. Against the background of steeply rising in feed prices in recent years, production was expanded to 20 hectares in 2007. In addition to being able to use rice cultivation technologies and machinery without modifications, the profitability for rice WCS is greater than for such crops as wheat, barley and soybeans when crop diversion subsidies are taken into account, realizing the profitability comparable to that of rice as staple food. Local livestock farmers, as users of this product, have put a high value on the WCS, given the preference cattle have shown and the subsequent increase in milk production, thus contributing to the increase in the feed self-sufficiency ratio.

While production is undertaken at present by growing a rice variety for staple food, feed-use rice breeds are scheduled to be introduced in 2008, expecting to further improve the profitability of the management.
The prevalence of breakfast skipping is linked with issues, including an increase in the food intake at each meal, possible over-eating, and the promotion of lifestyle-related diseases. Children who eat breakfast everyday tend to perform better on school tests and have greater stamina. There are indications that a disorderly lifestyle is one factor behind the loss of motivation for learning, physical strength, and vitality in children.

The promotion of Shokuiku (food education) is essential as a national movement. According to a survey conducted by the Cabinet Office of Japan, Shokuiku is conducted by 60% of respondents.

The percentage of respondents who said they were aware of Japanese Food Guide Spinning Top has increased from 26% to 40% between 2005 and 2006 and the number of people using it as a reference source is also on the rise. In addition, 90% of respondents are inclined to use this Japanese Food Guide Spinning Top as a reference source in 2006.

By utilizing the Guide effectively, promoting the implementation of a Japanese dietary pattern, which is based on rice with various side dishes made from seafood, livestock products, vegetables, helps to the realization of a healthy diet, which contribute to increase the food self-sufficiency ratio.

The government promotes activities to provide experiences in agriculture, forestry, and fisheries through educational farms and increases interest and understanding with respect to food.

![Consumption of breakfast and test scores (elementary school students)](image)

**Consumption of breakfast and test scores (elementary school students)**

<table>
<thead>
<tr>
<th>Japanese Language Level A</th>
<th>Not consuming often</th>
<th>Not consuming at all</th>
<th>Consuming most of the time</th>
</tr>
</thead>
<tbody>
<tr>
<td>83%</td>
<td>78%</td>
<td>72%</td>
<td>69%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mathematics A</th>
<th>Not consuming often</th>
<th>Not consuming at all</th>
<th>Consuming most of the time</th>
</tr>
</thead>
<tbody>
<tr>
<td>84%</td>
<td>78%</td>
<td>72%</td>
<td>66%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Japanese Language Level B</th>
<th>Not consuming often</th>
<th>Not consuming at all</th>
<th>Consuming most of the time</th>
</tr>
</thead>
<tbody>
<tr>
<td>65%</td>
<td>58%</td>
<td>52%</td>
<td>47%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mathematics B</th>
<th>Not consuming often</th>
<th>Not consuming at all</th>
<th>Consuming most of the time</th>
</tr>
</thead>
<tbody>
<tr>
<td>65%</td>
<td>58%</td>
<td>52%</td>
<td>47%</td>
</tr>
</tbody>
</table>

**Conducting of Shokuiku (food education)**

<table>
<thead>
<tr>
<th>Not being conducted despite wishing to do so</th>
<th>Being conducted as much as possible</th>
<th>Being proactively conducted</th>
<th>Not being conducted much</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.3%</td>
<td>26.4%</td>
<td>43.6%</td>
<td>12.1%</td>
</tr>
</tbody>
</table>

**Awareness and reference of the “Japanese Food Guide Spinning Top”**

<table>
<thead>
<tr>
<th>FY 2005</th>
<th>Not being aware of the JFGST</th>
<th>Other, no response</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.5%</td>
<td>18.5%</td>
<td>1.8%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FY 2006</th>
<th>Not referring to the JFGST</th>
<th>Other, no response</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.8%</td>
<td>57.3%</td>
<td>1.8%</td>
</tr>
</tbody>
</table>

**Source:** FY 2007 Survey of the Status of National Academic Performance and Learning (conducted in April 2007) (MEXT)

**Notes:**
1) Administered to approximately 2.25 million students in the sixth year of elementary school and the third year of junior high school.
2) Questions set forth for Japanese Language (Mathematics) Level A primarily focused on contents that would affect the contents of studies in subsequent school years if not learned and on the knowledge and skills that are essential in real life and that should ideally have been learned enough by students that they can apply such knowledge and skills at any time (questions relating mainly to matters of knowledge).
3) Questions set forth for Japanese Language (Mathematics) Level B primarily focused on the ability of students to apply knowledge and skills to a variety of situations in real life and on contents that would test the ability of students to formulate, implement, assess, and improve on solutions to various problems (questions relating mainly to practical matters).

**Source:** Awareness Survey Pertaining to Shokuiku (Cabinet Office, released in May 2007)

**Note:** Administered nationwide to 3,000 male and female subjects 20 years of age and older (response rate of 61.0%)

**Source:** FY 2005 Actual Conditions Survey Pertaining to Food Actions, etc. conducted in January 2006 (The Information Service Center for Food and Foodways) ; FY 2006 Mail-in Monitoring Survey Pertaining to the State of the Dissemination of Dietary Guidance and Other Resources conducted in February 2007 (The Rural Culture Association)

**Notes:**
1) The FY 2005 survey was administered to 2,100 male and female subjects between the ages of 20 and under 70 years residing in the Tokyo and Kinki areas and outlying regions. (Response rate of 87.3%)
2) The FY 2006 survey was administered to 2,500 male and female subjects between the ages of 20 and under 70 years residing in the Tokyo and Kinki areas and outlying regions. (Response rate of 91.8%)
Section 1: Improving the food self-sufficiency ratio and stable food supply

- Local consumption of local produce consists not only of actions that promote the local consumption of agricultural products produced locally but also of actions that build connections between producers and consumers, enabling them to meet and speak directly with one another.
- There are 14 thousand farmers markets set up nationwide, which draw 230 million shopping visits a year. A high percentage of these markets are attached to café and restaurants, making them also important as a means of revitalizing local agriculture and related sectors.
- More than 80% of users of farmers markets understand what is meant by the phrase local consumption of local produce. The degree of understanding and degree of implementation of local consumption of local produce are rising.
- In promoting local consumption of local produce, implementation of school lunch program is as important as farmers market. A target of 30% or more by FY 2010 has been set forth in the Basic Plan for the Promotion of Shokuiku for the percentage of local agricultural products used in school lunch program (at a prefectural level).
- In addition, the target for the frequency of rice-based meals served per week is approximately 3.0. There is a certain correlation between the frequency of rice-based meals served in school lunch programs per week and the level of per capita rice consumption. In order to smoothly pursue actions to expand the use of local agricultural products, it is necessary to train and cultivate coordinators who can organize the vast number of stakeholders involved.

Facilities affiliated with the farmers markets

<table>
<thead>
<tr>
<th>Facility</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cafe and restaurants</td>
<td>44.8%</td>
</tr>
<tr>
<td>Processing facilities</td>
<td>41.1%</td>
</tr>
<tr>
<td>Training and on-the-job training facilities</td>
<td>18.6%</td>
</tr>
<tr>
<td>Eateries</td>
<td>18.5%</td>
</tr>
<tr>
<td>Farms for experiencing farming</td>
<td>14.9%</td>
</tr>
<tr>
<td>Hot spring facilities</td>
<td>9.5%</td>
</tr>
<tr>
<td>Accommodation facilities</td>
<td>5.7%</td>
</tr>
<tr>
<td>Others</td>
<td>12.4%</td>
</tr>
</tbody>
</table>

Source: FY 2006 Nationwide Actual Condition Survey Pertaining to the Operational Contents of "Permanent, Manned, Year-Round Operations" of Farmers Markets (The Organization for Urban-Rural Interchange Revitalization, released in March 2007)

Degree of farmers market users awareness of the concept of local consumption of local produce and the degree to be practiced

- Understand: 81%
- Effort being made to practice: 61%
- No effort being made to practice: 20%
- Not aware of this concept: 9%
- I have heard of this concept: 4%
- Do not understand: 10%


Frequency of rice-based meals served in school lunch program per week and consumption of rice

<table>
<thead>
<tr>
<th>Region</th>
<th>Nationwide</th>
<th>Kanto I</th>
<th>Kanto II</th>
<th>Kinki I</th>
<th>Kinki II</th>
<th>Hokkaido</th>
<th>Tohoku</th>
<th>Kyushu</th>
<th>Hokuriku</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Number of times served)</td>
<td>52</td>
<td>54</td>
<td>56</td>
<td>58</td>
<td>56</td>
<td>60</td>
<td>62</td>
<td>64</td>
<td>64</td>
</tr>
<tr>
<td>(Consumption) kg per person, per year</td>
<td>2.5</td>
<td>2.7</td>
<td>2.9</td>
<td>3.1</td>
<td>3.3</td>
<td>3.5</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Actual Condition Survey Pertaining to the Serving of Rice-Based Meals (2006) (MEXT); Survey Pertaining to National Health and Nutrition (average for years between 2003 and 2005) (MHLW)

Chapter 2

- The Food Recycling Act\(^1\) was enacted in 2001 with the aim of building a recycle-based society by promoting the recycling of recyclable food resources\(^2\) and reducing the volume of food waste generated.
- While the percentage of food waste that was recycled in FY2006 rose to 59% for the food industry as a whole, the volume of food waste that was generated amounted to approximately 11 million tons, a figure that does not suggest that much progress has been made in efforts to reduce the volume of food wastes generated.
- In 2007, the Food Recycling Act was revised to reinforce the instruction and supervision provided by the government to food-related businesses and make it compulsory to report every year on the state of actions taken pursuant to this act. In addition, targets for the implementation of recycling carried out by individual businesses are set in accordance with the state of implementation.
- These revisions to the Food Recycling Act promote the building of a recycling loop whereby recyclable food resources generated by stores and other establishments operated by food-related businesses are recycled into fertilizer or feed, which is then used to produce agricultural, livestock, and fishery products, which are then used by the same food-related businesses.

Food wastes generated and recycled

Reviewing the system of certifying recycling business plans pursuant to the revised Food Recycling Act

*1: The Food Recycle Act is an abbreviation. The formal title is the Act on the Promotion to Recover and Utilize Recyclable Food Resources

*2: "Recyclable food resources" refer to food wastes (including leftovers generated in food manufacturing processes and in the process of dining out) that are effectively used as resources upon being recycled into fertilizer, feed, or other items.
(3) Ensuring food safety and consumer confidence

- Taking the food chain approach, and conducting the management for the prevention of problems and accidents are indispensable for ensuring food safety.
- In securing the safety of food, it is necessary to introduce and promote process management methods to conduct quality management by recording and inspecting each operation in the production process.

Strict ensuring of food safety through the food chain

Ministry of Agriculture, Forestry and Fisheries
(Ensuring safety by improving the process of production, distribution, and consumption of agricultural, livestock and fishery products)

Ministry of Agriculture, Forestry and Fisheries
(Regulations for controlling the production processes of agricultural, livestock and fishery products)

Collaboration

Food Safety Commission
(Scientific assessment of the influences on human health)

Source: MAFF

- The adoption of Hazard Analysis and Critical Control Point (HACCP) methods is required to secure the safety of food in the food industry.
- The government promotes the adoption of Good Agricultural Practices (GAP) to ensure the appropriate management of the entire agricultural production processes in agricultural production sites. The government aims to introduce GAP in key areas of production (2,000 production sites) for vegetables, fruits, rice, wheat, barley, and so on by FY 2011.

Measures for the adoption and promotion of GAP

Information exchange
- Set up a GAP section on the official website of the Ministry of Agriculture, Forestry and Fisheries

Dissemination and enlightenment
- Distribute pamphlets for the promotion of GAP
- Officially release a highly versatile, basic GAP model (basic GAP) nationwide

Practice support
- Officially release a GAP Adoption Manual
- Training for extension advisers
- Support demonstrated production areas through the provision of subsidies for securing food safety and security

Source: MAFF

Note: GAP constitutes of a sequence of good agricultural practices (process-checking practices) by which a farmer will (1) determine the inspection items pertaining his or her farm work, (2) carry out and maintain a record of farm work in accordance with these inspection items, (3) inspect and evaluate this record and identify improvement points, and (4) utilize these improvement points for the next planting of crops.
Chapter 2

Phytosanitary measures in accordance with the risks

Stage 1 Initiation
- Discovery of new pests
- Importing new agricultural products

Stage 2 Pest risk assessment
- Pests not yet present in the country
  - High possibility of introduction, establishment, and spread
  - High degree of economic importance
- Pest present in the country
  - Present but not widely distributed and executing official controls
  - High degree of economic importance
  - No official control
  - Low degree of economic importance

Stage 3 Pest risk management
- Identify pests to be subject to phytosanitary measures
- Select appropriate measure in accordance with degree of risk
- Execute appropriate phytosanitary measure
- Do not quarantine

System of monitoring food labeling and guidance

Ministry of Agriculture, Forestry and Fisheries
- Reinforce food labeling and standards monitoring office system
- Strategically monitor and engage in surveys, etc. with respect to transactions between businesses
- Undertake staff entry inspections and reinforce training to improve the ability to deal with the provision of information

Food and Agricultural Materials Inspection Center
- Reinforce spot surveys
- Establish a special food labeling survey team
- DNA inspections and other scientific analyses, etc.

Regional Agricultural Administration Bureaus
- Surveys conducted by regional agricultural administration offices and the comprehensive management of links with related bodies (the new establishment of overall labeling and standards guidance offices)

Regional Health Service Bureaus, regional offices of the Fair Trade Commission, and others
- Surveys conducted by regional health service bureaus, regional offices of the Fair Trade Commission, and others

Prefectural measures
- Prefectures in charge of the AUE Law
- Prefectures in charge of the Food Sanitation Law
- Prefectures in charge of the Law for Preventing Unjustifiable Lagniappes and Misleading Representation

National Police Agency (since November 2007)
Ministry of Land, Infrastructure, Transport and Tourism (since June 2005)

Source: MAFF
Section 2: Strengthening the structure of agriculture and bolstering high added values

(1) The current state of the farm labor force

- There were 75 thousand persons newly engaged in farming in 2006 (excluding new employees). There were 11 thousand new farmers aged 39 years old or younger, of which 2,480 were new graduates. In addition, there were 6,510 new employees of agricultural corporations and other such entities.
- The newcomers to the agricultural section face variety of challenges, such as the acquisition of farming technologies and the securing of agricultural land and funds. Those from a non-agricultural background care about whether acceptance and support measures by local public organization are in place when they decide where to start their farming.
- The government has provided precise support to new farmers to facilitate their entry into farming whether of experience or otherwise, in accordance with the following stages from before the commencement of farming to the establishment of farming, ① the information provision and consultations stage, ② experience and training stage, ③ entry preparations stage, and ④ the establishment stage.

### Difficulties encountered in commencing agricultural managements (multiple responses)

<table>
<thead>
<tr>
<th>Difficulty</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acquisition of farming technologies</td>
<td>60.6</td>
</tr>
<tr>
<td>Securing agricultural land</td>
<td>56.3</td>
</tr>
<tr>
<td>Securing funds</td>
<td>55.2</td>
</tr>
<tr>
<td>Selecting a farming area</td>
<td>25.2</td>
</tr>
<tr>
<td>Finding an advisor</td>
<td>16.7</td>
</tr>
<tr>
<td>Securing housing</td>
<td>15.5</td>
</tr>
</tbody>
</table>

Source: Status Survey on New Farmers in Agriculture (released in August 2007) (MAFF)

### Reasons for selecting a farming area (multiple responses, top five reasons given in 2006)

<table>
<thead>
<tr>
<th>Reason</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrative acceptance and support systems in place</td>
<td>35.5</td>
</tr>
<tr>
<td>Existence of employer or trainer</td>
<td>33.7</td>
</tr>
<tr>
<td>Excellent natural environment</td>
<td>28.4</td>
</tr>
<tr>
<td>Availability of agricultural land that could be purchased</td>
<td>28.2</td>
</tr>
<tr>
<td>Located near family home</td>
<td>22.2</td>
</tr>
</tbody>
</table>

Source: National Chamber of Agriculture

Note: Result of the questionnaire survey administered to 1,288 new farmers other than those belonging to farming households and farmers who have commenced agricultural managements after procuring their own land and other assets on their own (response rate 45.3%)

### Case study: Providing support for the resolution of problems encountered by new farmers

In Miyashiro Town, Saitama, a training center for rookie farmers has been established to accept trainees who wish to engage in farming. Training farms, farm machinery have been provided by the third sector, which was established using funds issued by the town, local agricultural cooperatives, and others in 2001.

Training farms are initially 3 to 5 ares and are gradually expanded. There are many cases in which a trainee will, upon the completion of his or her training, rent agricultural land from the owner of the site and settle in the town. The town agricultural committee has relaxed standards to help the new entrants lease agricultural land. In addition, technical guidance is provided by local instructional farm households and other parties and other actions to help trainees refine their management skills by enabling them to ship and sell goods through a farmers market operated by the third sector during their training period. Moreover, trainees are also being hired as part-time operators for contract farm work undertaken by the third sector as a means of securing income and thereby solving a short-term issue that affects many of them during the training period.

These initiatives have allowed nine people to engage in farming in a five-year period and are contributed to the revitalization of the local agricultural industry.
Female farmers play important roles, such as accounting for half of a population mainly engaged in farming and half of core persons mainly engaged in farming. However, the percentage of women in certified farmers and agricultural committee members remains at a low level.

More income-generating activities are being undertaken by women in rural areas but 60% of such businesses earn sales amounts of less than 3 million yen.

It is necessary to promote female participation and to ensure an environment that facilitates income-generating activities through appropriate evaluations of the roles of women.

### Percentage of certified farmers, etc. comprising female farmers

<table>
<thead>
<tr>
<th>Category</th>
<th>Male Count</th>
<th>Female Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population mainly engaged in farming</td>
<td>3,205</td>
<td>1,718</td>
<td>53.6%</td>
</tr>
<tr>
<td>Core persons mainly engaged in farming</td>
<td>2,105</td>
<td>939</td>
<td>44.6%</td>
</tr>
<tr>
<td>Certified farmers (entities)</td>
<td>228,593</td>
<td>6,774</td>
<td>3.0%</td>
</tr>
<tr>
<td>Agricultural committee members (persons)</td>
<td>45,379</td>
<td>1,869</td>
<td>4.1%</td>
</tr>
</tbody>
</table>

Sources: Survey on Movement of Agricultural Structure (MAFF)

Notes:
1) Figures for certified farmers are from 2007; figures for agricultural committee members are from 2005; all other figures are from 2006.
2) The number of female certified farmers includes the number of female independent applications and the number of joint applications filed by married couples.

### Changes in the number of income-generating activities by rural women and other variables

#### Percentage of such business earning sales amounts of less than 3 million yen (right axis)

- 1997: 63.6%
- 2001: 64.8%
- 2006: 59.3%

#### Number of cases consisting of income-generating activities

- 1997: 4,040 cases
- 2001: 7,327 cases
- 2006: 9,444 cases

Sources: Status Survey on Income-generating Activities by Rural Women (MAFF)

### Foreign trainees in the agriculture and food sectors

- In 2006, there were 90 thousand trainees who entered in Japan under the industrial training programs. There are 41 thousand persons who applied for transition to technical interns per year.
- There were 20 thousand trainees and 10 thousand technical interns in the agriculture, forestry, fisheries, and food sectors (FY 2006). These figures demonstrate upward trends.
- As the numbers of improper conduct by accepting bodies are increasing, there is a need for accepting bodies to engage in appropriate operations. Furthermore, some have requested the implementation of training programs in accordance with the actual situation surrounding agriculture.
Section 2: Strengthening the structure of agriculture and bolsters high added values

(2) Promoting agricultural cooperative reforms

- The Japanese agricultural cooperatives (JA) Group has made slight improvements in operating profits through reforms consisting of mergers of general agricultural cooperatives, the consolidation of regional organizations with national organizations, and a reduction in the size of their workforce. However, gross profits from operations remain on a downward trend due to a decline in operating turnover.

Main organizations and operations of the JA Group

- The management of agricultural cooperatives remains reliant on revenues generated by their credit and mutual relief operations to offset deficits piled up in the economic operations. The self-support accounting is required for each type of operation.
- In order to balance a budget in the economic operations of agricultural cooperatives, it is necessary to endeavor to expand usage by principal farmers through distribution cost reductions and operational reviews.
- Zen-Noh (National Federation of Agricultural Cooperative Associations) is currently engaged in fundamental reforms of its economic operations in accordance with a Rebirth Plan. In order to have principal farmers perceive results of these reforms, the acceleration of reforms is an issue.

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Receipts and disbursements by each type of operation corresponding to general agricultural cooperatives

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Chapter 2

(3) Reducing food supply costs

In order to reduce food supply costs by 20% within five years, various programs, formulated in line with the Action Plan for the Reduction of Food Supply Cost (established in September 2006), should be promoted steadily.

Progress of the Action Plan for the Reduction of Food Supply Cost

<table>
<thead>
<tr>
<th>Contents of action</th>
<th>Target</th>
<th>Progress</th>
</tr>
</thead>
<tbody>
<tr>
<td>○Reduce production costs by supplying and efficiently utilizing low-cost production materials, etc.</td>
<td>Expand the rate of dissemination of imported high-analysis fertilizers (25% less than items of same production type and same class) and BB fertilizers (between 10% and 25% less than items of same production type and same class).</td>
<td>By FY2010, imported high-analysis fertilizers should account for 43% of general high-analysis fertilizers while BB fertilizers should account for 50% of advanced compound fertilizers. Imported high-analysis fertilizers account for 49% (end of December 2007); BB fertilizers account for 55% (end of December 2007).</td>
</tr>
<tr>
<td></td>
<td>Establish model zones and promote actions to reduce material costs, such as by introducing new technologies.</td>
<td>Reduce the costs pertaining to three types of rice-cultivation materials (fertilizer, agricultural chemicals, and agricultural machinery) in model zones in three years by 15%. Model operations have been implemented in 7 zones nationwide (FY2007) and technologies for dispersing cropping periods in 6 of these zones have been demonstrated.</td>
</tr>
<tr>
<td>○Reduce distribution costs by reforming the wholesale market, streamlining logistics, and undertaking other initiatives.</td>
<td>Undertake demonstration experiments towards establishing an optimal logistics system based on links with the wholesale market.</td>
<td>By FY 2008, there should be 115 markets newly participating in joint shipping. 89 markets (end of FY 2007)</td>
</tr>
<tr>
<td></td>
<td>Establish and disseminate a work system based on the use of electronic tags and reduce logistical costs in markets where this system has been introduced.</td>
<td>Reduce logistical costs in markets where electronic tags have been introduced by about 25%. Demonstration testing (FY2005 to 2007) has shown that it is possible to shorten the time required for inspections and other functions by at least 25%.</td>
</tr>
</tbody>
</table>

Source: MAFF
Notes:
1) *1 price gaps are current as of July 2007.
2) *2 refers to bulk blend fertilizers consisting of a simple blend of nitrogen, phosphoric acid, and potash.

Against a backdrop of soaring prices of crude oil and international prices of grains and soybeans, light and heat power expenses, and the prices of feed and fertilizer have been increasing. With respect to the costs of production materials, it is necessary for concerned parties to continue to reduce such costs while taking into consideration the fact that relevant issues are emerging that cannot be resolved through the application of management efforts.

Year-on-year rate of rise or decline in the index of prices of agricultural production materials (general) and the degree of contribution by type

Source: Statistical Survey on Prices in Agriculture (MAFF)
Section 2: Strengthening the structure of agriculture and bolstering high added values

(4) Production and policies by item

- Prices of formula feed have been increasing sharply due to a rise in international grain prices and ocean freight rates, such that they are now 20% higher compared to prices in 2006. This increase has in turn led to an overall increase of between 5% and 15% in the cost of producing livestock.
- Under the stabilization system of formula feed prices, the practice of normal compensation has been invoked continuously since the third quarter of FY2006. Since the fourth quarter of FY2006, abnormal compensation has also been invoked to moderate the impact of these sharp price increases. Livestock management has nevertheless been compelled to shoulder a larger burden.
- In light of the fact that there has been insufficient price shifting in the face of the soaring prices of formula feed, it was decided to implement emergency support measures for livestock and dairy farms, in February 2008. At present, there are indications that formula feed prices will remain at a high level, the government is required to review the stabilization system of formula feed prices.

Formula feed prices

<table>
<thead>
<tr>
<th>Yen per ton</th>
</tr>
</thead>
<tbody>
<tr>
<td>60,000</td>
</tr>
<tr>
<td>55,000</td>
</tr>
<tr>
<td>50,000</td>
</tr>
<tr>
<td>45,000</td>
</tr>
<tr>
<td>40,000</td>
</tr>
<tr>
<td>35,000</td>
</tr>
<tr>
<td>30,000</td>
</tr>
</tbody>
</table>

Source: MAFF
Note: Prices of formula feed are weighted average prices (tax included) of feed corresponding to all breeds of livestock as supplied loosely and in bags on an ex plant basis.

2008 emergency measures for livestock production and dairy farming

- **Emergency measures for the support of dairy farmers**
  - Grants to prefectural dairy farmers for such initiatives as those directed at the expansion of the production of self-supplied feed based on the *Plan for the Reinforcement of Dairy Farming (Three-Year Plan)* (single-year limitation applied).
  - Create support measures for mutual compensation as undertaken by producer groups and other initiatives as part of a safety net to be exercised during downturns in demand for drinking milk.
  - Raise the unit amounts of grants for producers of manufacturing milk taken in consideration of the sharp increases in the feed prices and other factors.
  - Increase the required amounts for businesses undertaking structural reforms in the demand for raw milk subject to the expansion of the supply of raw milk used for raw cream and other products as newly switched substitutes for butter and skim milk.

- **Emergency measures for the support of beef cattle farmers**
  - Raise the guaranteed base price of beef cattle and the stable price of beef taken in consideration of the sharp increases in the feed prices and other factors.
  - Partially offset on an emergency basis excess in the property expenses of beef cattle fattening operations due to soaring prices of feed and other factors.
  - Support actions promoting increases in productivity through improvements in fertility and reductions in accident rates.

- **Emergency measures for the support of pig farmers**
  - Raise the stable prices of pork taken in consideration of the sharp increases in the feed prices and other factors.
  - Implement emergency operational support measures based on the use of funds pertaining to local pork businesses.
  - Support actions promoting increases in productivity through improvements in fertility and reductions in accident rates.

- **Emergency financing measures for the support of livestock and dairy management entities**
  - Increase the credit limit for special support funds pertaining to animal fodder.
  - Establish aid-attached leasing programs for individuals for the improvement of livestock and dairy farming productivity.

- **Emergency support for reinforcing the infrastructure of self-supplied feed**
  - Support the planting of high-yield crops such as new premature corn on upland fields where non-feed crops have been planted.
  - Support the expansion of the production and use of domestically produced feed that can be self-supplied through the expansion and establishment of the use of such types of feed as feed-use rice and eco-feed.

Source: MAFF
Chapter 2

- Wheat production (2007) stood at 909,700 tons, exceeding the target for production efforts in 2015 (860,000 tons). However, improvements are required in quality, such as the inconsistent quality of wheat when compared to wheat produced overseas.
- For stable production of wheat and barley, it is necessary to secure stable income through reductions in production costs. It is also required to promote fostering principal farmers and production measures, such as the introduction of new varieties.
- At 229,400 tons, the production volume of soybeans (2007) remained at the same level as the previous year. Domestic production is almost entirely earmarked for food uses, with 60% used for making tofu and 10% used for making boiled beans and side dishes.
- In addition to quality improvements, homogenization and the undertaking of large-lot transactions, the steady pursuit of production-area reforms, including the promotion of the development of new technologies and varieties, are required in order to build stable business relationships with users.

### Production of wheat and barley, etc.

![Graph of Wheat and Barley Production]

- All included costs of production per 10 a of wheat:
- Yield target per 10 a of wheat for 2015 (right axis)
- Production of barley and naked barley
- Production of wheat

Sources: Statistics on Crop and Statistical Survey on Farm Management and Economy (Production Costs of Rice, Wheat and barley) (MAFF)

### Production of soybeans

![Graph of Soybean Production]

- All included costs of production per 10 a of soybeans:
- Yield target per 10 a of soybeans for 2015 (right axis)
- Production of soybeans

Sources: Statistics on Crop and Statistical Survey on Farm Management and Economy (Production Costs of Industrial Crops) (MAFF)

- Amid growing demand for vegetables for use in the processing and food service sectors, the self-sufficiency ratio in vegetables has been declining due to rising imports attributed to their stable year-round production, homogeneity, and low prices.
- While the demand for fruits, ranging from 8 to 9 million tons, remains in recent years, the self-sufficiency ratio in fruits has been declining, due to reduced domestic production and an increase in imports of processed fruit products.
- Soaring prices of crude oil in recent years have had an impact on greenhouse horticulture farming. Costs of light and heat power account for approximately 20% to 30% of the total costs of the agricultural managements. Thus, increases in the price of bunker A are directly linked to increases in production costs. The government has been supporting efforts to improve facilities for securing better heat efficiency and warmth retention properties.

### The volume of imports of and the self-sufficiency ratio in vegetables

![Graph of Vegetable Imports and Self-Sufficiency]

- Rate of self-sufficiency (right axis)
- Volume of imports
- China

Sources: Trade Statistics (MOF); Food Balance sheet (MAFF)

Notes:
1) Each rate of self-sufficiency is a value for the given fiscal year calculated on a weight basis.
2) Import volumes are values that are inclusive of processed goods.

### The volume of domestic production of, volume of imports of, and the self-sufficiency ratio in fruits.

![Graph of Fruit Production, Imports, and Self-Sufficiency]

- Rate of self-sufficiency (right axis)
- Imports
- Domestic production

Sources: Food Balance sheet (MAFF)

Notes:
1) Each rate of self-sufficiency is a value for the given fiscal year calculated on a weight basis.
2) Import volumes are production-converted values.
(5) Export promotion of agricultural, forestry and fishery products and foods

- Increases in the exports of fishery products contribute significantly to increases in the total exports of agricultural, forestry and fishery products and foods. More recently, the contribution made by agricultural products is also considerable. While exports are primarily directed to Asia and the United States, Hong Kong overtook the United States to become the leading export destination in 2007.

- In overviewing the exports item by item, the growth in exports of Chinese yam, apple, strawberry, beef, poultry, green tea, and chocolate sweets and other confectionery products has been quite remarkable in recent years. While rice is popular in Taiwan, Hong Kong, the United States, and others, rice exports to China resumed for the first time in four years in June 2007. A total of 124 tons had been shipped up to March 2008.

Rate of increase in and degree of contribution to the total value of exports of agricultural, forestry and fishery products and foods

![Rate of increase in and degree of contribution to the total value of exports of agricultural, forestry and fishery products and foods](image)

Source: Trade Statistics of Japan (MOF)

Notes:
1) As figures corresponding to each item indicate the degree of contribution, they differ from the rates of increase per item in terms of value.
2) The export value for agricultural products are exclusive of alcoholic beverages and tobacco products; the export value for fishery products are exclusive of pearls; processed foods are classified as agricultural products or fishery products according to their raw ingredients.

Major export markets of Japanese agricultural, forestry and fishery products and foods

![Major export markets of Japanese agricultural, forestry and fishery products and foods](image)

Source: Trade Statistics of Japan (MOF).

Examples of items which have increased export value

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Rice (excluding aid purpose)</td>
<td>500 million yen</td>
<td>124%</td>
<td>244%</td>
<td>Popular in Taiwan, Hong Kong, the US and others due to the popularity of sushi and other types of Japanese food; exports to China resumed in June 2007.</td>
<td>Beef</td>
<td>2.0 billion yen</td>
<td>314%</td>
<td>1,559%</td>
<td>Exports to the US and Hong Kong are gaining momentum.</td>
</tr>
<tr>
<td>Chinese yam</td>
<td>1.9 billion yen</td>
<td>104%</td>
<td>92%</td>
<td>Exported to Taiwan and the US as an ingredient in herbal cuisine.</td>
<td>Poultry</td>
<td>900 million yen</td>
<td>302%</td>
<td>268%</td>
<td>Exports to Vietnam are increasing due to an increase in demand for chicken feet and other poultry products.</td>
</tr>
<tr>
<td>Apple</td>
<td>8.0 billion yen</td>
<td>140%</td>
<td>301%</td>
<td>Large apples are popular as an upscale gift item in Taiwan.</td>
<td>Green tea</td>
<td>3.2 billion yen</td>
<td>105%</td>
<td>234%</td>
<td>Green tea is undergoing a boom in popularity in Europe and the US.</td>
</tr>
<tr>
<td>Strawberry</td>
<td>100 million yen</td>
<td>123%</td>
<td>1,838%</td>
<td>Popular as a gift item in Hong Kong and Taiwan.</td>
<td>Confectionery</td>
<td>11.5 billion yen</td>
<td>115%</td>
<td>175%</td>
<td>Products made with a significant amount of cocoa, which is said to be effective for preventing arteriosclerosis, are especially popular in China and Hong Kong.</td>
</tr>
</tbody>
</table>

Source: Trade Statistics of Japan (MOF).
Chapter 2

The Comprehensive Strategy for Exporting Agricultural, Forestry and Fishery Products and Foods has been adopted in May 2007. According to the strategy, the public and private sectors are to cooperatively make effort to implement the strategy by ① accelerating quarantine negotiations and otherwise improving the export environment, ② setting important target countries, drawing roadmaps, and otherwise undertaking strategic efforts by item, ③ providing matching support and otherwise supporting highly-motivated producers and exporters, and ④ sponsoring prioritized, strategic events, such as when resuming rice exports to China, and otherwise spreading Japanese food and ingredient abroad.

### Examples of improving the export environment

<table>
<thead>
<tr>
<th>Adopting the HACCP approach</th>
<th>Adopting the GAP approach</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fishery products / For EU: 21 facilities; for the US: 225 facilities</td>
<td>While the attainment of GLOBALGAP may be required for shipments to the retail sector in the EU and the cost of inviting inspectors from overseas was significant: OIA system of Japanese GLOBALGAP inspectors has been established (April 2007);</td>
</tr>
<tr>
<td>Beef / For the US: 4 facilities; for Hong Kong: 4 facilities</td>
<td>○ Support in respects of the introduction of a system of GAP that can even accommodate the needs of advanced farmers, including support offered in terms of the provision of guidance and advice at production sites by diffusion instructors, is being provided.</td>
</tr>
<tr>
<td>● The complex EU-HACCP rules are not sufficiently comprehended by concerned parties</td>
<td>○ Support improvements of facilities in accordance with standards and engage in quality control</td>
</tr>
<tr>
<td>Steps that need to be taken</td>
<td>Current status</td>
</tr>
<tr>
<td>◆ Clarify certification standards</td>
<td>○ Fishery products / For EU: 21 facilities; for the US: 225 facilities</td>
</tr>
<tr>
<td>● Compile examples of certified facilities</td>
<td>○ Beef / For the US: 4 facilities; for Hong Kong: 4 facilities</td>
</tr>
<tr>
<td>○ Publicize certification standards</td>
<td>● The complex EU-HACCP rules are not sufficiently comprehended by concerned parties</td>
</tr>
<tr>
<td>● Utilize private-sector institutions (technical advice)</td>
<td>○ Clarify certification standards</td>
</tr>
<tr>
<td>● Hold workshops</td>
<td>○ Compile examples of certified facilities</td>
</tr>
<tr>
<td>○ Support improvements of facilities in accordance with standards and engage in quality control</td>
<td>○ Publicize certification standards</td>
</tr>
</tbody>
</table>

Source: MAFF
Note: For fishery products exported to the United States, the number of facilities is equal to the sum of the number of facilities certified by the MHLW and the number of facilities certified by the Japan Fisheries Association.

### Exporting rice to China

With respect to rice exports, various initiatives directed primarily at the East Asian market are undertaken by Fukui Prefecture, Niigata Prefecture, and various other regions. In addition, rice exports to China resumed in 2007 after four years during which shipments were not made to that country.

Recently, demand in China for japonica rice has risen thanks to an increase in income that has been on pace with economic growth, such that japonica rice accounts for 30% of rice production by volume (2004). 1.5% (20 million people) of the Chinese total population consists of the wealthy class, those who earn 100 thousand yuan or more a month (approximately 1.5 million yen). One rank down is the rapidly growing proprietary class (labeled “next rich”)¹, those who earn between 50 thousand (approximately 750 thousand yen; a typical businessperson in Shanghai earns 45 thousand yen a month) and 100 thousand yuan a month. This class of people is estimated to comprise nearly 10% of the population of 16 key cities or more than 50 million people nationwide. In particular, a notable characteristic of young members of the proprietary class is their inclination to spend considerable sums of money on their favorite items. It is important to strategically engage in the exporting of agricultural products, including rice, to these classes of potential consumers.

¹: According to Next Rich (Proprietary Class) Structure and Market (Nomura Research Institute). The proprietary class has emerged in urban centers and is recognized as a class with the inclination to purchase automobiles, real estate, and other upscale items.

### Case study: Initiative to brand WAGYU beef using a universal mark

As cases in which foreign produced beef featuring the WAGYU label has been seen being bought and sold in foreign restaurants and supermarkets, a universal WAGYU mark was made to prove that given cuts of beef constitute genuine Japanese-produced WAGYU beef. Japanese beef is herewith different from beef produced in other countries. Applications to register the mark as a trademark have been filed in Japan and elsewhere by the Japan Livestock Industry Association. Businesses dealing with Japanese-produced beef will further promote the branding of Japanese beef by printing out the mark on packages for export and using this mark by, for example, affixing a sticker to products at the time of sale.
(6) Various actions towards strengthening the structure of agriculture and the bolstering of high added value

- Japanese agricultural, forestry, and fishery products and foods thereof are the products of valuable intellectual property shaped by the technologies, traditions, and culture and have unique qualities and strengths that have no parallels in other countries. In order to reinforce the global competitiveness and improve the profitability of domestic agriculture and thereby to vitalize the local economy, we will need to proactively and strategically harness intellectual property while protecting it in an appropriate manner.

**Intellectual property in the agricultural, forestry and fishery sectors**

<table>
<thead>
<tr>
<th>Examples of intellectual property rights</th>
<th>Important intellectual properties other than intellectual property rights</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Breeder’s right (Protecting new plant varieties)</td>
<td>• Time-honored agricultural technologies</td>
</tr>
<tr>
<td>• Patent right (Such as for a method of aerial cultivation of squash and genes for which useful features have been discovered)</td>
<td>• Time-honored plant varieties (such as Koshi-Hikari rice and Fuji apples)</td>
</tr>
<tr>
<td>• Model utility right (Such as a pipe with which Chinese yams can be cultivated to conform to an ideal shape)</td>
<td>• Genetic resources pertaining to Japanese cattle and other animals</td>
</tr>
<tr>
<td>• Trademark right</td>
<td>• Brands (such as local brands and corporate brands)</td>
</tr>
<tr>
<td>• Design right (Such as for an easy-to-use pruning shear)</td>
<td>• Food culture and traditional culture</td>
</tr>
<tr>
<td></td>
<td>• Rural landscapes formed by the efforts of people</td>
</tr>
</tbody>
</table>

Source: MAFF

- The government promotes specific measures pursuant to the *Ministry of Agriculture, Forestry and Fisheries Strategy on Intellectual Property* (March 2007). Such measures include the creation of new demand and new industries based on the use of research and development, the formulation of *Intellectual Property Handling Guidelines* for producers and on-site instructors, the fortification of responses to the infringement of rights, and the provision of awareness education and knowledge to producers engaged in the agriculture, forestry, and fisheries and other relevant parties.

**Main measures contained in the Ministry of Agriculture, Forestry and Fisheries Strategy on Intellectual Property**

1. Creating and utilizing

   - **Research and technological development**
     - Create new demand and new industries based on the use of research and development.
     - Attain genetic patents and promote the creation of new varieties and the improvement of existing breeds.
     - Identify research needs and promote the commercial viability of research results:
       - (1) Build an intellectual property network for the agricultural, forestry, and fishery industries;
       - (2) Reinforce links with a view to opening up new sectors.

   - **Production sites and rural areas**
     - Formulate intellectual property handling guidelines for producers and on-site instructors:
     - Promote branding and commercialization through a process of uncovering and gaining renewed awareness of local resources:
       - (1) Rediscover and harness accessible landscapes, elements of food culture, and other local resources;
       - (2) Provide support for local branding.

2. Protection

   - Reinforce responses against infringements of rights
   - Reinforce the protection of the rights of breeders overseas
   - Establish a point of consultations in regards to infringements that occur overseas

3. Education and the training of personnel

   - Promote awareness education and the diffusion of knowledge among producers engaged in agriculture, forestry and fisheries and researchers, extension advisors, and others.

Source: MAFF
Chapter 2

The government promotes the following various researches and developments to address diverse policy issues pertaining to food, agriculture, and rural areas: ① research and development projects undertaken with a view to improve productivity significantly under the theme of developing production systems designed to save power use, save energy use, and reduce costs, ② the development of new innovative varieties to contribute to the resolution of issues relating to food, the environment, and energy using of genomics, and ③ research and development projects undertaken with a view to secure food safety and consumer trust.

Case studies of research and development projects designed to save power usage, save energy usage, and reduce costs or to contribute to the resolution of issues relating to food, the environment, and other matters

Non-tillage cultivation technologies for use with paddy rice, wheat, and soybeans

No-tillage seeding

- With no-tillage seeding, seeds are deposited into grooves cutting the straw from the previous cropping.
- Paddy rice, wheat, and soybean are sowed; yields are more or less the same as yields from conventional cultivation.

Strawberry harvesting and preparation robots

- Strawberry harvesting robot
- Packaging robot

Developing crops to contribute to the resolution of food and environmental issues

The development of wheat that is tolerant to drought conditions and salt damage using DREB (dehydration-responsive element binding) genes that issue instructions to protect the plant from dry and salt conditions.

Genetically modified wheat using DREB gene

Under drought conditions

Rice

Detecting of polymorphism

Rice

Detection of polymorphic length of the amplified DNA fragments (differences in the positions of the bands)

Sources: MAFF

Case studies of research and development projects undertaken with a view to securing food safety and consumer trust

Packeting robot

Sources: MAFF
Chapter 2

Section 3: Revitalizing rural areas through the promotion of co-existence and interactions

(1) Present state of rural areas and communities

- The Japanese population is on a downward phase. The depopulation rate of rural areas is faster than that of Tokyo area and Nagoya area. The population of rural areas is expected to be reduced to 80% of current levels in 30 years.
- Although community facilities and information and communications infrastructures improved in the rural areas, the coverage of sewage facilities is low in such towns and villages with small populations. A significant gap remains between such locations and urban centers.
- Rural communities play various roles in local areas that go beyond agricultural production. There are presently 139 thousand rural communities nationwide (2005), of which 110.9 thousand communities have maintained community functions (excluding rural communities that are wholly included in urbanization promotion areas).
- Many of communities that may potentially disappear are communities with low numbers of people and households and communities located in mountainous areas. The local infrastructure should be maintained and that support should be extended in respects of the lives of local residents in such communities. The promotion of agriculture is needed alongside the provision of support for daily living activities.

The rate of prevalence of sewage facilities (by size of municipal population)

The probability that community will disappear and types of area

Administrative measures applied to communities that may potentially disappear (multiple responses)


Note: Questionnaire survey administered to 775 underpopulated municipalities as of 1999 and 2006 (response rate 100%).
In municipalities, their fiscal scale and the number of regular staff are on a declining trend. Furthermore, their staffs relating to agriculture, forestry, and fisheries and their budgets relating to agriculture have been shrinking significantly. In contrast to other municipalities, municipalities that merged in FY2003 and FY2004 have experienced greater reductions in the sizes of their staffs relating to the agriculture, forestry, and fisheries and in agricultural budget as disbursed out of general funds.

The mergers of municipalities have caused some concerns in that the unique characteristics and salient features of an area could blur over in terms of the enthusiasm for agriculture and in terms of land use plans between former municipalities. At the same time, it is anticipated that there will be positive effects in terms of the utilization of diverse and abundant local resources, adjustments made to wide-area land use by way of extraterritorial cultivation, the establishment of specialized sections, and the upgrading of positions filled by employees in charge to full-time posts.

It is important to promote reviewing land-use plans, establishing a system for the promotion of agricultural administration through coordination among organizations concerned, and to make efforts to use the advantages that come from municipal mergers, including the use of local resources and brandings possibilities.

### The number of staff members and ordinary accounting settlement amounts in municipalities

<table>
<thead>
<tr>
<th>Staff member numbers</th>
<th>Accounts related to agriculture</th>
<th>Accounts related to welfare</th>
</tr>
</thead>
<tbody>
<tr>
<td>General administration</td>
<td>Ordinary accounts</td>
<td>(Staff member numbers)</td>
</tr>
<tr>
<td>Agriculture, forestry, and fisheries</td>
<td>Accounts related to agriculture</td>
<td>(Account settlement amounts)</td>
</tr>
<tr>
<td>Local welfare</td>
<td>Ordinary accounts</td>
<td></td>
</tr>
</tbody>
</table>

Source: Condition Survey Pertaining to Regional Finances (MIC)

Notes:
1) The figure corresponding to the number of staff members with ties to agriculture, forestry, and fisheries is a percentage value current as of April 1, 2006, with April 1, 2001 set as the base date.
2) The figures corresponding to the account settlement amounts are percentage values for FY2005, with FY2000 set as the base year; includes the expenses of service associations.
3) The account settlement amount relating to agriculture equals the sum of agricultural expenses, livestock expenses, and agricultural land expenses; the account settlement amount relating to welfare equals local welfare expenses.

### Timing of municipal mergers; number of staff members related with agriculture, forestry, or fisheries ; agriculture-related expenses

<table>
<thead>
<tr>
<th>Municipalities other than those referred to on the left</th>
<th>Ordinary accounts</th>
<th>Accounts related to agriculture</th>
<th>Accounts related to welfare</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fiscal year</td>
<td>Municipalities other than those referred to on the left</td>
<td>Ordinary accounts</td>
<td>Accounts related to agriculture</td>
</tr>
<tr>
<td>FY2003 mergers</td>
<td>Municipalities other than those referred to on the left</td>
<td>Ordinary accounts</td>
<td>Accounts related to agriculture</td>
</tr>
</tbody>
</table>

Source: Condition Survey on Regional Finances (MIC)

Notes:
1) Figures corresponding to the number of staff members with ties to agriculture, forestry, and fisheries are percentage values current as of April 1, 2006, with April 1, 2003 set as the base date.
2) The figures corresponding to the account settlement amounts are percentage values for FY2005, with FY2002 set as the base year; agriculture-related expenses equal the sum of agricultural expenses, livestock expenses, and agricultural land expenses disbursed out of general finances.
3) Municipal merger figures are based on the latest merger figures up to FY2005; Municipalities other than those referred to on the left equals the sum of the number of municipalities that merged in FY2005 and the number of municipalities that have not merged since FY1999.

### Case study: Community development based on the use of local resources as spurred by a municipal merger

Myoko City in Niigata Prefecture was established by a merger of municipalities located at the foot of Mount Myoko. With a start of the city named after Mount Myoko, it has carried out community development by utilizing local resources, such as the local climate, culture, and agriculture, under the philosophy of “Creation of Bio-Region.” It aims to develop areas where people can coexist with nature and where all life forms can be fostered securely by establishing the following four points of appeal: ① “slow tourism,” which allows visitors to tap into a pool of spiritual richness while immersed at a leisurely pace in the natural environment of the Myoko area, ② “green tourism,” which allows visitors to appreciate the natural environment of the Myoko area through direct exposure to the natural environment and farms, ③ “medical tourism,” which allows visitors to recover their humanity and enjoy a healthy state of being while standing amid an unspoiled natural environment and hot spring facilities, and ④ “art and culture tourism,” which allows visitors to relish the atmosphere to be gained from getting in touch with examples of local nature, culture, and art. In addition, Myoko city has built a system for harnessing new interactions for the development of the community has been built, such as through the establishment of a Myoko Sanraku Yume (piedmont dream) Fund to accept contributions from persons with whom the philosophy of community development resonates and through the founding of the Myoko City Residents PR Oendan (supporters group).
Section 3: Revitalizing rural areas through the promotion of co-existence and interactions

Recently, in the hilly and mountainous farming areas, wildlife damage has become more severe and extensive nationwide. The damage to agricultural products amounts to around 20 billion yen, 70% and 30% of which are attributable to animals and birds, respectively. Wild boars, deer, and monkeys account for over 80% of damage caused by animals.

Wildlife damage reduces the motivation of farmers to engage in farming, and is one of the factors behind the increase in abandoned cultivated land, which in turn invites more wildlife damage as part of a vicious cycle. There are now more areas that are not able to adequately engage in damage prevention measures because of the aging of persons engaged in agriculture, forestry, or fisheries and a reduction in the number of and aging of hunters who normally take the lead in capturing wildlife.

Measures to cope with wildlife damage should be comprehensively promoted, such as by preventing damage through adjustments to population sizes of wildlife through capture, the establishment of security fences and the management of habitat environments through improvements to satochi-satoyama areas based on the incorporation of the concept of coexistence with wildlife. In December 2007, the Act on Special Measures for the Prevention of Damage due to Wildlife was enacted as a lawmaker-initiated legislation. This law allows municipalities to damage control independently.

Key points of the Act on Special Measures for the Prevention of Damage due to Wildlife

Measures, such as the ones listed below, have been taken in municipalities that have drafted damage prevention plans:

1. Take necessary financial administration measures;
2. Enable a devolution of the right to authorize the trapping of wildlife from the prefectural government;
3. Facilitate the establishment of teams to implement measures to address wildlife damage.

Source: MAFF

Basic concept underlying measures to address wildlife damage

- Population control based on prefectural plans
- Capture through the use of traps and hunting
- Ascertain areas of distribution, etc.

On taking into account coexistence with wildlife:
- Make improvements to satochi-satoyama areas;
- Make improvements to and protect forests through cultivation on broad-leaved forests and other initiatives;
- Appropriately manage wildlife sanctuary zones, etc.

Source: MAFF

State of wildlife damage compared to 10 years ago

Damage caused to agricultural crops by wildlife (FY2006)
(2) Reinforcement of the cooperation with the food industry and other industries

- The food and drink manufacturing industry has traditionally been linked with the local agricultural sector and is an important industry for local economies. In particular, the shipments by food manufacturing industry accounts for a high percentage of shipments by all manufacturing industry in the regions such as Hokkaido, Tohoku, Kyushu, and Okinawa.
- However, business sentiment has become more cautious lately. In particular, business sentiment is flagging in the food manufacturing industry, restaurant and lodging industry. A gap has emerged between urban centers and countryside due to the stagnancy of the agricultural, food, and other related industries.
- Revitalizing the food industry is an important component of revitalizing local economies, agriculture, and rural areas, and the government will promote various programs for local revitalization through the promotion of coordination among the agricultural, commercial, and industrial sectors.

### Percentage of the monetary volume of shipped manufactured output accounted for by the monetary volume of manufactured food and drink shipments (2005; top 10 prefectures)

<table>
<thead>
<tr>
<th>Prefecture</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kagoshima</td>
<td>49.5</td>
</tr>
<tr>
<td>Hokkaido</td>
<td>37.6</td>
</tr>
<tr>
<td>Okinawa</td>
<td>37.1</td>
</tr>
<tr>
<td>Aomori</td>
<td>29.0</td>
</tr>
<tr>
<td>Miyazaki</td>
<td>26.9</td>
</tr>
<tr>
<td>Tottori</td>
<td>23.9</td>
</tr>
<tr>
<td>Kyoto</td>
<td>21.5</td>
</tr>
<tr>
<td>Saga</td>
<td>21.5</td>
</tr>
<tr>
<td>Miyagi</td>
<td>20.7</td>
</tr>
<tr>
<td>Iwate</td>
<td>20.2</td>
</tr>
</tbody>
</table>

Source: Census of Manufactures (METI)
Note: Includes tobacco and feed. Based on a full workforce scale.

### Business sentiment of companies (percentage of companies with a positive sentiment less percentage of companies with a negative sentiment)

<table>
<thead>
<tr>
<th>Year</th>
<th>2006 March</th>
<th>2007</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive business conditions</td>
<td>↑</td>
<td>↓</td>
<td>↓</td>
</tr>
<tr>
<td>Information and communications</td>
<td>25</td>
<td>20</td>
<td>15</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>20</td>
<td>15</td>
<td>10</td>
</tr>
<tr>
<td>All industries</td>
<td>15</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td>Food products within the manufacturing industry</td>
<td>10</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Restaurants and lodgings</td>
<td>5</td>
<td>0</td>
<td>-5</td>
</tr>
<tr>
<td>Negative business conditions</td>
<td>↓</td>
<td>↑</td>
<td>↑</td>
</tr>
</tbody>
</table>

Source: Short-Term Economic Survey of enterprises in Japan (Bank of Japan)
Note: Full-scale aggregate totals.

### Actions for revitalizing local economies through the promotion of coordination among the agricultural, commercial, and industrial sectors and by way of other means

I. Action to promote coordination among the agricultural, commercial, and industrial sectors in order to revitalize local economies
   - Effectively support the promotion of sales relating to local products, the development of new products, and the promotion of innovation in local industries, among others, by promoting the mutual utilization of measures and the focused application of measures.

II. Joint implementation of the Let’s fully savor Japanese brands! and Awesome Japan! campaigns
   - In order to endeavor to expand the consumption of domestic agricultural, forestry, and fishery products, encourage industry groups and other relevant parties under the jurisdiction of each ministry and promote the development of these campaigns into a national movement.

III. PR and other initiatives for promoting coordination among the agricultural, commercial, and industrial sectors
   - Each ministry shall establish links, undertake public relations activities to support coordination among the agricultural, commercial, and industrial sectors, and provide education to encourage adoption to businesses and other concerned parties belonging to the agricultural, commercial, and industrial sectors through one another’s network and other channels.

IV. Establishment of legal schemes
   - Two bills relating to coordination among the agricultural, commercial, and industrial sectors containing provisions for the support of such initiatives as the development of and provision of sales support for new products to be undertaken by producers in agriculture, forestry, and fisheries and small- and medium-sized businesses acting in collaboration was submitted to the National Diet at the 169th session.
   - A bill to promote bio-fuel production from biomass derived from the agricultural, forestry, and fishery industries was submitted to the National Diet at the 169th session.

Source: MAFF, METI
Section 3: Revitalizing rural areas through the promotion of co-existence and interactions

While there are surveys indicating that the main purpose of lodging-based travel is the "eating," links between agriculture and lodging-related sectors vary regionally, such that these links need to be reinforced.

Where the procurement of local agricultural products by local inns and hotels has increased and links between agriculture and the lodging sector have been reinforced, estimates of a boost in local agricultural production reveal an increase of between approximately 2% and 4% in the monetary amount of agricultural production in the Kinki and Chubu regions, where links are currently weak.

By expanding the scope of links, such as through the planning and development of souvenirs made using specialty products and travel products offering first-hand exposure to agriculture and rural areas, further effects in terms of agricultural production and the ability to draw tourists can be expected.

Rate of increase in the monetary amount of agricultural production where links between agriculture and the lodging sector have been reinforced

<table>
<thead>
<tr>
<th>Region</th>
<th>Rate of Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hokkaido</td>
<td>0.3%</td>
</tr>
<tr>
<td>Tohoku</td>
<td>0.3%</td>
</tr>
<tr>
<td>Kanto</td>
<td>1.7%</td>
</tr>
<tr>
<td>Chubu</td>
<td>1.8%</td>
</tr>
<tr>
<td>Kinki</td>
<td>4.2%</td>
</tr>
<tr>
<td>Chugoku</td>
<td>1.1%</td>
</tr>
<tr>
<td>Shikoku</td>
<td>0.6%</td>
</tr>
<tr>
<td>Okinawa</td>
<td>1.7%</td>
</tr>
</tbody>
</table>

Source: Regional Input-Output Table (METI)

Notes:
1) Agriculture corresponds to the aggregate sum of crop farming and stockbreeding; the lodging sector corresponds to inns and other lodging facilities.
2) The Kanto region includes Yamanashi, Nagano, Niigata, and Shizuoka Prefectures; the Kinki region includes Fuku Prefecture; and the Chubu region consists of Toyama, Ishikawa, Gifu, Aichi, and Mie Prefectures.
3) For the purpose of arriving at estimated figures, the following assumptions were made: ① the amount of demand in the lodging sector of each area is a certain value as of the most recent point in time (2000) and ② Kyushu, where the production multiplier effect exerted by the lodging sector on agriculture is greatest, was regarded as a reference standard such that it was assumed that links between agriculture and the lodging sector will be reinforced in other areas to a level approximately equivalent to that corresponding to Kyushu.
4) Rate of increase = [monetary amount of increase in agricultural production in connection with the reinforcement of links] / [monetary amount of agricultural production as of 2000]

Case study: Stabilizing farming and raising the level of production motivation through the establishment of links with the lodging sector

An inn located in Yufu City (formerly Yufuin Town), Oita Prefecture, made the decision to serve dishes that were particular to the Yufuin area, in response to requests made by guests who wished to eat cuisine made using local ingredients. Initially, it was difficult to lay in a stock of local agricultural products, even if such products were desired. While a farmer operating 2 hectares open field and 12 greenhouses turned down the inn at first, since the detailed orders of the inn could not be accommodated, the head chef of the establishment called at the field every day until he was finally able to convince the farmer to begin offering the desired products.

As a result, the head chef discussed a yearly crop plan with the farmer and managed to secure a stable supply of fresh high-quality agricultural products suitable for culinary uses. In addition, the farmer benefited from greater stability in his farming and also realized an increase in revenue, such as by selling rice that normally sold for 6 to 6.3 thousand yen per 30-kilogram package for 10 to 15 thousand yen to the inn.

There has been a gradual increase in the number of inns that deal in local agricultural products, including those whose chefs order vegetables directly from farmers and those that lay fresh vegetables in stock by patronizing local farmers markets. Furthermore, various actions are being undertaken with a view to bolstering the appeal of the entire Yufuin area, such as through workshops held by chefs where dishes made using local vegetables are devised.
3) Promoting co-existence and interactions between urban and rural areas

- Urban agriculture (which refers to agricultural activities carried out in urban and surrounding areas) accounts for 24% of the total number of farm households, 15% of the cultivated land, and 18% of sales of agricultural products of all commercial farm households.
- In the Kanto, Kinki, and Chubu regions, where large consumption markets exist, locally grown vegetables are supplied to buyers within the same area at high rates. There are many urban farmers in these areas. Urban agriculture plays an important role in terms of the supply of agricultural products to city residents.
- At the same time, urban agriculture plays not only the roles of supplying fresh agricultural products to city residents but also various other roles, such as forming green spaces and landscapes, providing locations for farming experiences and interactive activities through the use of allotment gardens, moderating the climate of urban centers, and serving as evacuation sites in case of a disaster. Surveys reveal that more than 90% of the people wish to preserve agricultural land in urban and surrounding areas. It is important that urban agriculture be maintained and promoted.

**Percentage of locally grown vegetables supplied to buyers within the same area (2000)**

<table>
<thead>
<tr>
<th>Region</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hokkaido</td>
<td>48.8</td>
</tr>
<tr>
<td>Tohoku</td>
<td>48.8</td>
</tr>
<tr>
<td>Kanto</td>
<td>71.1</td>
</tr>
<tr>
<td>Chubu</td>
<td>67.8</td>
</tr>
<tr>
<td>Kinki</td>
<td>99.9</td>
</tr>
<tr>
<td>Chugoku</td>
<td>34.0</td>
</tr>
<tr>
<td>Shikoku</td>
<td>32.1</td>
</tr>
<tr>
<td>Kyushu</td>
<td>48.1</td>
</tr>
</tbody>
</table>

Source: Regional Input-Output Table (METI)

Notes: 1) Percentage of locally grown vegetables supplied to buyers within the same area = 1 – [monetary amount of shipped or exported vegetables / monetary amount of vegetables grown locally]

2) Regional classifications are the same as the regional classifications used in the graph on the preceding page. Remote Okinawa is excluded from this graphical representation.

**Case study: A look at a grape garden in Setagaya-ku that is highly popular among neighborhood residents**

Rather than reduce the production of open-field vegetables in line with reductions in the size of their managements to 55 ares brought about by land readjustments and the impact of succession over time, an farm household that has been operating for generations in Setagaya-ku, Tokyo, established a grape garden 8 years ago based on projections of stable managements. This grape garden opens for the season at the end August. While it stayed open in the beginning for about 2 to 3 weeks until there were no more grapes, recent years have seen a surge in popularity for this grape garden among neighborhood residents, such that grapes are picked clean in about a week. No fee is charged to enter the premises or to sample products. Grapes picked by visitors are sold at 1,400 yen per kilogram.

In addition, a strawberry garden attached to this grape garden is also open for approximately a month around May. At 20 plants a lot, lots are leased out at a rate of 5,500 yen per lot, with users picking strawberries out of their own lots. On the day on which users are accepted for this strawberry garden, a lineup forms outside the front door of this farming household. The popularity of this venture is so great that applications are usually filled on the same day. Along with the grape garden, this location is known as a place of spiritual healing and relaxation among neighborhood residents.

Revenues from this grape garden and strawberry garden make up half of the agricultural earnings of their operator. The other half is attributed to the selling of open-garden vegetables. Sales have expanded more in the last 1 to 2 years by way of transactions conducted through farmers markets and from a stand set up in front of the farm than by way of shipments to marketplaces. Some of the factors behind this trend are thought to consist of an increase in the population of neighborhood residents due to the return of former residents to the city and the rising demand for reliable, safe, fresh vegetables. At the same time, farm work is undertaken with sufficient attention paid in order to prevent such problems as the noise from tractors and the spraying of agricultural chemicals from affecting neighborhood residents.
Allotment gardens allow urban residents to personally engage in agriculture on an accessible basis and are increasing in number as places where they can promote health, find a purpose in life, and foster interactions with others.

The number of allotment gardens is 3,246 as of the end of FY2006, which had increased by 20% since the end of FY2001 (five years ago). Many allotment gardens are located in places where the user can go on foot or by bicycle, and are also associated with high application ratios.

Usage fees for allotment gardens operated by municipalities are set relatively low to reflect the idea that they exist as a service provided to residents. For some of these gardens, operations and management are difficult to carry out with only revenues derived from the fees.

In contrast, for allotment gardens operated by farm households, high percentage of management has a positive balance of receipts and payments. There are also some farm households that are engaged in allotment farming operations and succeed in stabilizing the agricultural management.

### The number of allotment gardens

![Graph showing the number of allotment gardens](image)

Source: MAFF

### Application ratios of allotment gardens (end of FY2006)

![Graph showing application ratios](image)

Source: MAFF

### State of receipts and payments pertaining to allotment gardens (by founding operator; within the jurisdiction of the Kanto Regional Agricultural Administration Office)

![Bar chart showing state of receipts and payments](image)

Source: Kanto Regional Agricultural Administration Office

Note: Result of the questionnaire survey administered to 337 founder operators of allotment gardens (response rate of 87.2%).
The state of coexistence and interactions between urban and rural areas is evolving according to various forms ranging from temporary stays to settlements in rural areas.

In Japan, green tourism is growing as a class of leisure activities that allow participants to visit rural areas and enjoy interactions with the natural environment and the local culture and people. Green tourism is identified as a new tourism sector in the Basic Plan for the Promotion of a Tourism Nation (June 2007). Health tourism that leads to restoration, maintenance and improvement of health is also identified as a new tourism sector. Agriculture has multi-functionality including healthcare, recreational functions, the natural environment found in rural areas, and fresh culinary ingredients. Using these functions, the development of green tourism incorporating multi-functionality of agriculture and elements of health tourism is also expected.

The number of green tourism initiatives undertaken by agricultural management entities tends to differ from region to region. For example, the management of private accommodations by farmers is commonly found in the Tosan and Hokuriku regions.

With respect to green tourism initiatives undertaken by municipalities, 30% of municipalities accept experience tours while 20% of municipalities accept students on experience-oriented school trips.

Green tourism initiatives undertaken by agricultural management entities (2005)

![Bar chart showing green tourism initiatives by agricultural management entities in different regions]

Source: Census of Agriculture and Forestry (MAFF)
Note: Kita-Kanto consists of Tochigi, Gunma, and Ibaraki Prefectures; Minami-Kanto consists of Saitama, Chiba, Tokyo, and Kanagawa Prefectures; Tosan consists of Nagano and Yamanashi Prefectures.

Green tourism initiatives in municipalities

![Graph showing green tourism initiatives in municipalities]

Source: The Organization for Urban-Rural Interchange Revitalization
Note: Result of the questionnaire survey administered to 1,834 municipalities nationwide (response rate of 58.3%).
Section 3: Revitalizing rural areas through the promotion of co-existence and interactions

- Hands-on agricultural experiences obtained in childhood significantly affect the involvement of a person in the agriculture and forestry in adulthood, as evidenced by the high percentage of such persons who participate in programs centered on agricultural and forestry experiences, allotment gardening, farm support and forestry volunteering in on-site activities. Hands-on agricultural studies tend to moderate such emotions as anger and insecurity in children.

- At the elementary and junior high school levels, field studies are largely given in schools and within municipalities. Agricultural experiences combined with lodgings can be seen as a more recent option selected for school trips. While schools that have chosen to partake in such trips have indicated that they are effective, there is also a sense of disenchantment with the lack of homogeneity in the manner by which host farm households have hosted participants.

- With the aim of enabling every student in every elementary school nationwide to participate in the project, relevant ministries are working together to promote the Children’s Rural Area Interaction Project, which promotes extended stay and experience-oriented activities of elementary school students in rural areas.

### Involvement in the agriculture and forestry by type of farm-work experience undergone in childhood

| Use of the direct selling of agricultural products, participation in agricultural land trusts, engaging in fundraising or contribution activities for the protection of forests and agricultural land (providing funds without visiting site) | Have farm-work experience | 64.4 |
| Participation in programs centered on agricultural and forestry experiences, allotment gardening, farm support and forestry volunteering, and agricultural land and forestry ownership systems (engaging in activities by directly visiting agricultural land and forests) | Do not have farm-work experience | 52.2 |

Source: MLIT
Notes: 1) Result of the online survey administered to monitors registered with an online survey company (total of 3 thousand responses received).
2) Survey subjects consisted of city residents aged 20 years or older who were not engaged in the agricultural, forestry, or fishery industry at the time of the survey (including by way of concurrent employment in any of these industries). A city resident for the purpose of this survey is defined as a resident of one of numerous cities nationwide with a population of 300 thousand people or more or of one of the 23 special wards of Tokyo (or, where no cities with a population of 300 thousand people or more exist in a prefecture, of the seat of the prefectural government). (Some cities were excluded from consideration if there were multiple cities with a population of 300 thousand people or more situated in a given prefecture.)

### Psychological changes through agricultural experiences

<table>
<thead>
<tr>
<th>Score</th>
<th>Before experiences</th>
<th>After experiences</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: National Institute for Rural Engineering of the National Agricultural and Food Research Organization
Note: Based on averages of the results derived from the measurement of the psychological state of elementary and junior high school students based on question forms on 19 cases of agricultural experiences distributed before and after the experiences in question.

### Opinions in regards to hands-on agricultural learning in the course of school trips taken by junior high school students

<Evaluation>
- Family-like ties to the agricultural household strengthened.
- Understanding of agriculture became greater.
- Became aware of the difficulties of work and inspired to appreciate food through hands-on exposure to agriculture.
- Students are satisfied.

<Dissatisfaction>
- Places and operators with a track record in accepting participants for experience-oriented agricultural programs are limited in number, such that destinations overlap.
- There is a lack of homogeneity in the manner by which farming households host participants.
- A lack of normative awareness on the part of host farming households have caused children to become disappointed.

Source: Educational Tour Institute
Notes: 1) Result of the questionnaire survey administered to 1,044 public junior high schools in 6 prefectures in the Kinki region (response rate of 92.3%).
2) Only opinions relating to hands-on learning that clearly pertained to agricultural experiences were extracted.
Kleingarten, which provides farm experiences, with accommodations is an activity that allows urban residents to learn how to produce vegetables and utilize processing technologies, as well as enjoy leisurely pursuits through interactions with local residents while staying in rural areas. Such activities are gradually increasing in number.

Forty percent of urban residents have not engaged in fundraising for or contributed to activities for the conservation of agricultural land or directly purchased agricultural products. Some of the reasons cited include a lack of awareness of such activities and a lack of knowledge of participation methods and application procedures. It is necessary to convey information about rural areas to permit urban residents to participate.

Farmers markets offering agricultural, forestry, and fishery products have been set up at over half of the 874 Roadside Stations registered nationwide (as of April 2008). These Roadside Stations play a significant role in the promotion of coexistence and interactions between urban and rural areas through exchanges between local farm households and urban residents. It is expected that local information will be transmitted using this Roadside Station network.

In addition to having an economic effect, the flow of people between urban and rural areas also creates an opportunity for local areas to obtain new knowledge and leaders of local activities. It is important to incorporate human resources, knowledge, technologies that are concentrated in cities and connect them to the revitalization of rural areas through the promotion of a state of coexistence and interactions between cities and local areas.

### Reasons for not participating in indirect activities (multiple responses)

<table>
<thead>
<tr>
<th>Reason</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>I was not aware of the existence of such activities</td>
<td>30.9</td>
</tr>
<tr>
<td>I do not have any particular interest in such activities</td>
<td>25.0</td>
</tr>
<tr>
<td>I do not know how funds obtained through fund-raising or donations are used</td>
<td>21.8</td>
</tr>
<tr>
<td>I do not know how to participate in such activities or where to submit applications</td>
<td>20.4</td>
</tr>
<tr>
<td>I do not know which activity I should undertake</td>
<td>20.1</td>
</tr>
<tr>
<td>I do not have anyone with whom I can participate in such activities (difficult to participate on my own)</td>
<td>14.1</td>
</tr>
<tr>
<td>I do not know in which organization’s activities I should participate</td>
<td>13.7</td>
</tr>
<tr>
<td>I feel insecure as I have not participated in such activities before</td>
<td>12.7</td>
</tr>
<tr>
<td>I do not know what results can be achieved through such activities</td>
<td>11.2</td>
</tr>
<tr>
<td>I do not know in which organization’s activities I should participate</td>
<td>0.2</td>
</tr>
<tr>
<td>I was not aware of the existence of such activities</td>
<td>2.8</td>
</tr>
<tr>
<td>Others</td>
<td></td>
</tr>
</tbody>
</table>

Source: MLIT

Note: Examples of indirect activities include the following: fundraising for and contributions to afforestation activities and the protection of forests, fundraising for and contributions to the cultivation of safe crops and the protection of agricultural land, the purchasing of products made using domestic lumber, the purchasing of products made using thinned wood, the direct purchasing of agricultural products, the purchasing of agricultural products through a hometown package-delivery service or ownership system, engagement in a profit-sharing silviculture system, and the presentation of agricultural land trusts.

### Case study: Expanding sales channels for agricultural products through the first urban Roadside Station in the country

In Hachioji City, Tokyo, the first Roadside Station in Tokyo opened in April 2007. As an urban Roadside Station, the facility includes a farmers market, a restaurant, and space for interactions. In accordance with the lifestyles of consumers, the farmers market is open until 9 o’clock in the evening to accommodate customers who arrive later in the day. In addition, a system to allow shippers to ascertain the state of sales has been introduced to give shippers the ability to diligently replenish products as needed. For the first 9 months after opening, the farmers market posted sales of 560 million yen and recorded a visitor count of over one million people. In establishing a farmers market, a shipping association was formed by farm households in the city. Approximately 140 farmers currently ship products. TOKYO X-branded pork and ice cream produced by local dairy farms sell well, sales of the shipping association exceed 200 million yen, and shippers have reported a significant increase in their revenues. The registration as the Roadside Station, which is used as a rest stop by bus tours and for other functions, has also resulted in a boost to the number of visitors to the area. Weekend visitors comprise equal numbers of city residents and tourists.
Global food supply and demand situation worsens
1. Global food situation has been undergoing unprecedented changes. Food demand has been significantly surging due to the growing world population and economic growth in the populous countries such as China and India. Yet, with decreasing farmland area partly due to spreading desertification and slowing growth of yield per unit of area, food supply has been facing a quite difficult situation. Furthermore, the international prices for agricultural products have risen and reached an all-time high. In the future, food supply capability cannot be expected to increase significantly. The global food market is then predicted to become increasingly tight. A new problem, diversion of edible crops into biofuel production, has also arisen and aggravated the difficult situation. Moreover, with frequent abnormal weather, a shortage of water resources and outbreaks of livestock infections, the global food supply has been losing its stability.

Japan's food supply capability is weak
2. Japan currently imports more than 60% of its food supply. To enjoy a rich diet on this small land, Japanese people inevitably depend on imported foods to some extent. If the dependence should deepen, however, it would give a feeling of food insecurity among the people. Today, domestic agricultural resources, including paddy fields, which have excellent sustainability as an agricultural production base, are not fully utilized in Japan, thus causing the expansion of abandoned cultivated land and fallow fields. In addition, given the heavy dependence of food imports on a handful of exporting countries, we should also recognize that Japan's food supply system is subject to the fluctuations of supply capabilities of those countries.

Various problems caused by an improper diet
3. An excessively rich diet would cause various problems. The dietary pattern of Japanese in the 1980s was recognized as nutritionally balanced, ideal diet. Since then, however, rice consumption has decreased year after year, while the consumption of livestock products and oils/fats has increased. As a result, the dietary pattern today is likely to cause obesity and other lifestyle related diseases, meanwhile the food self-sufficiency ratio has dropped to 39%. At the same time, improper diets, including the prevalence of breakfast skipping among adolescents and children, should not be overlooked. In addition, the amount of household food waste per person per year currently exceeds 80 kg.

To gain broad understanding and sympathy on our food
4. Solutions for these food-related problems are the challenges of our future. We need to recognize the fact that the consumption of domestic rice and other agricultural products not only increases the food self-sufficiency ratio but also improves our health, revitalizes rural areas, and preserves the global environment. It is necessary to gain broad understanding and sympathy for the importance of this fact. Especially, it is important to foster greater understanding among children of the importance and values of food, farming, and life in every facet of the educational processes in schools and families.

Domestic agricultural resources need to be utilized effectively
5. To ensure the future of food, utilizing the domestic agricultural resources effectively is a highest priority. It is important to maximize the utilization of the domestic farmland such as reclaiming abandoned cultivated land. The requirements to realize such utilization should be cleared by further efforts such as listening to the voices of farmers. Along with fostering the agricultural managements with robust technologies and high aspirations, it is required to build a system in which people in diverse fields can enter the agricultural sector. Cultivating human resources through the development and extension of agricultural technologies together with the education of agriculture management is also important.
Efforts to address the domestic needs from consumers

6. Japanese dietary patterns are closely linked to the role of Japanese agriculture. Promoting dietary patterns based on domestic agricultural resources will rejuvenate domestic agriculture. Since processed food and eating-out are indispensable to the current dietary patterns, it is necessary to gain understanding and support from food manufacturers and food service industries with a view to boost the consumption of domestic agricultural products.

   Meanwhile, farmers are required to respond appropriately to the consumers’ and food industries’ needs for domestic agricultural products. What is important is that a stable supply system of food products with high quality and high safety standards to be established. Safety and high quality should be an important source of competitive advantage of Japanese agricultural products. People who are engaged in agriculture and food industries should take actions with a sense of tension to provide high quality and high safety products, and undisguised information.

Long term and strategic approach

7. To ensure the future of food, it is indispensable to develop an approach from a long-term and strategic viewpoint. For example, the following measures are of increasing importance to cope with the tight global market for food: development and popularization of rice flour products; fodder rice production in paddy field; and fodder production from food waste.

   When the global food market gets tighter, there is a concern that food insecurity, especially among the poor in developing countries, will worsen. The stability of world food situation is closely connected to the stability of international society, which is closely related to the food security problems in developed countries. Thus, we should actively promote effective international cooperation related to food and agriculture.

Stabilizing food supply is the responsibility of the national government

8. The most important responsibility of the national government is to secure a stable food supply to the people under any circumstances. With this security, people in the country can steadily make decisions and control actions without causing confusion.

   In the face of increasingly tight supply-demand margin in the global food market, securing domestic agricultural resources, ensuring a stable supply of imported food and stockpiling crops for staple food and feeding, are increasingly important. Under these circumstances, the government needs to formulate the specific measures to ensure food security.

   It is also important to encourage people to take deliberate actions by promptly providing correct information on an ever-changing world food situation.

To ensure the future of food

9. To ensure the future of food, each Japanese needs to share the above-mentioned recognitions and to start with what he/she can do on a long-lasting basis.

   At the same time, the national and local governments should take measures to effectively promote the efforts by farmers, food industries, and consumers. In particular, the national government must concentrate its efforts to review existing concrete measures for food security and to establish a long-term global food and agricultural strategy.

   It is convinced that food safety and food security in a new era will ensured when the domestic agricultural resources are effectively utilized by the development of free and vigorous economic and exchange activities in a sustainable manner under a well-established national strategy.
With a view to realizing the targets and resolving the issues presented in the Basic Plan for Food, Agriculture, and Rural Areas, the government will comprehensively carry out measures relating to consumption and production in an effort to increase the food self-sufficiency ratio, measures relating to the securing of the stable food supply, measures relating to the sustainable development of agriculture, and measures relating to the promotion of rural areas. In addition, particular emphases will be made on the following measures.

1. Reinforce the structure of domestic agriculture

   To steadily conduct the three key measures for the agricultural policy reform, the government will work to be more widespread and settle these measures. At the same time, the government will correspond delicately to enable the elderly and small-scale farmers to securely engage in agriculture upon the implementation of these measures, such as support for organizing community based farm cooperatives.

   In addition, the government will firmly implement rice production adjustments in view of reductions in the consumption of rice and trends in the international supply-demand situations and prices of crops whose supply is heavily dependent on imports, such as wheat, barley, soybeans, and feed crops. At the same time, the government will promote to settle steadily the production in paddy fields of crops in which we need to increase the self-sufficiency ratio, including wheat, barley, soybeans, feed crops.

   The government will successively carry out farmland reform in accordance with the contents of the Direction in Which Agricultural Land Policies Shall be Deployed, a document that was compiled with the aim of ensuring the effective use of agricultural land.

   Additionally, the government will promote organizational reforms of agricultural cooperatives alongside the strong promotion of initiatives to reduce food supply costs at each stage of production and distribution. Furthermore, the government will promote the technological development to improve productivity and reduce costs with a view to reinforcing the structure of agriculture. The strategic creation, protection, and utilization of intellectual property will be pursued and the potential capacity of agriculture will be demonstrated.

2. Revitalize rural areas

   Under the Strategy for the Revitalization of Rural Areas, the government will promote the development of human resources capable of local leadership, the rejuvenation of rural communities through the conservation and resurrection of festivals, traditions and culture, and the creation of jobs related to agriculture. Furthermore, efforts will be undertaken to improve income levels for all local areas and secure employment opportunities by, among others, promoting the selling of local products and supporting the development of new products in order to reinforce links between agriculture and other industrial sectors including commercial and processing industries.

   Additionally, the government will comprehensively support initiatives based on municipal plans in order to fundamentally reinforce measures adapted to local circumstances and correspond to escalation and widening of agricultural damages caused by wildlife.

3. Strategic initiatives on measures for food and agriculture

   With respect to food issues, the government will inform the public of a message for the people as drafted by the strategy council for envisioning the future of food in order to raise awareness of matters relating to food among the entire nation. Furthermore, the government will promote strategic initiatives targeting both production and consumption with a view to raising food self-sufficiency ratio to 45% by 2015, which had dropped to 39% in 2006.

   In response to a series of incidents that undermining consumer confidence in food labels, the government will work to ensure consumer trust through the reinforcement of a monitoring system based on the establishment of the Food Labels Special G-Men, the obligation to affix quality labels for food products whose transactions conducted by food industries based on the revised law “Act on Standardization and Proper Labeling of Agricultural and Forestry Products” (JAS Law), and the insistence on thorough compliance with relevant laws and regulations on the part of food-related businesses.

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*1: Refers to the Programs of Direct Payment for Paddy-field Farming and Upland-field Farming, Measures to Promote Rice Policy Reforms, and Measures to Conserve and Improve Land, Water and Environment.
Moreover, in the event that information is provided by citizens, the government will take action immediately, and will ensure closer ties to the relevant organizations, and a response that will emphasize the viewpoint of consumers will be thoroughly implemented as part of the promotion of an administration that aims to be more transparent to consumers.

Additionally, the government will ensure food safety at all stages of the food chain, such as by improving the sophistication of management methods at manufacturing processes and prevent problems and accidents on consumers.

As for the promotion of exports of Japanese food products, the government set a goal of 1 trillion yen by 2013. To achieve this goal, the government will focus on initiatives such as upgrading the export environment including accelerating quarantine discussions, studying and formulating an export business-model strategy, supporting motivated exporters, and transmitting information on Japanese food to overseas markets.

4. Contribute to conservation of the global environment

To address the pressing problem of global warming, the government aims to make agriculture, forestry, and fisheries to proactively contribute to the conservation of the global environment. To achieve this goal, the government will comprehensively promote measures to mitigate and to adapt global warming and international cooperation based on Ministry of Agriculture, Forestry and Fisheries (MAFF)’s Strategy for Preventing Global Warming.

To expand the domestic production of bio-fuel significantly, the government will pursue stable supply of low cost bio-fuel through links between agricultural, forestry and fishery workers and bio-fuel manufacturers. Initiatives and programs utilizing rice straw, thinned wood, and other materials whose use would not deplete the food supply stability shall also be promoted.

The government will promote sustainable agricultural practices that enhance the quality of the habitats and breeding grounds of organisms based on Ministry of Agriculture, Forestry and Fisheries (MAFF)’s Biodiversity Strategy, incorporating viewpoints focusing more on the conservation of biodiversity into measures relating to food, agriculture, and rural areas.

5. Engage in international negotiations

With respect to the WTO agricultural negotiations, the government will strategically engage in negotiations in hopes of establishing trade rules that keep a balance between the interests of exporting countries and those of importing countries. This is based on a basic principle of coexistence of diverse forms of agriculture capturing the essential position of Japan in these negotiations.

The government will present a unified front when engaging in negotiations concerning economic partnership agreements (EPAs) with such countries as Australia by considering our national economic and diplomatic interests, sufficiently recognizing the importance of Japanese agriculture according to a policy of firmly protecting what needs to be protected, and taking into account the state of progress of the structural reforms that have been applied to domestic agriculture.
## Basic indicators on food, agriculture and rural areas

### 1. Food

<table>
<thead>
<tr>
<th>Item</th>
<th>Data</th>
<th>Year</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Self-sufficiency ratio</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(calorie basis)</td>
<td>39%</td>
<td>FY 2006 (estimated)</td>
<td>Target: 45% (FY2015)</td>
</tr>
<tr>
<td>(production value basis)</td>
<td>68%</td>
<td>FY 2006 (estimated)</td>
<td>Target: 76% (FY2015)</td>
</tr>
<tr>
<td><strong>The consumption volume (per year per capita)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Livestock products</td>
<td>58 kg (1965) -&gt; 137 kg (2006)</td>
<td>FY 2006 (estimated)</td>
<td></td>
</tr>
<tr>
<td><strong>Domestic production of the food industry</strong></td>
<td>85,528.9 billion yen</td>
<td>FY 2005</td>
<td>86,151.6 billion yen in FY2004</td>
</tr>
<tr>
<td><strong>Workers in the food industry</strong></td>
<td>7.74 million persons</td>
<td>2005 (QE)</td>
<td>951 trillion yen attributed to all industries (2005)</td>
</tr>
<tr>
<td><strong>Percentage of the total workforce</strong></td>
<td>13%</td>
<td>2005 (QE)</td>
<td>8.01 million persons in 2000</td>
</tr>
<tr>
<td><strong>Imports of agricultural, forestry, and fishery products</strong></td>
<td>8,557.4 billion yen</td>
<td>2007</td>
<td>Agricultural products: 5,530.4 billion yen; forestry products: 1,390.5 billion yen; fishery products: 1,636.5 billion yen</td>
</tr>
<tr>
<td><strong>Exports of agricultural, forestry, and fishery products</strong></td>
<td>433.7 billion yen</td>
<td>2007</td>
<td>Target: 1 trillion yen (by 2013)</td>
</tr>
</tbody>
</table>

### 2. Agriculture

<table>
<thead>
<tr>
<th>Item</th>
<th>Data</th>
<th>Year</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>All industries</strong></td>
<td>511,877.0 billion yen</td>
<td>FY 2006</td>
<td>1.2% of total domestic production</td>
</tr>
<tr>
<td>Agriculture, forestry, and fishery</td>
<td>5,984.1 billion yen</td>
<td>FY 2005</td>
<td>Peaked at 7,853.5 billion yen (1990)</td>
</tr>
<tr>
<td>Agriculture</td>
<td>4,859.9 billion yen</td>
<td>FY 2005</td>
<td>1.0% of all industries</td>
</tr>
<tr>
<td>Forestry</td>
<td>248.8 billion yen</td>
<td>2006</td>
<td>0.05% of all industries</td>
</tr>
<tr>
<td>Fisheries</td>
<td>878.6 billion yen</td>
<td>FY 2005</td>
<td>0.2% of all industries</td>
</tr>
<tr>
<td><strong>Production of paddy field rice (rice-crop index)</strong></td>
<td>8,705,000 tons (99)</td>
<td>2007</td>
<td></td>
</tr>
<tr>
<td><strong>Total number of farm households</strong></td>
<td>2.85 million households</td>
<td>2005</td>
<td>Peaked at 6.18 million households (1950)</td>
</tr>
<tr>
<td></td>
<td>1.96 million households</td>
<td>2005</td>
<td>Outlook: 2.10 to 2.50 million households (2015)</td>
</tr>
<tr>
<td></td>
<td>0.43 million households</td>
<td>2005</td>
<td>When statistics were first tallied: 3.31 million households (1985)</td>
</tr>
<tr>
<td><strong>Business farm households</strong></td>
<td>2.85 million households</td>
<td>2005</td>
<td>When statistics were first tallied: 0.82 million households (1990)</td>
</tr>
<tr>
<td></td>
<td>1.96 million households</td>
<td>2005</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.43 million households</td>
<td>2005</td>
<td></td>
</tr>
<tr>
<td><strong>Population mainly engaged in farming</strong></td>
<td>3.12 million persons</td>
<td>2007</td>
<td>Peaked at 14.54 million persons (1960)</td>
</tr>
<tr>
<td></td>
<td>1.85 million persons (59%)</td>
<td>2007</td>
<td></td>
</tr>
<tr>
<td><strong>Core persons mainly engaged in farming</strong></td>
<td>2.02 million persons</td>
<td>2007</td>
<td>Peaked at 11.75 million persons (1960)</td>
</tr>
<tr>
<td></td>
<td>1.18 million persons (59%)</td>
<td>2007</td>
<td>Outlook: 1.46 million persons (2015)</td>
</tr>
<tr>
<td><strong>Persons newly engaged in farming</strong></td>
<td>75,000 (81,000) persons</td>
<td>2006</td>
<td>Outlook: 0.90 million persons (2015)</td>
</tr>
<tr>
<td></td>
<td>11,000 (15,000) persons</td>
<td>2006</td>
<td></td>
</tr>
</tbody>
</table>
## 2. Agriculture (Continued)

<table>
<thead>
<tr>
<th>Item</th>
<th>Data</th>
<th>Year</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Principal farmers</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Principal farmers</td>
<td>8,700 corporations</td>
<td>2005</td>
<td>Stable, efficient farming</td>
</tr>
<tr>
<td>Community based farm cooperatives</td>
<td>13,062 cooperatives</td>
<td>February 2008 (estimated)</td>
<td>Family farm managements: approx. 330,000 to 370,000 households</td>
</tr>
<tr>
<td>Specified farming communities</td>
<td>1,781 communities</td>
<td>End of December 2007</td>
<td>Corporate managements: approx. 10,000 cooperatives</td>
</tr>
<tr>
<td>Specified agricultural corporations</td>
<td>649 cooperations</td>
<td>End of December 2007</td>
<td>Community based farm cooperatives: approx. 20,000 to 40,000 cooperatives</td>
</tr>
<tr>
<td><strong>Agriculture</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Agricultural land</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agricultural production legal persons</td>
<td>9,466 legal persons</td>
<td>January 2007</td>
<td>385 stock corporations (excluding special limited companies)</td>
</tr>
<tr>
<td>Lease-type corporate entrants</td>
<td>256 corporations</td>
<td>September 2007</td>
<td>Target: 500 corporations (FY2010)</td>
</tr>
<tr>
<td>Applications for Programs of Direct Payment for Paddy-field Farming and Upland-field Farming</td>
<td>72,431 management entities</td>
<td>2007</td>
<td>Area figures under 2007 cultivation plan: 437,000 ha for rice, 254,000 ha for the 4 mugi grains (barley, wheat, oat, and rye), 110,000 ha for soybeans, 66,000 ha for beets, 22,000 ha for starch-use potatoes</td>
</tr>
<tr>
<td>Cultivated land under management</td>
<td>4.65 million ha</td>
<td>2007</td>
<td>384 stock corporations (excluding special limited companies)</td>
</tr>
<tr>
<td>Paddy fields</td>
<td>2.53 million ha</td>
<td>2007</td>
<td>Target: 500 corporations (FY2010)</td>
</tr>
<tr>
<td>Upland fields</td>
<td>2.12 million ha</td>
<td>2007</td>
<td>384 stock corporations (excluding special limited companies)</td>
</tr>
<tr>
<td>Abandoned cultivated land</td>
<td>0.39 million ha</td>
<td>2005</td>
<td>384 stock corporations (excluding special limited companies)</td>
</tr>
<tr>
<td>Rate of use of cultivated land</td>
<td>93%</td>
<td>2006 (estimated)</td>
<td>384 stock corporations (excluding special limited companies)</td>
</tr>
<tr>
<td><strong>Farming</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All income of farm household</td>
<td>4.99 million yen</td>
<td>2006</td>
<td>384 stock corporations (excluding special limited companies)</td>
</tr>
<tr>
<td>Agricultural income</td>
<td>1.23 million yen</td>
<td>2006</td>
<td>384 stock corporations (excluding special limited companies)</td>
</tr>
<tr>
<td>All income of business farm household</td>
<td>5.48 million yen</td>
<td>2006</td>
<td>384 stock corporations (excluding special limited companies)</td>
</tr>
<tr>
<td>Agricultural income</td>
<td>4.29 million yen</td>
<td>2006</td>
<td>384 stock corporations (excluding special limited companies)</td>
</tr>
<tr>
<td>General agricultural cooperatives</td>
<td>844 cooperatives</td>
<td>FY2006</td>
<td>384 stock corporations (excluding special limited companies)</td>
</tr>
<tr>
<td>Members of agricultural cooperatives</td>
<td>9.32 million</td>
<td>FY2006</td>
<td>384 stock corporations (excluding special limited companies)</td>
</tr>
<tr>
<td>Total amount of savings deposited with agricultural cooperatives</td>
<td>82,417.3 billion yen</td>
<td>End of February 2008</td>
<td>384 stock corporations (excluding special limited companies)</td>
</tr>
<tr>
<td>Agricultural committees</td>
<td>1,843 committees</td>
<td>October 2006</td>
<td>384 stock corporations (excluding special limited companies)</td>
</tr>
<tr>
<td>Agricultural committee members</td>
<td>39,997 persons</td>
<td>October 2006</td>
<td>384 stock corporations (excluding special limited companies)</td>
</tr>
<tr>
<td>Agricultural mutual relief associations.</td>
<td>277 associations</td>
<td>April 2008</td>
<td>384 stock corporations (excluding special limited companies)</td>
</tr>
<tr>
<td>Land improvement districts</td>
<td>5,632 districts</td>
<td>End of March 2007</td>
<td>384 stock corporations (excluding special limited companies)</td>
</tr>
<tr>
<td>Number of extension advisors</td>
<td>8,244 persons</td>
<td>Beginning of FY2007</td>
<td>384 stock corporations (excluding special limited companies)</td>
</tr>
<tr>
<td><strong>Agricultural groups, etc.</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agricutural committee members</td>
<td>2,223 committees as of October 2005</td>
<td>384 stock corporations (excluding special limited companies)</td>
<td></td>
</tr>
<tr>
<td>Agricultural committee members</td>
<td>1,682 female members (4.2%)</td>
<td>384 stock corporations (excluding special limited companies)</td>
<td></td>
</tr>
<tr>
<td>Agricultural mutual relief associations.</td>
<td>10,907 associations (1955)</td>
<td>384 stock corporations (excluding special limited companies)</td>
<td></td>
</tr>
<tr>
<td>Land improvement districts</td>
<td>13,163 improvement districts (1961)</td>
<td>384 stock corporations (excluding special limited companies)</td>
<td></td>
</tr>
<tr>
<td>Number of extension advisors</td>
<td>13,748 persons</td>
<td>384 stock corporations (excluding special limited companies)</td>
<td></td>
</tr>
</tbody>
</table>
### 3. Rural areas

<table>
<thead>
<tr>
<th>Item</th>
<th>Data</th>
<th>Year</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population of farm households</td>
<td>7.64 million persons</td>
<td>2007</td>
<td>11.55 million persons in 1997</td>
</tr>
<tr>
<td>Persons aged 65 years and older</td>
<td>2.52 million persons</td>
<td>2007</td>
<td>3.02 million persons in 1997</td>
</tr>
<tr>
<td>Percentage of total population</td>
<td>6%</td>
<td>2007</td>
<td>9% in 1997</td>
</tr>
<tr>
<td>Elderly persons (aged 65 years and older) as a percentage of the population of farm households</td>
<td>33%</td>
<td>2007</td>
<td>26% in 1997</td>
</tr>
<tr>
<td>Elderly persons (aged 65 years and older) as a percentage of the total population</td>
<td>21%</td>
<td>2007</td>
<td>15% in 1997</td>
</tr>
<tr>
<td>Agricultural communities</td>
<td>139,000 agricultural communities</td>
<td>2005</td>
<td>Peaked at 156,000 agricultural communities (1955)</td>
</tr>
<tr>
<td>Certified eco-farmers</td>
<td>154,695</td>
<td>End of September 2007</td>
<td>Target: 200,000 (end of FY2009)</td>
</tr>
<tr>
<td>Allotment gardens</td>
<td>3,246 gardens</td>
<td>End of March 2007</td>
<td>2,319 gardens in March 2000</td>
</tr>
<tr>
<td>Monetary amount of production output Urban agriculture</td>
<td>2,750.9 billion yen</td>
<td>2005</td>
<td>2,993.8 billion yen in 1995</td>
</tr>
<tr>
<td>Total number of farming households</td>
<td>690,000 households</td>
<td>2005</td>
<td>770,000 households in 1995</td>
</tr>
<tr>
<td>Area of arable land</td>
<td>1.28 million ha</td>
<td>2005</td>
<td>1.17 million ha in 1995</td>
</tr>
</tbody>
</table>

*1: Monetary amount exclusive of alcoholic beverages, tobacco products, and pearls
*2: National Accounts (Cabinet Office)
*3: Farming households that derive their income mainly from agriculture and that have persons under 65 years of age who are engaged in self-employed farming for no less than 60 days a year.
*4: The population mainly engaged in farming for whom engagement in work is their normal primary state
*5: Figures in parentheses constitute statistics that are inclusive of employed farmers
*6: Persons who have been certified by municipalities under agricultural operational improvement plans
*7: All agricultural communities exclusive of agricultural communities that are wholly included in urbanization promotion areas (definition of survey subject was revised in 2005)

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### Japanese agricultural output (2006)

(Monetary output of agriculture, forestry, and fisheries in Japan)

(Monetary agricultural output in Japan by item)

- **Total:** 8,290.0 billion yen (100%)
  - **Livestock:** 2,353.1 billion yen (28%) 
  - **Beef cows:** 460.1 billion yen (6%)
  - **Pork:** 498.0 billion yen (6%)
  - **Poultry:** 650.9 billion yen (9%)
  - **Dairy cows:** 744.1 billion yen (9%)
  - **Other:** 1,814.6 billion yen (22%)
  - **Rice:** 1,146.8 billion yen (14%)
  - **Vegetables:** 2,057.4 billion yen (25%)
  - **Fruits:** 757.0 billion yen (9%)
  - **Tubers and roots:** 201.3 billion yen (2%)
  - **Flowers:** 401.6 billion yen (5%)
  - **Wheat/barley:** 146.1 billion yen (2%)
  - **Beans:** 78.2 billion yen (1%)
  - **Fishery industry:** 1,806.3 billion yen (16%)
  - **Forestry industry:** 432.2 billion yen (4%)

Source: MAFF

Note: Figures for the agricultural output are estimated values; figures for the forestry and fishery output are determined values.
Glossaries

Genetic resources
Genetic resources are defined by the Convention on Biological Diversity as “any material of plant, animal, microbial, or other origin containing functional units of heredity [that is] of actual or potential value.”

Greenhouse gases (GHG)
Under the Kyoto Protocol, signatories are obliged to reduce emissions of greenhouse gases consisting of carbon dioxide, methane (which is generated in such places as paddy fields and final waste treatment sites), dinitrogen monoxide (which is generated, for example, in processes to make some of the materials of chemical products and from livestock excretions), hydrofluorocarbons (used as a coolant in air conditioners), perfluorocarbons (used in processes for the manufacture of semiconductors), and sulfur hexafluoride (used in processes for the manufacture of semiconductors), which act to warm the surface of the earth by absorbing and radiating some of the infrared rays that is reflected off the ground.

Good Agricultural Practice (GAP)
The concept of GAP refers to a sequence of agricultural process-checking practices by which farmers and production areas will, according to crops, local conditions, (1) make plans concerning farm work and determine the inspection items that will apply in their particular cases, (2) carry out and maintain records of farming work in accordance with these inspection items, (3) inspect and evaluate these record and identify improvement points, and (4) utilize these improvement points for the next planting of crops. These practices are carried out in order to secure the safety of agricultural products, conserve the environment, and attain numerous other objectives.
In order to facilitate engagement in GAP by producers and production areas, “Basic GAP” in respects of fundamental matters concerning essential items (legal compliance and environmental conservation) and important items (such as the prevention of soil contamination by hazardous substances and the prevention of the emergence of pathogenic microorganisms) have been made public in regards to rice, wheat/barley, soybeans, greenhouse vegetables, open-field vegetables, fruit, flowers and tea.

Educational farm
“Educational farm” represents activities designed to allow producers engaged in agriculture, forestry and fisheries to provide for people opportunities to experience packages relating to farming, with the aim of promoting greater understanding of the blessings of nature and of the various activities undertaken by producers. An experience package relating to farming requires that a participant receives instructions from a person engaged in agriculture, forestry, or fisheries and carries out two or more operations in respects of the same crop for two days or more per year.
Kyoto Mechanisms
The Kyoto Mechanisms are market-based mechanisms designed to flexibly reduce greenhouse gases as defined in the Kyoto Protocol. Numerical targets for reductions in greenhouse gas emissions by developed countries listed in the Annex I parties are set forth in the Kyoto Protocol. In this connection, the Kyoto Mechanisms are market-based mechanisms by which a signatory may purchase emission rights from another country or invest in a country with lower reduction costs in order to apply such emission reductions towards meeting their own reduction targets. Specifically, the Kyoto Mechanisms consist of three different mechanisms depending on the characteristics of target countries and activities: the Clean Development Mechanism (CDM), Joint Implementation (JI), and Emissions Trading.

Economic Partnership Agreement (EPA) / Free Trade Agreement (FTA)
An FTA is an agreement designed to liberate trade in goods and services and is to be concluded between specific countries and regions for the purpose of promoting reciprocal trade between two or more countries by way of the elimination of tariffs, adjustments to systems, and other means. An EPA is an agreement that includes the contents of an FTA and is designed to extensively strengthen economic relationships, including those in respects of market systems and economic activities.

Abandoned cultivated land
Abandoned cultivated land is a statistical term of MAFF and means land that has not been under cultivation in at least one year and with respect to which there is no clear intent to re-cultivate within the next several years. In contrast, land that has not been under cultivation more than one year prior to a survey date but with respect to which there is intent to re-cultivate within the next several years is referred to as unplanted land and is included in cultivated land under management.

Community based farm cooperative
A community based farm cooperative consists of farming activities through which farm households in a community connected territorially engage jointly in agricultural production. The forms and contents of the farming activities are diverse according to local situations and include the following: ① group farming on diverted paddy fields, ② the joint use of machinery that has been jointly purchased, and ③ the joint approach from production to sales, with leaders playing a central role.

Japanese Food Guide Spinning Top
The Japanese Food Guide Spinning Top as a balanced meal guide presents suggestions of what to eat and the portions thereof per day in order to link the Japan’s Dietary Guidelines formulated in 2000 to specific actions with a view to realizing a physically and mentally healthy and well-rounded dietary pattern. Depicted as a spinning top, the Guide presents targeted daily consumption volumes using images of prepared foods for each meal category: staple foods, side dishes, main dishes, milk and dairy products, and fruits. The Guide was issued in 2005 by the Ministry of Health, Labour and Welfare and the Ministry of Agriculture, Forestry and Fisheries.
New programs to stabilize farmers’ income (Programs of Direct Payment for Land-extensive Farming)

The programs started in 2007 and targets paddy-field farming and other land-extensive farming, for the purpose of accelerating structural reforms of Japanese agriculture and of enabling the conformance of the Japanese agricultural policy system with international rules. Upon reviewing the programs, the name was changed as the Programs of Direct Payment for Paddy-field Farming and Upland-field Farming (in Hokkaido) and as the Programs of Direct Payment for Paddy-field Farming (in other prefectures).

The previous price policies that targeted all farmers and that were stipulated by item were reviewed and reconfigured as programs that target motivated and efficient farmers and that are focused on entire farm management. The contents of support consist of the following: ① compensation to offset losses arising from differences in production conditions between Japan and overseas countries (targeted items: wheat/barley, soybeans, beets, and potatoes for starch), and ② compensation to moderate the impact of reductions in revenue (targeted items: rice, wheat/barley, soybeans, beets, and potatoes for starch).

Specified farming community

A specified farming community is a voluntary organization that has obtained the agreement of landowners and leaseholders in the area with given territorial connections, as a trustee organization of farming on at least two-thirds of the agricultural land in the area, where is predicted to suffer from a shortage of principal farmers. In the event that such an organization is expected to definitely become an agricultural production legal person and has been requested to accept farm work by a landowner or leaseholder, it has an obligation to accept such a request.

Specified agricultural corporation

A specified agricultural corporation is a corporation that has obtained the agreement of landowners and leaseholders in the area with given territorial connections, as a corporation of amassing over half of the agricultural land in the area, where is predicted to suffer from a shortage of leaders. In the event that such a corporation has been requested to accept agricultural land from a landowner or leaseholder, it has an obligation to accept such a request.

Home-meal replacement (nakashoku)

Home-meal replacement (nakashoku) is positioned halfway on the spectrum between meals eaten by dining out at restaurants and homemade meals eaten at home. It refers to foods with a short shelf life that are prepared and processed outside the home and that are taken to home, work, school, or an outdoor location, and consumed as a meal without cooking. Examples include commercially available bento lunch boxes and daily dishes.

Certified farmers (system)

The certified farmer system is a system under which, according to the Agricultural Management Framework Reinforcement Act, municipalities draft basic plans setting forth objectives in respects of efficient, stable farm management in line with actual local conditions and certify plans for improving farm management drafted by farmers who aim
the said objectives. Various measures are administered on a priority basis for certified persons (certified farmers), including low-interest rate financing systems (such as the Super L&S loan), measures for liquidation of farmland, and programs to improve infrastructure as a means of supporting principal farmers. Certified farmers have been eligible to benefit from the New Programs to stabilize the income in farm management (Programs of Direct Payment for Land-extensive Farming) since 2007.

Agricultural production legal person
An agricultural production legal person is a corporation that may acquire rights to agricultural land-use and that satisfies all the following requirements: ① corporation form requirement, ② business requirement, ③ member requirement, and ④ officer requirement. A corporation other than agricultural production legal person can acquire leasehold rights to agricultural land-use.

Stabilization System of Compound Feed Prices
The Stabilization System of Compound Feed Prices is a system for granting compensation payment to livestock farmers out of funds during times of rising compound feed prices for the purpose of stabilizing livestock farm management by moderating the impact of fluctuations in compound feed prices on livestock farmers. It consists of a practice of normal compensation and a practice of abnormal compensation. Normal compensation funds are contributed by compound feed manufacturers and livestock farmers while abnormal compensation reserve funds are donated from Japanese government and compound feed manufacturers. The practice of abnormal compensation payment is invoked during times of steep, extraordinary increases in prices that cannot be sufficiently addressed by invoking the practice of normal compensation payment.

Land-use right based on the Agricultural Management Framework Reinforcement Act
This land-use right is the right of lease and usage leaseholds over agricultural land to be used for agricultural purposes as set forth in the Agricultural Management Framework Reinforcement Act. This right, which is set forth in Farmland Intensive Use Plans based on the Agricultural Management Framework Reinforcement Act, differs from general leases based on the Agricultural Land Act. Concerning this right, agricultural land is reverted back to the owner upon the expiration of the term of the agreement. (This right can be reconfigured.)

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.