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## Acronyms and abbreviations

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<tr>
<td>ABARE</td>
<td>The Australian Bureau of Agricultural and Resource Economics</td>
</tr>
<tr>
<td>BSE</td>
<td>Bovine Spongiform Encephalopathy</td>
</tr>
<tr>
<td>EPA</td>
<td>Economic Partnership Agreement</td>
</tr>
<tr>
<td>FAMIC</td>
<td>Food and Agricultural Materials Inspection Center</td>
</tr>
<tr>
<td>FAO</td>
<td>Food and Agriculture Organization</td>
</tr>
<tr>
<td>FTA</td>
<td>Free Trade Agreement</td>
</tr>
<tr>
<td>GAP</td>
<td>Good Agricultural Practice</td>
</tr>
<tr>
<td>GCC</td>
<td>Cooperation Council for the Arab States of the Gulf</td>
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<tr>
<td>GHG</td>
<td>Greenhouse Gas</td>
</tr>
<tr>
<td>GPS</td>
<td>Global Positioning System</td>
</tr>
<tr>
<td>HACCP</td>
<td>Hazard Analysis and Critical Control Point</td>
</tr>
<tr>
<td>JFGST</td>
<td>Japanese Food Guide Spinning Top</td>
</tr>
<tr>
<td>JITCO</td>
<td>Japan International Training Cooperation Organization</td>
</tr>
<tr>
<td>LCS</td>
<td>Low Carbon Society</td>
</tr>
<tr>
<td>MAFF</td>
<td>Ministry of Agriculture, Forestry and Fisheries</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>
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<td>MIC</td>
<td>Ministry of Internal Affairs and Communications</td>
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<td>MOF</td>
<td>Ministry of Finance Japan</td>
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<tr>
<td>NARC</td>
<td>National Agricultural Research Center</td>
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<td>NARCH</td>
<td>National Agricultural Research Center for Hokkaido Region</td>
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<tr>
<td>NARO</td>
<td>National Agriculture and Food Research Organization</td>
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<tr>
<td>NIAS</td>
<td>National Institute of Agrobiological Sciences</td>
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<tr>
<td>NPO</td>
<td>Nonprofit Organization</td>
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<tr>
<td>ODA</td>
<td>Official Development Assistance</td>
</tr>
<tr>
<td>PS&amp;D</td>
<td>Production, Supply &amp; Distribution</td>
</tr>
<tr>
<td>QE</td>
<td>Quick Estimation</td>
</tr>
<tr>
<td>R&amp;D</td>
<td>Research and Development</td>
</tr>
<tr>
<td>UAE</td>
<td>United Arab Emirates</td>
</tr>
<tr>
<td>UN</td>
<td>The United Nations</td>
</tr>
<tr>
<td>US</td>
<td>The United States</td>
</tr>
<tr>
<td>USDA</td>
<td>United States Department of Agriculture</td>
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<tr>
<td>WeNARC</td>
<td>National Agricultural Research Center for Western Region</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>tons</td>
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Key Messages of the 2008 Annual Report

Efforts toward the realization of untroubled living conditions by ensuring food safety and regaining consumer trust in food

- Several food safety incidents have occurred recently. These include the incident rice scandal uncovered in September 2008 and the incidents involving chemically poisoned imported food that unfolded during the period from the end of 2007 to the beginning of 2008. These incidents had raised fears among domestic consumers, each requiring an urgent investigation to determine the cause and a slew of preventive measures against the recurrence of similar incidents. Further, there have been several incidents such as mislabeling and bad manufacturing by food dealers that have shaken consumers' confidence in food safety.

- The incidents in question made everybody concerned with the food sector, including the government staffs, aware that they ought to be primarily responsible for food safety. With the awareness of such responsibilities, the government and other agencies should take all possible measures to restore consumers' confidence in food safety through improvements in safety control methods.

- In particular, every employee of MAFF (Ministry of Agriculture, Forestry and Fisheries) should implement the organizational reforms that are part of MAFF policy under an unwavering awareness that s/he must ensure food safety in a way that the public can accept.

Establishment of a strong agricultural structure in response to the progress of globalization in the field through the extensive use of paddy fields which enhances the domestic food supply capacity and raises the food self-sufficiency rate

- In the light of the global food situation which is likely to remain tight for some time into the future, the full-scale domestic production of wheat, soybean, feed crop and rice for new demands such as rice flour or rice for livestock feed is vital, and can be achieved through the extensive use of paddy fields. Paddy fields are sustainable agricultural production infrastructure in the sense that they are immune to replant failure and produce crops semi-permanently.

- The rice and paddy-field farming policies should be reviewed from all angles in the context of the agricultural policy reform to aim at establishing paddy-field farming with good prospects, paying attention to the extensive use of paddy fields in each region and by each farmer in 2009, the first year of the policy. The policies should also be framed in a way that rewards farmers whose performances are in compliance with the government's rice production adjustment program.

- In addition to the efforts on the production side, the concerned parties will need to make better coordinated and concrete efforts to increase the consumption of domestic agricultural products in order to raise the food self-sufficiency rate. Individuals, companies and other related organizations currently carry on a voluntary grassroots movement, the so-called “Food Action Nippon,” to raise the food self-sufficiency rate. More individuals are expected to join the movement.

- The establishment of a strong domestic agricultural structure can help stabilize the global agricultural market. The government should then work on the WTO and EPA/FTA negotiations carefully not to disturb efforts to make for the establishment of the domestic agricultural sector.

Implementation of effective measures to secure land, water and human resources for the agricultural sector in order to ensure its ability to provide sufficient food to satisfy the domestic demand

- The government should pursue measures to secure sufficient agricultural land in line with the agricultural land reform plan presented in December 2008. In particular, it needs to promote the lending and borrowing of agricultural land, and assist motivated farmers to expand their agricultural land in order to utilize it effectively.

- Concerning the agricultural water supply facilities, the government has introduced a system for stock management that enables it to rehabilitate decaying facilities in an efficient and effective way based on a function diagnosis of the facilities. The government should strengthen such efforts in order to ensure a stable supply of agricultural water.

- The government should promote support measures for farmers such as the Programs of Direct Payment for Paddy- and Upland-Field Farming so as to secure enough principal farmers. At the same time, it should encourage various types of agriculture including community based farm co-operatives that contain small scale as well as aging farmers.

- Amid concerns that the domestic agricultural structure has been weakened by the retirement of farmers born during the first decade of the Showa Period, it is important to encourage motivated young people who are taking up agriculture and providing them with consulting services and on-the-job training.
Fulfilling of the potential of the agricultural sector in rural areas as a growing industry, and revitalizing rural areas

- In 2005, the value of the domestic market size for agricultural and fisheries products amounts to 10.6 trillion yen at the production stage and 74 trillion yen at the final consumption stage. This suggests the possibility that farmers may raise their income levels and revitalize their regional economies by engaging in food processing and food distribution industries in addition to the agricultural sector.
- Farmers need to accelerate agricultural research and technological development, protect intellectual property rights, exploit the same strategically in order to enhance competitiveness and create added value in agricultural products.
- The population in Japan is expected to decrease substantially, especially in the intermediate and mountainous areas. The conservation and utilization of agricultural resources such as agricultural land and water is critical to the maximization of the multifunctionality of agriculture.
- The agricultural sector is a key industry in rural areas, where potential labor demand is expected to exist. In rural areas, it is important to create employment, raise the income levels and revitalize the economy of regions by promoting inter-industrial alliances among agriculture, manufacturing and commerce, and the harmonious co-existence and interactions between urban and rural areas, and among the young and baby-boomer generations.

Establishment of the agriculture, forestry and fisheries that will contribute to global environmental protection

- The active utilization of resources and energy in the rural areas is important to enable the agriculture, forestry and fishery sectors to play leading roles in a new, low-carbon society.
- Agricultural soil plays an important role as a Greenhouse Gas sink. It is necessary to enhance the existing scientific knowledge about the organic carbon stock of soil in order to utilize this function.
- The efficient biofuel production technologies that use cellulosic materials and do not affect food supply should be developed to increase domestic biofuel production.
- The government should promote biodiversity-focused sustainable agriculture and rural development in order to preserve farming and mountain villages through appropriate agricultural activities.

The facilitation of closer collaboration among the relevant ministries to implement food, agricultural and rural policies that are synchronized with our economic society and the daily lives of our people
- The setting up of agriculture, forestry and fishery administrations that truly focus on the people, harmonizing consumers' voices and farmers' efforts on farms, are among the current agricultural policies being reviewed by the government as it formulates a new, basic plan for food, agriculture and the rural areas.
Measures aimed to resolve the “tainted rice” scandal, and recovering consumer confidence in food safety

The incident rice, or so-called “tainted rice”, which fell short of the hygiene standards defined by the Food Sanitation Law and was sold by the government for non-food use, has been illegally resold by certain companies as an edible product to food processing firms. This scandal was uncovered in September, 2008. The government bears a grave responsibility for selling such rice without sufficient preventive measures and overlooking the illegal distribution for a long period of time, provoking public anxiety about food safety.

MAFF established a special task force to deal with this problem on September 24, 2008, and announced a work schedule on September 28. In accordance with the work schedule, MAFF implemented a host of new measures: It investigated and revealed the distribution route of the incident rice, established preventive measures against the recurrence of the same problem, introduced assistance measures for the rice distributors and processors who had unknowingly used the tainted rice, reviewed the current rice distribution system (leading to the introduction of a rice traceability and a relaying place of origin information of rice and rice products) and reviewed the working method and organization of MAFF.

MAFF decided to stipulate in its contracts with rice importers that any imported rice that falls short of the hygiene standards laid down by the Food Sanitation Law must be destroyed or shipped back to the exporters. In addition, any rice in the government stock will also be destroyed if it fell short of hygiene standards during storage. MAFF also prepared a manual for compliance inspection and decided to conduct spot checks on the rice sold from the government stock, on the basis of the Law for Stabilization of Supply, Demand and Prices of Staple Food.

MAFF failed to learn a lesson from the past BSE case. In response to its failure, the ministry is executing reforms so that each of its officials engages in his or her duties with serious appreciation of consumer concerns and the importance of food safety.

The government drew up a bill of Rice Traceability Law following the interim report released by the Investigative Commission on the Rice Distribution System in November 2008. The purpose of the bill is to introduce a traceability system for rice and rice products, enable a prompt trace-back of the distribution route as necessary and make it obligatory for business entities dealing with rice and rice-based products to provide information about their origin. The bill was enacted on April 17, 2009.

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In March 2009, another scandal broke out as many MAFF officials were found to be engaged in unauthorized labor union activities that were in violation of the National Civil Service Law. MAFF failed to adequately investigate this problem, resulting in further erosion of public confidence in the ministry. In response to such failures, the ministry is executing its reforms as it looks to emerge as an organization that is kind, courteous, and honest.

1 MAFF will table its report by mid-July 2009, directed and supervised by an independent committee.
Topical subjects during the year 2008

1. Measures to secure the food supply capacity in Japan

- Amid the significant changes in the global food situation, it is necessary to increase domestic farm production in order to secure a stable supply of food for the future.
- Farmland area per capita in Japan is much smaller than that in the Western countries. While Japanese agriculture is suitable for wet-paddy rice cultivation, upland crops such as wheat and soybean, which require well-drained soil, are technically very difficult to produce in the country. Japanese agriculture, therefore, is dominated by labor-intensive paddy rice cultivation.
- In Western countries, governments make the required budgetary allocation to support and improve their agricultural sectors. The Japanese government also needs to use its agricultural budget, which accounts for 2.6% of its national budget (fiscal year 2005), effectively in order to improve the food supply capacity.
- Various measures need to be implemented to ensure the food supply capacity, such as the active utilization of domestic agricultural products, the development of leading agricultural managers for the future of Japanese agriculture, securing farmlands and agricultural water, and enabling the agricultural sector and the rural areas to fulfill their potential.

### Country-by-country comparison of farmland area and agricultural budget (2005)

<table>
<thead>
<tr>
<th></th>
<th>Japan</th>
<th>U.S.</th>
<th>EU (25)</th>
<th>Germany</th>
<th>France</th>
<th>U.K.</th>
<th>Australia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Farmland area (ten thousand ha)</td>
<td>469</td>
<td>17,718</td>
<td>10,988</td>
<td>1,210</td>
<td>1,964</td>
<td>578</td>
<td>4,974</td>
</tr>
<tr>
<td>Percentage of the land area</td>
<td>12.4%</td>
<td>18.4%</td>
<td>27.6%</td>
<td>33.9%</td>
<td>35.6%</td>
<td>23.7%</td>
<td>6.4%</td>
</tr>
<tr>
<td>Population (million persons)</td>
<td>127.8</td>
<td>296.4</td>
<td>460.7</td>
<td>82.5</td>
<td>61.0</td>
<td>60.2</td>
<td>20.4</td>
</tr>
<tr>
<td>Per capita farmland area (a)</td>
<td>3.7</td>
<td>59.8</td>
<td>23.9</td>
<td>14.7</td>
<td>32.2</td>
<td>9.6</td>
<td>243.8</td>
</tr>
<tr>
<td>Agricultural budget (billion JPY)</td>
<td>2,255.9</td>
<td>3,306.6</td>
<td>6,620.5</td>
<td>1,674.4</td>
<td>2,034.0</td>
<td>853.8</td>
<td>143.9</td>
</tr>
<tr>
<td>Comparison with national budget</td>
<td>2.6%</td>
<td>1.2%</td>
<td>44.9%</td>
<td>4.6%</td>
<td>4.9%</td>
<td>1.2%</td>
<td>0.8%</td>
</tr>
<tr>
<td>Agricultural budget per farm household*</td>
<td>79</td>
<td>158</td>
<td>68</td>
<td>429</td>
<td>359</td>
<td>298</td>
<td>111</td>
</tr>
<tr>
<td>Agricultural budget per 1ha of farmland*</td>
<td>48.1</td>
<td>1.9</td>
<td>6.0</td>
<td>13.8</td>
<td>10.4</td>
<td>14.8</td>
<td>0.3</td>
</tr>
</tbody>
</table>


Notes:
1) * Unit of “agricultural budget per 1ha of farmland” and “Agricultural budget per farm household” is “ten thousand JPY”
2) “Farmland area” doesn’t include meadow and grazing land
3) “Agricultural budget of ‘EU(25)’” is the budget implemented by EU agencies such as the European Commission, which is different from budgets implemented by the governments of member countries.

### Actions undertaken by the Japanese agricultural sector in order to improve its food supply capacity

**Goods: Utilizing domestic products aggressively**
- Practicing rice-centered dietary pattern
- Pursuing new possibilities of rice utilization
- Improving the feed self-sufficiency rate
- Strengthening the coordination among the agricultural, commercial and industrial sectors and recovering the share of the domestic agricultural products
- Promoting exports of Japanese agricultural, forestry, and fisheries products and foods

**Land: Securing farmland and agricultural water as base of food production**
- Revision of farmland policy
- Securing superior farmlands
- Promoting farmland consolidation
- Clearing abandoned farmlands

**Human: Cultivating principal farmers**
- Stably promoting the Programs of Direct Payment for Paddy- and Upland-Field Farming
- Promoting development of various farm managements
- Promoting new entry of young persons and enterprises into agriculture

**Achievement of the food self-sufficiency rate (45%) and building system for stable food supply in emergencies**

**Technique: Enabling the agricultural sector to fulfill their potential**
- Accelerating development of technology leading innovation
- Strategically creating, conserving and utilizing of intellectual property

Source: MAFF
2 Measures to create employment in rural areas

- Amidst the worsening employment situation, the agricultural sector still holds the key to employment expansion in rural areas. The government deployed agricultural employment measures such as the "Inaka-de Hataraki-Tai! (human resources development and dispatch assistance in rural areas)".
- It is important to raise public interest in agriculture to enable motivated and qualified human resource to view agriculture as a career option. The government provides a wide range of assistance to people who want to engage in agriculture; the government provides information on the subject, conducts personal consultations on the career opportunities in the field, and supports the launch of farming initiatives. As a result, there have been several instances of workers from non-farm families succeeding as farmers.

### Measures to create employment in rural areas

- Creation of agricultural employment counseling counters
  The government has created rural employment counseling counters at MAFF, the regional agricultural administration offices, and the local agricultural policy offices. Further, the government coordinates closely with the employment promotion centers for agriculture, forestry and fisheries in order to increase employment opportunities, and to gather and provide employment-related information.

- Consultancy for career opportunities and support for long-term training programs
  - Agricultural employment program
    A program for practical training that aims to imbibe technical know-how and business management techniques from the agricultural production corporations
  - "Inaka-de Hataraki-Tai! (A program for human resources development and dispatching assistance in rural areas)"
    A matching service mediated by NPO (nonprofit organizations), universities and private companies, "Inaka-de Hataraki-Tai!" makes the connection between urban people who are interested in agricultural activities and settlements in rural areas, and rural areas where additional workforce is needed to reactivate such areas.

- Job creation by the creation of new businesses, etc.
  To create new businesses in rural areas, the government promotes new efforts such as the reinforcing the collaboration among agriculture, commerce and manufacturing industry; the promotion of a harmonious co-existence and interactions between the urban and rural areas; and the active use of domestic agricultural products.

- Securing job opportunities by promoting infrastructure development

### Some cases of the career path that a person newly engaged in farming became a principal farmer

<table>
<thead>
<tr>
<th>Male (32 years old)</th>
<th>Male (28 years old)</th>
<th>Male (33 years old)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(born in Kawachi-town, Ibaraki pref.)</td>
<td>(born in Chiba-city, Chiba pref.)</td>
<td>(born in Yokohama-city, Kanagawa pref.)</td>
</tr>
<tr>
<td>22 years old: After graduating from the faculty of agriculture, through a company employee into a trainee for 5 years in agricultural corporations in Gunma and Nagano pref. Learning know-hows and techniques, offered agricultural land in the period</td>
<td>24 years old: Majored in the conservation of environment at university, worked for a major eating-out company after graduation</td>
<td>20 years old: Got a job with a semiconductor programming company after graduating from the vocational school of information science</td>
</tr>
<tr>
<td>27 years old: Independent from the agricultural corporation, started farming (vegetable) in Saku-city, Nagano pref. Got the certification of organic JAS on all crops Fostered human resources positively; made 2 trainees independent as farmers</td>
<td>27 years old: Withdraw from the company because of a desire for agriculture Learned the basic of agriculture at the Japan Agricultural Practice School Made a decision to do farming</td>
<td>23 years old: Thought about changing job due to a recession Made a decision to do farming in Hiratori-town, Hokkaido with having a information on the support system for newcomers in agriculture there</td>
</tr>
<tr>
<td>33 years old: In 2007, grew vegetables such as zucchini on 175-a upland fields Labor forces were 5 persons; himself and 4 employees (in the harvest period) Sales of agricultural products amounted to 10 million yen</td>
<td>28 years old: After graduating from the school, got a job with an agricultural corporation in Tokai-village, Ibaraki pref. through the consult meeting to engagement in agriculture</td>
<td>24-25 years old: Started on-the-job training at a farm household in Hiratori-town, Hokkaido</td>
</tr>
<tr>
<td></td>
<td>28 years old: Grew sweet-potato and tomato, and developed processed foods in charge Learned techniques and know-hows of farm management while working</td>
<td>26 years old: Finished training and engaged in agriculture (flowers) in Hiratori-town</td>
</tr>
<tr>
<td></td>
<td></td>
<td>32 years old: In 2006, grew flowers in 31-a greenhouses Labor forces were himself and his wife Sales of agricultural products amounted to 14.5 million yen</td>
</tr>
</tbody>
</table>

Source: National Chamber of Agriculture, the national newly employment in agriculture consulting center
Note: The ages in ( ) at the top boxes are as of 2007.
Chapter Ⅲ: Feature stories: Boosting the food supply capacity by making the full use of paddy fields

Section 1: International prices of crude oil, grains, and soybeans and their effects on consumers and farmers

(1) Food price increase and consumption trends

The international prices of grains and soybeans have been rising since the autumn of 2006. The current prices are 1.4 to 1.6 times higher than that of autumn 2006, despite the sharp decline in prices due to such factors as the worldwide financial crisis, the capital flight away from the commodity market, and the expected fall in the demand for grains.

In response to the above-mentioned price increase, the consumer price index of food has also witnessed an upward trend since the autumn of 2007. The index soared to 105.0 in October 2008. Items whose prices have risen significantly include wheat flour products, soybean products, and dairy products.

Changes in world market prices for grains and soybeans

Factors behind the steep rise in international prices

- Rise in food demand due to the economic growth of developing countries such as China and India
- Rise in non-food demand due to the worldwide increase in the production of biofuel
- Influence of climate change
- Export restriction measures taken by food exporting countries in addition to the above-mentioned structural factors, and the effect of the influx of speculative finances into the grain market

Source: Reuters Economic news Service, Jiji press

Changes in consumer price index by item (2005 base year)

Source: MIC “Consumer Price Index”
The disposable income of workers’ households has been on a downward trend. In particular, the disposable income of households comprising two or more members has declined in real terms since the second half of 2007. In addition, the consumption expenditure of households with two or more members has declined in real terms in 2008, and the average propensity to spend income has decreased year-on-year since the third quarter of 2008. The proportion of food expenditure to living expenditure has remained at the same level since 2004.

The expenditure on bread and processed food has declined in response to the sharp price rise since the beginning of 2008. Instead, the expenditure on rice and rice-related goods such as furikake and curry roux have demonstrated a sharp rise.

### Year-on-year changes in disposable income and expenditure

### Real term change ratio in expenditure per household

Source: MIC "Household Expense Survey", "Consumer Price Index"
(2) The affect of rising prices of agricultural production materials and the response to it

- The rising international prices of crude oil, grains, and soybeans affected the prices of agricultural production materials such as lighting and heating, feed, and fertilizers. The average price index of agricultural production materials in 2008 was 13.6% higher than its 2005 level.
- The average price of formula feed in 2008 was 63,000 JPY/ton, 1.4 times higher in comparison with that in 2006. Likewise, the average price of heavy oil for agriculture and fisheries in 2008 was 102 JPY/liter, 1.4 times higher than that in 2006.

### Rate of rise or decline in the index of prices of agricultural production materials (base year 2005)

![Rate of rise or decline in the index of prices of agricultural production materials](chart)

<table>
<thead>
<tr>
<th>Year</th>
<th>Gross income</th>
<th>Farming cost</th>
<th>Agricultural income</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2002</td>
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<td>2003</td>
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<tr>
<td>2004</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2005</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2006</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2007</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: MAFF "Statistical Survey on Prices in Agriculture, base year 2005"

- The ratio of feed expense in livestock farming rose from 20-60 percent in 2005 to 30-70 percent in 2007, which had a serious impact on the farming. The 2007 agricultural incomes from dairy, cattle fattening, and egg chicken farming declined significantly - 30%, 30%, and 50%, respectively.
- The ratio of lighting and heating expense in facility-use type agriculture rose from 20-30 percent in 2005 to 30-40 percent in 2008, which, too, had a significant impact on the farming. For example, the agricultural income from tomato farming (large size, during winter and spring) is estimated to have been reduced by 10 percent compared with that in 2005.

### Changes in agricultural income from livestock farming (2007 national average, per farm household, by type)

<table>
<thead>
<tr>
<th>Type</th>
<th>Item</th>
<th>2007</th>
<th>Ratio to 2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dairy farming</td>
<td>Gross income</td>
<td>3,574</td>
<td>103</td>
</tr>
<tr>
<td></td>
<td>Farming cost</td>
<td>3,072</td>
<td>113</td>
</tr>
<tr>
<td></td>
<td>Feed cost</td>
<td>1,387</td>
<td>121</td>
</tr>
<tr>
<td></td>
<td>Agricultural income</td>
<td>503</td>
<td>67</td>
</tr>
<tr>
<td>Fattening cattle</td>
<td>Gross income</td>
<td>4,383</td>
<td>105</td>
</tr>
<tr>
<td>farming</td>
<td>Farming cost</td>
<td>3,852</td>
<td>112</td>
</tr>
<tr>
<td></td>
<td>Feed cost</td>
<td>1,365</td>
<td>125</td>
</tr>
<tr>
<td></td>
<td>Agricultural income</td>
<td>531</td>
<td>69</td>
</tr>
<tr>
<td>Layers farming</td>
<td>Gross income</td>
<td>3,685</td>
<td>104</td>
</tr>
<tr>
<td></td>
<td>Farming cost</td>
<td>3,351</td>
<td>116</td>
</tr>
<tr>
<td></td>
<td>Feed cost</td>
<td>2,227</td>
<td>126</td>
</tr>
<tr>
<td></td>
<td>Agricultural income</td>
<td>334</td>
<td>51</td>
</tr>
</tbody>
</table>

Source: MAFF “Statistics on Management by Farming Type (Individual management)"

### Estimated income from facility-use type agriculture (2008)

<table>
<thead>
<tr>
<th>Type</th>
<th>Item</th>
<th>2008 estimate</th>
<th>Ratio to 2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cucumber</td>
<td>Gross income</td>
<td>336</td>
<td>113</td>
</tr>
<tr>
<td></td>
<td>Farming cost</td>
<td>165</td>
<td>110</td>
</tr>
<tr>
<td></td>
<td>light, heat and</td>
<td>48</td>
<td>151</td>
</tr>
<tr>
<td></td>
<td>power expence</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>share</td>
<td>29</td>
<td>137</td>
</tr>
<tr>
<td></td>
<td>Agricultural income</td>
<td>171</td>
<td>115</td>
</tr>
<tr>
<td>Large-size tomato</td>
<td>Gross income</td>
<td>315</td>
<td>102</td>
</tr>
<tr>
<td></td>
<td>Farming cost</td>
<td>184</td>
<td>110</td>
</tr>
<tr>
<td></td>
<td>light, heat and</td>
<td>47</td>
<td>146</td>
</tr>
<tr>
<td></td>
<td>power expence</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>share</td>
<td>26</td>
<td>133</td>
</tr>
<tr>
<td></td>
<td>Agricultural income</td>
<td>131</td>
<td>93</td>
</tr>
</tbody>
</table>

Source: MAFF “Statistics on Management by Items"
Emergency measures for the relief of livestock and dairy farming were carried out in February 2008 in order to mitigate the steep rise in feed prices. Additional measures were taken in June 2008 so as to ensure the smooth operation of the formula feed price stabilization program and to reinforce the existing farming stabilization programs.

In addition, the government decided to subsidize farmers’ groups who had reduced the usage of chemical fertilizers or fuel oil by more than 20% by compensating these farmers to the tune of 70% of their additional costs. By combining various policy measures such as structural transformation, tax benefits, and finances aimed at promoting energy-saving farming, the government is trying to establish a strong structure of agriculture, forestry, and fisheries.

Emergency measures for livestock and dairy farming (June 2008)

- Smooth operation of the Formula Feed Price Stabilization Program
  - Mitigate ordinary compensations from the ordinary compensation foundation by reducing the trigger baseline of the extra-ordinary compensation
  - Interest-free and long-term loan to the ordinary compensation foundation, but stop paying compensation by 4%

- Subsidy and price measures to support dairy farming
  - Raise a unit price of subsidy of milk for processing by the interim revision
  - Support to producers who urgently address the improvement of productivity such as enlarging the production of domestic feed

- Subsidy and price measures to support beef cattle farming
  - Raise a baseline price of calf for guarantee and the stable price of beef by the interim revision
  - Secure income in response to the expectation of increasing compensation for the Marukin project and so on
  - Support to feeding-cattle producers who address the improvement of productivity such as early shipment
  - Support to producers who try to improve the quality of calf

- Subsidy and price measures to support pig and chicken farming
  - Strengthen the safety nets in case of declining in pork price
  - Raise a baseline price of egg for compensation by the interim revision and so on

Source: MAFF

Measures conducted by MAFF to cope with the steep rise in crude oil prices

- Budgetary measures
  - Emergency measures
    - Establish a foundation for strengthening the management practices of fishermen and support a transition to energy-saving fisheries
    - Promote energy saving on facility horticulture and introduce energy-saving agricultural machines
  - Supplementary budget measures
    (1) Encourage the development and introduction of energy-saving technology and facility
      - Support to the demonstrations and developments of energy-saving technologies regarding primary industry by subsidies and financial measures
      - Promote the introduction of model heating facilities with highly energy-saving and GHG-emission reducing effects such as heating facilities using woody biomass
    (2) Encourage the development and introduction of bio-fuel and bio energy
      - Support to the initiatives of R&D, technical demonstrations and changes in the consciousness toward increasing production of domestic biofuel, while using soft-cellulosic materials such as tinned timber and rice straw which are consistent with supply of food

- Taxation measures
  - Exceptional tax exemption measures
    - Establish the measure of reducing the tax on gasoline mixed with bio ethanol
    - Establish the special measure regarding the fixed asset tax on facilities producing bio-fuel
    - Postpone the special measure regarding the tax on Bunker A for primary industry

- Financial measures
  - Finance to maintain and stabilize managements in response to soaring crude oil prices
  - Low- interest loan to fishermen who need operating money due to soaring fuel and promote endorsements by guarantee institutions

Source: MAFF
Section 2: Boosting demand for domestic agricultural products and promoting agricultural production based on demand

(1) Raising the food supply capacity and the food self-sufficiency rate by making the full use of paddy fields

- In order to ensure the stable supply of food on a long-term basis, raising the domestic agriculture’s food supply capacity, which is the foundation of the food supply, are the most important factors.
- Domestic agriculture, however, faces difficult problems such as the decrease in the arable land because abandoned cultivated lands are increasing, and the aging of farmers. The food self-sufficiency rate has witnessed a downward trend on a long-term basis in FY 2007: 40% in calories, and 66% in values.
- In strengthening the food supply capacity, it is necessary to ensure the preservation of agricultural resources such as arable land and irrigation, human resources, and technology, which in turn are capable of contributing to a rise in the food self-sufficiency rate.
- The demand for rice as a staple food is anticipated to decline as a result of the long-term reduction and aging of the population. Therefore, it is essential to align rice production with the demand for it.
- Aiming at the full use of domestic paddy fields, it is important to promote the full-fledged production of rice for flour, feed, and whole crop silage; the production of wheat, soybeans, and feed crops - crops that Japan is compelled to import – must also be encouraged.

Changes in the food self-sufficiency rate in Japan

![Chart showing changes in the food self-sufficiency rate in Japan.](chart.png)

Source: MAFF "Food Balance Sheet"

Structure of Japan's rice paddy field

- 60% Paddy field
- 40% Diverted paddy fields

- Rice paddy fields for staple food
  - Declining trend due to the decrease and aging of the population

- Diverted paddy fields
  - Expanding trend

1. Promote the production of wheat, soybean and feed crop whose self-sufficiency rates are low
2. Otherwise, promote the production of rice for non-staple food use such as rice flour and rice for livestock feed

Source: MAFF
(2) Increasing rice consumption including the promotion of the use of rice flour

- The rice (for staple food) production acreage in 2008 was 1,596,000 ha, 43,000 ha less than that in the previous year. Although the overproduction acreage decreased for the first time since the Rice Policy Reform of 2004, it still exceeded the target acreage by 54,000 ha.
- The rice policy as part of the agricultural policy reform, needs to be reviewed without prejudice, taking into account the progress farmers have made toward making the full use of the existing paddy fields.
- The demand for rice bottomed out after a long-term downward trend. The demand, from July 2007 to June 2008, amounted to 8,550,000t a year, which was 170,000t (2%) more than that of the previous year. The per capita rice consumption also increased by 0.4kg in FY 2007, after a long-term downward trend.

Changes in planted area and production of rice

Per capita rice supply per year by type and year-on-year change (milled rice base)
Rice flour has come to be used for various types of processed food, thanks to the technological improvements of the flouring industry. The demand for rice flour for its use in relatively new products such as bread, noodles, and confectionary, has grown to 9,500t in the fiscal year 2008 (estimated).

Consumers’ demand for processed food made with rice flour has grown. The demand is expected to grow further, given the fact that rice flour can be used as a substitute for wheat flour made from wheat, whose imports amount to 5,000,000t a year.

In order to promote the full use of paddy fields, it is essential to expand and stabilize the demand for rice flour that is made from domestically grown rice. However, the price of rice flour needs to be lowered further in the light of the difference in prices between rice flour and wheat flour as a result of the differences in raw material prices, marketing, and manufacturing costs.

### Microscopic pictures of wheat flour and rice flour

- Conventional rice flour
- Wheat flour
- Rice flour milled by new technology

**Photo credit**: WeNARC

### Demand for wheat by use type (2006, estimated)

- **For bread**: 1,560,000 t
  - 10,000 t (1%)
  - 1,540,000 t (99%)

- **For noodles other than udon**: 120,000 t
  - 40,000 t (3%)
  - 1,180,000 t (97%)

- **For udon**: 610,000 t
  - 390,000 t (64%)
  - 220,000 t (36%)

- **For sweets**: 760,000 t
  - 170,000 t (23%)
  - 580,000 t (77%)

- **For domestic use**: 1,080,000 t
  - 8,000 t (0.7%)
  - 1,000,000 t (93%)

- **For soybean paste and soy sauce**: 160,000 t
  - 10,000 t (6.2%)

- **Domestically grown wheat**: (About 800,000 t)
- **Imported wheat**: (About 5,000,000 t)

**Protein content**
- For bread: (11.5~13.0%)
- For noodles other than udon: (11.0~14.0%)
- For udon: (10.5~12.5%)
- For sweets: (7.5~10.5%)
- For domestic use: (6.5~9.0%)

(Cf. protein content of rice flour being around 6.2%)

**Source**: MAFF

### Column: History of research and development on rice flour manufacturing technology

Against the background of the rice market glut during the 1960s, the government requested the relevant industries to introduce rice flour bread. The flouring technology at the time, however, spoiled the taste of the bread, which prevented the industries from introducing it as a product. As a result, the plan broke down. Later, during the 1990s, new flour-making technologies were successfully developed, which finally enabled the versatile use of rice flour. In recent times, various processed food items have contained rice flour as an ingredient for various functional purposes.
In order to ensure the well-established use of rice flour, it is necessary to lower its prices to the level of wheat price, and further examine the production, marketing, and subsidization system.

In order to accelerate rice flour use, it is necessary to select high-yielding rice varieties that are appropriate for processing, taking account of users’ evaluations. It is also necessary to develop technology that can evaluate if a rice variety is good for processing or not. The government is promoting such overarching technological development.

Various efforts are bearing fruit of developing processed food using rice flour as an ingredient, including rice flour bread and others.

**Changes in the government selling price of imported wheat (weighted average of 5 major brands) and the rice price by use**

(Ten thousand JPY per ton)

- **Rice for staple food:** Approx. 240,000 JPY per ton
- **Rice for processed food:** Approx. 160,000 JPY per ton
- **Rice flour for bread use:** Approx. 80,000 JPY per ton

Source: MAFF

**Various efforts to develop processed food using rice flour**

- **(Ono city, Hyogo prefecture)**
  School lunch using local rice flour (steamed rice 3 times a week, rice flour bread twice a week)

- **(Yamaga city, Kumamoto prefecture)**
  Students of a local high school, in tandem with local entrepreneurs, developed rice flour food (rice flour pizza, rice flour bread with melon flavor) and received favorable reviews.

- **(Asahikawa city, Hokkaido)**
  Local farmers organized a company that manufactures staple food rice into rice flour. The development of new products using rice flour is underway.

- **(Sano city, Tochigi prefecture)**
  A milling company developed rice flour that could replace conventional wheat flour, and sold the flour to consumers.
The feed self-sufficiency rate, which was 25% in FY2007, is projected to reach 35% in FY2015. The domestic livestock farming is facing difficulty in coping with the rising costs due to the steep rise in feed prices. It is vital to ensure that livestock farming is based on domestically produced feed, given the heavy dependence on feed imports. Raising the feed supply capacity, and thereby raising the self-sufficiency rate, through the promotion of feed production - whole crop silage, feed rice, and feed that originates from scrap as well as grazing - is essential.

### The status quo and the targets of feed self-sufficiency rate

<table>
<thead>
<tr>
<th>Source</th>
<th>MAFF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Note</td>
<td>TDN is Total Digestible Nutrients</td>
</tr>
</tbody>
</table>

#### Estimated imports of major feed grains (2007) (estimated area)

- **Maize**: 12,060,000 t (1,310,000ha)
- **Kouryan**: 1,000,000 t (260,000ha)
- **Barley**: 1,200,000 t (500,000ha)
- **Other grains**: 280,000 t (90,000ha)
- **Soybean oil cake**: 3,430,000 t (1,810,000ha)
- **Bran**: 930,000 t (320,000ha)
- **Total**: 18,890,000 t (4,290,000ha)

#### Livestock farming based on domestic feed production

- **Utilization of paddy field (collaboration between rice farming and livestock farming)**
  - Whole crop silage
  - Feed originated from animal
  - Paddy field gazing
  - Rice straw

- **Intensive grazing**
  - Reduction of feed cost
  - Reduction of labor hours

- **Contractor**
  - Less laborious harvesting
  - Reduction of production cost
  - Income generation

- **TMR center**
  - Reduction of feeding time
  - Increase of milk production
  - Expansion of operation size

- **Effective utilization of unused resources such as feed that originates from scrap**
  - Securing various sources of feed material
  - Effective use of unused resources

- **Expand the immature cropping of maize**
  - Introduce the highly productive grazing
  - Rise in yield
  - Reduction in production cost

- **Utilization of abandoned cultivated land**
  - Grazing of breeding cattle
  - Reduction of feed cost
  - Preservation of farming land
  - Prevention of wildlife damage
Utilizing rice as feed, which leads to the full usage of paddy fields, is becoming popular. Rice seeds, straw, and leaves can be used as whole crop silage and for other feed purposes. The aggregate planted area of whole crop silage and feed rice increased rapidly - by 2 and 36.6 times, respectively during the last four years.

The yield of whole crop silage ranges from 2,500 to 3,500kg per 10a, in the case of the feed rice varieties. Some feed rice varieties are high yielding, being projected to yield up to 700 to 800 kg per 10a, which is equivalent to 1.5 times the productivity of the rice varieties that are used as staple food.

In order to further facilitate the production of whole crop silage and feed rice, it is important to develop high-yielding varieties, decrease production costs by introducing cost-saving production technology and machinery, build up producer-user relations on a long-term basis, and ensure a stable supply of seed rice.

### Changes in planted areas of whole crop silage and feed rice

### Rice varieties for feed rice

<table>
<thead>
<tr>
<th>Variety</th>
<th>Yield (kg/10a, brown rice base)</th>
<th>Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bekoaoba</td>
<td>732</td>
<td>High yielding variety suitable for heavy maturing culture</td>
</tr>
<tr>
<td>Momiroman</td>
<td>823</td>
<td>High yielding variety suitable for direct seeding, and for whole crop silage</td>
</tr>
<tr>
<td>Hokuriku 193</td>
<td>780</td>
<td>Lodging-resistance and high yielding variety suitable for bio-ethanol</td>
</tr>
</tbody>
</table>

### Merits of whole crop silage and feed rice

#### For rice farmers
- Suitable for paddy field
- Same cropping pattern with ordinary rice
- Being able to prevent injuries by continuous cropping of wheat and soybean
- No need for new investment in agricultural machinery

#### For livestock farmers
- Highly nutritious and fit for feed
- Can be preserved on a long-term basis
- Can be supplied all year round and during winter
- Possible to expand operation sizes without costing labor for feed production increase
(4) Promoting agricultural production on the basis of demand

- Domestic wheat and barley production have been on an upward trend in recent years. While domestic wheat production —882,000t in 2008— has exceeded the 2015 target of 860,000t, barley production —217,000t in 2008— has fallen short of the 2015 target of 350,000t.

- Improving crops quality and matching supply to demand are the problems faced by domestic wheat and barley farmers. To this end, it is necessary to replace the current wheat varieties used for bread manufacturing with those of better quality as well as to take the surest quality control measures. Improving productivity of barley by introducing new varieties with high quality and yield as well as employing such basic cultivation technologies as drain measures is required.

- Domestic soybean production was 262,000 t in 2008, almost all of which were earmarked for processed food, of which 60% is represented by tofu and boiled soybean and other side dishes account for 10%.

- In light of the decrease in the domestic soybean yield due to injury caused by exposure to excess moisture during the early growth stage and the subsequent dry condition, new technologies have been introduced in order to stabilize crop production. Examples include Soybean 300A technology, which ensures both high yield of 300 kg per 10a and high quality and the production system of preventing excess moisture and drying condition during the growth stage of soybean.
The demand for vegetables in the food industry is on an upward trend. Imports of vegetables peaked in 2005 and fell subsequently. In particular, imports from China decreased by 20% year-on-year in 2008. Although the market share of domestic vegetables for food processing industry is on a downward trend, 80% of industry entrepreneurs plan to increase domestic vegetable use. In order to establish a system for the stable supply of domestic vegetables, various efforts are being made such as fostering business intermediaries that function as go-betweens for farmers and food manufacturers.

The demand for fruit has been around 8,500,000t in recent years. The self-sufficiency rate, however, is on a downward trend due to the decrease in domestic production and an increase in processed fruit imports.

In order to enhance the competitiveness of domestic fruit production as per the consumer’s demand, the government has been taking measures such as support programs for fruit farming and programs to stabilize the demand and supply of fruits.

The volume of imports and self-sufficiency rates for vegetables

<table>
<thead>
<tr>
<th>Rate of self-sufficiency</th>
<th>Volume of imports</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td></td>
</tr>
</tbody>
</table>

The volume of domestic production, the volume of imports, and self-sufficiency rates for fruits

<table>
<thead>
<tr>
<th>Rate of self-sufficiency</th>
<th>Imports</th>
<th>Domestic production</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fresh</td>
<td>For processing</td>
</tr>
<tr>
<td></td>
<td>Fresh</td>
<td>Fresh</td>
</tr>
</tbody>
</table>

Image of stable supply system for vegetable distribution

1. Ensures stable supply of vegetable in case of crop failure by procuring from various producing areas and by keeping stockpiles
2. Creates new markets and carries out fixed price transactions under contracts in case of bumper crop
3. Supplies vegetables in the semi-processed form such as peeled and cut vegetables in order to meet the demand
4. Offers guidance to producing areas

Improvement of small-scale orchards (paths, moderation of slope and so on)

Displant and regenerate fruit trees to good varieties, and abandonment of disadvantaged orchards

- Oranges
- Apples
- Other fruits
- Every fruits

Rate of subsidy: fixed amount
Rate of subsidy: ½ and below
Rate of subsidy: ½ and below
Rate of subsidy: fixed amount
Rate of subsidy: ½ and below

Rate of subsidy for all: ½ and below

Image of stable supply system for vegetable distribution

Source: MOF “Trade Statistics”; MAFF “Food Balance Sheet”
Notes: 1) “Rate of self-sufficiency” is the fiscal year rate on a weight basis
2) “Volume of imports” contains processed vegetables

Source: MAFF
Notes: 1) “Rate of self-sufficiency” is the fiscal year rate on the basis of weight
2) “Volume of imports” is figures converted into fresh products.
Chapter Ⅰ: Major trends in food, agriculture, and rural areas

Section 1: Improvement of the food supply capacity and the food self-sufficiency rate, and the stable supply of safe food

(1) Global food situation and agricultural trade negotiations

Global food supply-demand balance has been influenced by the expanding population, rising income levels and changing in harvested areas. In addition, the increasing demand for biofuel and the frequency of abnormal weather conditions have become major factors influencing global food supply-demand in recent years.

World grain demand has increased with expanding population, rising income levels, and the increasing demand for biofuel.

In FY 2006, ending stocks declined to 16.6% due to the continuous decline in grain production in major producing countries, which was in contrast to the rising global demand. In FY 2007, as the global food supply-demand situation tightened, the food crisis had worsened to such a stage as to cause the eruption of food riots in Asia and Africa.

In FY 2008, it was predicted that the ending stocks would recover to 20.0% since the production of primary grain products were predicted to increase as a result of good weather in the Northern hemisphere.

Main factors of global food supply-demand balance

- Demand of biofuel-oriented crops
- Rapid economic growth of China, etc.
- Frequent abnormal weather conditions
- Exacerbation of desertification
- Water shortage
- Outbreak of animal disease
- Increasing population
- Increasing demand of animal products
- Area of cropland
- Yields

Source: MAFF

World grain production and demand, and the ending stocks ratio

Sources: UN World Population Prospects: The 2006 Revision, USDA Grain: World Markets and Trade (April 2008), PS&D
The 5 major countries and regions from which Japan imports agricultural products accounted for just over 70% of the total value, and the United States accounted for over 90% of the total import value of corn, resulting in a framework of reliance on certain countries.

The total value of vegetables imported from China has decreased following the introduction of a Positive List System of agricultural chemicals in foods in Japan. Agricultural imports from China took a downward turn in 2008 with a 20% decrease from the previous year, especially since imported food from China contained chemical contaminants.

It has been estimated by MAFF that if the import of agricultural products were disrupted completely, 2,020 kilocalories per day per capita could be supplied from domestic production alone by shifting crop production from meat and vegetables to high-calorie food crops such as potatoes. While this supply of calories would be sufficient to secure the minimally required level of calorie needs for people, dietary content would be quite different from what we have today.

To prepare for possible food emergencies, we will need to reinforce our food supply capacity by securing agricultural land and water for agricultural purposes, endeavoring to foster and secure principal farmers, and upgrading agricultural technologies under normal circumstances.

**Japan’s major import trading partners (2008)**

<table>
<thead>
<tr>
<th>Country</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>31%</td>
</tr>
<tr>
<td>China</td>
<td>13%</td>
</tr>
<tr>
<td>Japan’s major import of agricultural products</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Country</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>31%</td>
</tr>
<tr>
<td>China</td>
<td>13%</td>
</tr>
<tr>
<td>EU</td>
<td>13%</td>
</tr>
<tr>
<td>Australia</td>
<td>9%</td>
</tr>
<tr>
<td>Canada</td>
<td>6%</td>
</tr>
</tbody>
</table>

Change in imports of agricultural products and import volume of vegetables from China

**Examples of a 2,020kcal meal**

In addition: 1 bowl of udon noodles every 2 days, 1 bowl of miso soup every 2 days, 2 pieces of sota (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.
During a WTO informal ministerial meeting held in July 2008 aiming to establish the modalities, the negotiations broke down mainly because of a conflict between the developed and developing countries over special safeguard mechanism for developing countries. The government will continue engaging in the discussions constructively with an underlining principle of “coexistence of various types of agriculture”, while pushing forward the structural reform of domestic agriculture, to establish trade rules that are equitable to both importing and exporting countries.

The government will engage in negotiations of FTA/EPA - which supplements the WTO regime so as to maximize the national interest, while taking into account food security and the progress of agricultural structural reform, based on the principle: “to protect what should be protected”.

The number of undernourished people in the world in 2008 is estimated at 963 million according to the FAO. At the G8 Hokkaido Toyako Summit held in July 2008, the G8 countries acknowledged the importance of enhancing world food production and increasing investment in agriculture. Japan implements the ODA in accordance with the principle of contributing to global food security.

Source: MAFF

Note : 1) EPAs between Japan and ASEAN countries entered into force as follows: Singapore, Laos, Viet Nam, and Myanmar; in Dec. 2008: Brunei; in Jan. 2009: Malaysia; in Feb. 2009: Indonesia. From now, EPAs between Japan and other 4 ASEAN countries will enter into force after the notifications that domestic procedures have been completed.

2) Although the negotiation on the EPA between Japan and South Korea has stopped since Nov. 2004, working-level talks were held in Jun. and Dec. 2008.

3) The member countries of GCC (Cooperation Council for the Arab States of the Gulf): Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and UAE.
(2) Improvement of the food supply capacity and the food self-sufficiency rate

The food self-sufficiency rate in calories increased by 1% and reached 40% in FY 2007. This was mainly caused by the following reasons: First, the domestic wheat production in 2007 was the maximum over the last decade. Second, daily per capita rice consumption had increased. The self-sufficiency rate in values decreased to 66% due to a decline of vegetable and rice prices and inflationary prices of imported feedstuff.

There was a greater diversity in food habits. Comparison of diet in FY 1965 with that in FY 2007 revealed that calorie consumption became half and the consumption of meat, eggs, and oil increased.

The main reasons for the long last fall in the food self-sufficiency rate in calories are the decrease in the consumption of rice which can be produced only in Japan, and a simultaneous increase in the consumption of animal products and oil; which requires the production of feeding grain that is difficult to be produced in Japan and increase in oil consumption which is also difficult to produce in Japan. In addition, the inability to meet the demand of food for processing and institutional use is another factor.

### Contents of meals and consumed amount of food per capita

<table>
<thead>
<tr>
<th>Item</th>
<th>1965</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rice</td>
<td>100%</td>
<td>24%</td>
</tr>
<tr>
<td>Soybeans</td>
<td>33%</td>
<td>62%</td>
</tr>
<tr>
<td>Vegetables</td>
<td>28%</td>
<td>14%</td>
</tr>
<tr>
<td>Fish and seafood</td>
<td>110%</td>
<td>52%</td>
</tr>
<tr>
<td>Wheat</td>
<td>31%</td>
<td>14%</td>
</tr>
<tr>
<td>Oils and fats</td>
<td>28%</td>
<td>16%</td>
</tr>
<tr>
<td>Livestock products</td>
<td>47%</td>
<td>50%</td>
</tr>
<tr>
<td>Others</td>
<td>68%</td>
<td>24%</td>
</tr>
</tbody>
</table>

**Source:** Food Balance Sheet (MAFF)  
**Note:** *show the self-sufficiency rate in calories*

### Composition of calories supplied and the self-sufficiency rate by food item

**On a calorie basis**

- **Rice:** 100%
- **Beef:** 24%
- **Pork:** 62%
- **Eggs:** 33%
- **Milk:** 14%
- **Oil:** 16%
- **Vegetables:** 50%
- **Fruits:** 45%
- **Fish and seafood:** 45%

**Source:** Food Balance Sheet (MAFF)  
**Notes:** Figures in square brackets denote calories supplied by domestic production.
In order to achieve the target of 45% as the food self-sufficiency rate in calories and 76% in values, it is important to address both the process of agricultural production and food consumption. Besides, it is important for consumers, companies, associations, and public bodies to collaborate towards promoting consumption of domestic agricultural products.

"FOOD ACTION NIPPON" was launched on October 2008, and is a national movement to raise the food self-sufficiency rate. Various activities that contribute to promoting consumption of domestic agricultural products are conducted, including incentives to provide points to domestic agricultural products and invention of new food products by the voluntary participation of individuals and companies.

MAFF conducted a trial calculation showing that if an additional mouthful of rice was taken at each meal, the self-sufficiency rate would rise by 1% on a calorie basis.

### Actions for improving the food self-sufficiency rate

<table>
<thead>
<tr>
<th>People</th>
<th>National movement</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Practice a Japanese dietary pattern</td>
<td>• Fulfill a target of production effort.</td>
</tr>
<tr>
<td>• Promote consumption of domestic food</td>
<td>• Promote the domestic production of foods</td>
</tr>
<tr>
<td>• Reduce food wastage</td>
<td>• Fulfill a good dietary habits</td>
</tr>
<tr>
<td>Farmer, Farmers’ organization</td>
<td>• Improvement of the nutritive value of the diet</td>
</tr>
<tr>
<td>• Utilize land efficiently</td>
<td>• Reduce food wastage</td>
</tr>
<tr>
<td>• Produce crops according to needs</td>
<td></td>
</tr>
<tr>
<td>Government</td>
<td></td>
</tr>
<tr>
<td>• Support efforts to improve the food self-sufficient rate</td>
<td></td>
</tr>
<tr>
<td>• Structured preparation for possible emergencies</td>
<td></td>
</tr>
<tr>
<td>Food manufacturer, distributor, food-service industry</td>
<td></td>
</tr>
<tr>
<td>• Meet consumer needs (Ensuring consumer confidence)</td>
<td></td>
</tr>
<tr>
<td>• Proper indication</td>
<td></td>
</tr>
</tbody>
</table>

### Additional consumption which raises self-sufficiency rate by 1% (a trial calculation)

- An additional bite of rice per meal
- Three additional bowls of Japanese wheat noodles made by domestic wheat per month
- Three additional portions of tofu made by domestic soybean per month

Source: MAFF

< "FOOD ACTION NIPPON" >

"FOOD ACTION NIPPON" is a national movement which aims “to successfully create a Japanese dietary pattern”. This movement propagates the concept, “The government and the people of Japan should work together to improve the food self-sufficiency rate”. FOOD ACTION NIPPON advocates the slogan “Take simple and easy steps” and prescribes the following actions.

1. Eat seasonal foods.
2. Eat foods that are locally produced.
3. Meals should consist of increased amount of rice and vegetables.
4. Reduce wastage of food.
5. Learn about and try to support the movement to improve the food self-sufficiency rate.

Source: http://www.syokuryo.jp/
It is known that 30.2% of men in their 30s and 24.9% of women in their 20s do not eat breakfast everyday. Additionally, there are numerous flaws in the dietary pattern followed in Japan, such as the low levels of vegetable and fruit intake. An undesirable dietary lifestyle is a factor responsible for the loss of motivation for learning, physical strength, and vitality in children. Regular breakfast is important for children to establish good dietary habits.

Shokuiku is an important means of gaining knowledge and sense of awareness about food. The percentage of respondents who said they acknowledge the Japanese Food Guide Spinning Top (JFGST) and the percentage of respondents who said they use the JFGST increased.

It is important to use the press-agent JFGST for Retailers, home-meal replacement, and the food service industry in order to make appropriate lifestyle changes. It is important to use the JFGST to follow a Japanese dietary pattern.

**Relation between consumption of breakfast and test scores**

<table>
<thead>
<tr>
<th></th>
<th>(sixth grade of elementary school)</th>
<th>(third grade of junior high school)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Consuming most of the time</td>
<td>Consuming most of the time</td>
</tr>
<tr>
<td>Japanese</td>
<td>67%</td>
<td>74%</td>
</tr>
<tr>
<td>Language A</td>
<td>67%</td>
<td>74%</td>
</tr>
<tr>
<td>Mathematics A</td>
<td>66%</td>
<td>66%</td>
</tr>
<tr>
<td>Mathematics B</td>
<td>55%</td>
<td>53%</td>
</tr>
<tr>
<td>Not consuming</td>
<td>43%</td>
<td>36%</td>
</tr>
<tr>
<td>at all</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Awareness and reference of the Japanese Food Guide Spinning Top (JFGST)**

<table>
<thead>
<tr>
<th>Year</th>
<th>Not being aware of the JFGST</th>
<th>Being aware of the JFGST in name only</th>
<th>Being familiar with the content of the Japanese Food Guide Spinning Top(JFGST)</th>
<th>Others and No response</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>71.8</td>
<td>44.5</td>
<td>18.5</td>
<td>2.1</td>
</tr>
<tr>
<td>2006</td>
<td>70.0</td>
<td>64.4</td>
<td>55.0</td>
<td>1.8</td>
</tr>
<tr>
<td>2007</td>
<td>63.0</td>
<td>50.4</td>
<td>38.6</td>
<td>1.0</td>
</tr>
<tr>
<td>2008</td>
<td>57.3</td>
<td>44.5</td>
<td>28.7</td>
<td>1.0</td>
</tr>
</tbody>
</table>


Note: "A" focuses on knowledge. "B" focuses on the practical application.
(Promoting local consumption of local produce)

- "Local consumption of local produce" is a campaign to promote the consumption of agricultural products produced locally and also to bring about better communication between producers and consumers. It is expected to not only improve the food supply capacity and the food self-sufficiency rate and to invigorate local agriculture but also reduce CO₂ emissions due to transportation.

- The government promotes active use of local products in school lunch by the revision of the “School Lunch Program Act” and food education using school lunch. It is important to establish a stable supply system of local products to promote the use of local products in school lunch, for example, farm stands play the role of distribution coordinator.

- The average annual sales of farm stands which are the main bases of the action of “local consumption of local produce,” amounted to 88.7 million yen per stand in the fiscal year 2006, which was 19% more than compared to sales 3 years ago. Some farm stands formed a network with others and supply local agricultural products mutually. These actions are expected to shift distribution costs to the producers’ income.

**Serving rice and utilizing local products in school lunch**

<table>
<thead>
<tr>
<th>The national average of the number of times rice was served in school lunch:</th>
<th>The national average utilization rate of local products in school lunch:</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 times per week</td>
<td>23.3%</td>
</tr>
</tbody>
</table>

Source: MEXT
Notes: 1) Figures are the result of a survey of about 500 schools that provide school lunch.
2) Utilization rate is the percentage of local food in the total food used in school lunch (based on the number of food materials).

**< Practice of “local consumption of local produce” in tourist spots >**

A research center publishing a travel information magazine launched a project to enhance the satisfaction of hotel guests through the practice of “local consumption of local produce” in Yunoyama-onsen, Komono-town, Mie prefecture using as a model area.

The project was initiated by increasing the awareness of the local community and sharing perceptions about this project. Then, the range of local products used was expand using food materials produced within the prefecture, and these were provided to hotel guests at breakfast and tea time; the hotel guests were informed about the place of origin of the food materials in an easily understandable way.

These actions enhanced the guest’s satisfaction from the food. In addition, these actions have helped in the discovery of new food materials in Mie and development of new distribution routes. This community will continue to practice “regionally specific food” and “communications through foods”.

**Four important points to take steps towards local consumption of local produce**

1. **“Local consumption of local produce” is not difficult.**
2. Identify the local food materials in each prefecture.
3. Contact point of food is not only dinner!
4. It is important to communicate with hotel guests.

Source: Jalan research center ‘To-irimakashi’ the 12th number (June, 2008)
The food industry forms a big part of Japan's industrial economy. The scale of economy is 11 trillion yen for agricultural and fisheries products for food (containing imports (1.2 trillion yen)) and 74 trillion yen at the final consumption stage of food and drink. With the processing and food-service stages, its economic scale is increased up to 7 times.

The amount of food wastes generated by the food industry is equal to 11 million tons per year. Under such circumstances, the execution rate of food waste recycling for feed and fertilizers provided for in the “Food Recycling Act” was raised to 54%.

With the revision of the “Food Recycling Act” in December 2007, the government further promoted the processing of food wastes into feeds or fertilizers by retailers or food-service providers. The promotion of utilization of agricultural, livestock and fisheries products produced by collection and recycle of food resources over border municipalities resulted in progress in the formulation of recycle loops.

The amount of food wastes generated by food dealers and households is estimated at 5-9 million tons per year. Sharing a common feeling of awareness to the importance of food should induce the food industry and consumers to act for the reduction of food wastes such as reduction of generation of food wastes by stock management and the utilization of irregular food products.

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Flow of Food and Drink Expenditure until Final Consumption (2005)

| Source | MIC and 9 other offices “Input Output tables for Japan” |
| Notes | 1) Milled grains, slaughtered animals and frozen marine products are included in “fresh food, etc.” at the final consumption stage, although these are processed foods which go through food industry.  
2) Meals served at hotels, Japanese inn and hospitals and so on are not included in “eating-out”, but included in “fresh food, etc.” and processed food as ingredients expenditure |

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Flow of generation of food waste

(3) Ensuring food safety and consumer confidence

- In order to supply safe food to consumers and prevent adverse effects on consumer health, action for food safety improvement must be implemented in the food supply chain from the farm to the table, on the basis of risk analysis (i.e. the Food Chain Approach).
- It is important to improve food safety through the adoption of the “Hazard Analysis and Critical Control Point” (HACCP) method, which is a process management method for hazard prevention, to constantly monitor and record certain aspects that require such close assessment.

### Ensuring safety of domestically produced and imported food

#### Food chain

<table>
<thead>
<tr>
<th>Stage</th>
<th>Process</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Production stage</strong></td>
<td>Agricultural, livestock, and fisheries products</td>
</tr>
<tr>
<td><strong>Processing and distribution stage</strong></td>
<td>Food</td>
</tr>
<tr>
<td><strong>Consumers</strong></td>
<td></td>
</tr>
</tbody>
</table>

**Domestic products**

- MAFF (Ensuring food safety through improvement of production, distribution, and consumption of domestically produced agricultural, forestry, and fisheries products)
- (Regulation of domestically produced materials by such as Agricultural Chemicals Regulation Act)
- MHLW (Monitoring of domestically distributed food)

**Imported food**

- Exporters
  - Agricultural department
  - Holding export quarantine
- MHLW (Executing import quarantine)

Source: MAFF

### Framework of risk analysis

- **Risk analysis**: Analysis of potential problems, their prevention and reducing the possibilities of damage
- **Risk management**: After determining risk by methods such as field survey reviewing measures for risk reduction and performing appropriate measures when required.
- **Risk assessment**: Scientific evaluation of the damage caused by ingestion of toxic substances in food and the extent of damage
- **Risk communication**: Communication and information exchange with concerned persons such as consumers

Source: MAFF

### Framework of risk management

- **Initial work of risk management**: Specifying the problem about food safety, gathering and analyzing scientific knowledge, determining priority of hazard factors, investigating contamination, developing and revising of contamination reduction techniques.
- **Taking measures for risk management**: Concretely presenting measures to improve food safety for producer and food traders (Practicing guidelines, etc.)
- **Practicing measures for risk management**: Making contents of practicing guidelines available to relevant people by incorporating guidelines into process management method (GAP, HACCP, etc.)
- **Reviewing risk management**: Verifying risk management measures through monitoring of the actions of the enterprise and the contaminating factors and re-verifying risk management measures in the light of the result of verification studies.

Source: MAFF
Further, the government sets targets for the introduction of “Good Agricultural practice” (GAP) in main crop production areas of rice, wheat, vegetables, fruits and so on (2,000 production areas) by the fiscal year 2011. GAPs were introduced in 1,138 production areas by the end of July, 2008.

An agricultural producers’ cooperative corporation in Katori city, Chiba prefecture aims to produce foods which can be easily available to all without anxiety and to conserve the natural environment by creating “autonomous producers” who think and practice proactively. They cherish interaction with business partners, consumers, and farmers around the world.

It has been awarded the EurepGAP (it is GLOBALGAP today) certification, a global standard, for the preparation of a manual, which was easily understood by members and educated them. At the time of assessment, they were advised from the producers’ viewpoint by a judge who is a stock farmer in New Zealand and felt that his advice was useful for improvement of its farm management.

Its action concerning GAP is wide-ranging as follows; method for daily checking, farmland management, method for recording and filing the use of agrichemicals etc., method for training operators, method for sanitary control and health control of operators, and so on. Although an introduction of GAP does not lead to an increase of sales, it is thought that these efforts are beneficial to increase the awareness of members and to step up to organizational production. Henceforth, it will promote members’ understanding regarding and practice of these steps.

In order to ensure consumer confidence, it is essential for the food industry to observe compliance (with regulations or observation of ethics, etc.). In addition, the government will strictly regulate and supervise the food industry by monitoring mislabeling by Food Labels Special G-Men and monitoring in cooperation with consumers such as food label telephone hot line and food labels monitoring system.

Traceability means the ability to follow the movement of the food through specified stage(s) of production, processing and distribution. Individual businesses should be encouraged to keep records such as the date of purchase, the date of sell, suppliers and customers. Traceability is beneficial to both food business operators and customers because it enables businesses to withdraw the food in question from the market effectively and accurately, and to protect customers not to buy it in the event of food safety problem.

Although the rate of introduction of traceability system by food retailers is increasing, small and medium-sized operators and farmers have been behind in implementing traceability system due to its costs. It is necessary to promote methods that would encourage small business operators and farmers to take the records-keeping action with ease and at a low cost.

The rate of mislabeling of fresh food (Based on the number of agricultural, livestock, and fishery products and food excluding rice)
Section 2: Strengthening the structure of agriculture and bolstering high-added values

1. The current state of agricultural economy

In Japan, there has been a decline in the area of cultivated land and such land is being increasingly abandoned. In addition, persons engaged in farming are either declining or aging. Total agricultural output has been declining since 1984; this was the year when peak agricultural output was observed (total agricultural output in 1984 was 11.7 trillion yen). This is because of a decline in rice production along with a decline in its demand, etc.

In 2007, the total income of business farm households was 5.48 million yen per household and their agricultural income accounted for 80% of the total income. Although agricultural income of semi-business farm household was less than 10% of the total income, the total income of such household was higher than that of business farm household.

Although agricultural income from paddy farming remained the same over years due to a long-term stagnation in the price of rice, some farmers have raised their agricultural income by cost reduction through improvements in the efficiency of farming or switched to multiple farming. Hence, the agricultural income of farm households that used new strategies was higher than that of farm households that did not change their strategies.

### Area of cultivated land, the size of the agricultural workforce, and other parameters

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cultivated land area (10,000 ha)</td>
<td>600</td>
<td>557</td>
<td>538</td>
<td>504</td>
<td>469</td>
</tr>
<tr>
<td>Abandoned cultivated land (10,000 ha)</td>
<td>-</td>
<td>-</td>
<td>13.1</td>
<td>13.5</td>
<td>24.4</td>
</tr>
<tr>
<td>Total number of farm households (10,000 households)</td>
<td>566</td>
<td>495</td>
<td>423</td>
<td>344</td>
<td>285</td>
</tr>
<tr>
<td>Population mainly engaged in farming (10,000 persons)</td>
<td>1,151</td>
<td>791</td>
<td>543</td>
<td>414</td>
<td>335</td>
</tr>
<tr>
<td>Core persons mainly engaged in farming (10,000 persons)</td>
<td>894</td>
<td>489</td>
<td>346</td>
<td>256</td>
<td>224</td>
</tr>
<tr>
<td>65 years old or older (%)</td>
<td>-</td>
<td>-</td>
<td>19.5</td>
<td>39.7</td>
<td>57.4</td>
</tr>
</tbody>
</table>

Source: MAFF “Census of Agriculture and Forestry” “Statistics on Cultivated Land and Planted Area”

### Comparison of the distribution of agricultural land per farm household between Japan and other countries

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural land area per farm household</td>
<td>1.83 ha</td>
<td>181.7 ha</td>
<td>16.9 ha</td>
<td>3,407.9 ha</td>
</tr>
</tbody>
</table>

Source: MAFF “Survey on Movement of Agricultural Structure,” USDA; the European Commission; ABARE

Note: The figure for Japan refers to the area of cultivated land under management per commercial farm household.

### Composition of the total income of commercial farm households in 2007

<table>
<thead>
<tr>
<th></th>
<th>548</th>
<th>592</th>
<th>445</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business farm households</td>
<td>39</td>
<td>425</td>
<td>145</td>
</tr>
<tr>
<td>Semi-business farm households</td>
<td>48</td>
<td>399</td>
<td>204</td>
</tr>
<tr>
<td>Side-business farm households</td>
<td>101</td>
<td>592</td>
<td>210</td>
</tr>
</tbody>
</table>

Source: MAFF “Statistical Survey on Farm Management and Economy (Statistics on Management by Type of Management)” and “Survey on Movement of Agricultural Structure”

### Change in the agricultural income and cost of the same farm households (paddy farming)

<table>
<thead>
<tr>
<th></th>
<th>1997</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Farm households surveyed.</td>
<td>1,175</td>
<td>1,233</td>
</tr>
<tr>
<td>Agricultural management cost</td>
<td>1,501</td>
<td>1,941</td>
</tr>
<tr>
<td>Agricultural income</td>
<td>1,055</td>
<td>1,146</td>
</tr>
<tr>
<td>Farm households among those surveyed on the left for which plans of new action were taken. (20 management entities)</td>
<td>1,793</td>
<td>1,395</td>
</tr>
</tbody>
</table>

Source: MAFF
(2) Securing farmland and agricultural water, and utilization of farmland

- The area of land under cultivation has been declining since 1961, when a peak area was under cultivation (6.1 million ha), and it dropped to 4.6 million ha in 2008. The following factors are responsible for a decrease in cultivated land: decrease in cultivation activity and conversion of farmlands to non-farming ones for housing purpose. The area of abandoned cultivated land has increased since 1985, and it reached 386,000 ha in 2005 (MAFF “Census of Agriculture and Forestry”).
- The rate of cultivated land utilization has been continuously declining over the years; the utilization rate was 92.6% in 2007.

### Cultivated land area and its expansion/ruin

- Cultivated land managed by principal farmers has been increasing, and 2.1 million ha of land was cultivated land in the fiscal year (FY) 2007, which accounts for only 45% of the total cultivated land area in Japan. It is important to use farmlands efficiently for conducting extensive farming, but farmlands are found scattered in some locations in spite of a certain scale of managed farmland.
- In order to promote the utilization of abandoned cultivated land, utilizing the system for the special zone for structural reform, the government relaxed the regulations in order to allow business enterprise to enter farming business by borrowing farmlands from municipalities (so-called Special Zones for Lease) in FY 2003, and applied it throughout Japan in FY 2005.
- In September 2008, 320 corporations had cultivated 950 ha of farmland.

### The situation after other industries started practicing agriculture, and the areas of leased farmland

![Diagram of farmland area and its expansion/ruin](source)

- **(Classification by type of organizations)**
  - NPO etc.
  - Special limited companies
  - Stock companies
- **(Classification by industries)**
  - Agricultural production companies
  - Others
  - Food industry
  - Construction industry
- **(Farmland area lent to others)**
  - Farmland possibly being abandoned
  - Abandoned farmland

Source: MAFF
Farmlands must be secured in good condition, be utilized effectively, and be assigned to motivated farmers. Diverse issues concerning the farmland situation in Japan are indicated by both system and actual condition, such as increase in abandoned cultivated land; difficulty in the concentrated use of farmlands; and farmland price, which is higher than the revenue derived from agricultural production because of diverse expectations.

Due to these factors, Ministry of Agriculture, Forestry and Fisheries of Japan (MAFF) formulated “Plans of Agrarian Reform” in December 2008, which focused on retaining farmlands by restraining abandonment of farmlands and redefining the base of farmland system from “possession” to “utility.”

In addition, by bringing farmlands under the control of motivated farmers by creating easier options to lease farmlands, MAFF aims to secure stable food supply by increasing domestic food production. In order to achieve this, a “bill for partial amendments of Agricultural Land Act” was submitted to the National Diet at the 171st session.

In order to share farmland information, council of regional leaders in municipalities started building a farmland information database in FY 2008. In addition, the government conducted the field survey to identify a location and to grasp the degree of deterioration concerning lands which were cultivated in the past but are not able to cultivate now in FY 2008 in order to eliminate abandoned cultivated lands.

According to the result of the survey of the 1,777 municipalities dealing with abandoned cultivated land, 149,000 ha of abandoned cultivated land are potentially arable, of which 82,000 ha can be made arable by activities such as mowing, and the rest 67,000 ha require infrastructure development for making the land cultivable. The target of regeneration and utilization of such areas is about 100,000 ha.

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**Summary of review of farmland ownership system**

- **Japanese farmland area has decreased to about 70% of its peak level.**
  - 1961: 6.1 million ha
  - 2008: 4.6 million ha

- **Hopes for diversion**
  - Higher price of farmland over income from agricultural production

- **Glacial concentration and scale expansion**

- **Securing farmland by restraining reduction in farmland area**
  - Expansion of the target of allowance of farmland diversion (establishment of community facilities such as hospitals and schools)
  - Raising the penalty for illegal diversion
  - Asking prefectural governments for proper treatment of allowance of diversion of farmland below 2 ha

- **Rebuilding foundation of the system from “possession” to “use”**
  - Clarification of the debt of the farmland owners
  - Clarification of the farmland owners’ debt on the law, using farmlands properly and effectively
  - Promotion of concentration of farmland in a comprehensive way
  - Introduction of farmland-lease system in which formal and trusted organizations lease farmlands; it is necessary that the owners of the farmlands be mande of the organization in a comprehensive way and be available to users

- **Securing farmland in the arable land zone**
  - Tightening of the regulation of exclusion from arable land zone
  - Asking prefectural governments to secure farmlands in arable land zone
  - Based on the outcomes of these measures for securing farmlands, the government will reconsider role sharing between national and local government organizations over the next 5 years

- **Rebuilding foundation of the system from “possession” to “use”**
  - Issues for postponement of tax payment for inheritance of farmland based on review of the farmland ownership system
  - Keeping postponement of tax payment of farmland, if the possessors lend farmland to others

---

**Summary of the result of the entire survey on abandoned cultivated land (estimated)**

<table>
<thead>
<tr>
<th>Total</th>
<th>Green+Yellow</th>
<th>Green</th>
<th>Yellow</th>
</tr>
</thead>
<tbody>
<tr>
<td>284,000 ha</td>
<td>149,000 ha</td>
<td>82,000 ha</td>
<td>67,000 ha</td>
</tr>
</tbody>
</table>

Source: MAFF “Complete survey on abandoned cultivated land”

Note: Between April 2008 to the end of March 2009, field survey was conducted in 1,785 municipalities (at the time, the number of all municipalities is 1,788). The 1,777 municipalities presented their survey results to the Ministry of agriculture, forestry, and fisheries (MAFF) by the end of March 2009; 1,172 of them surveyed whole area of all over the municipalities. MAFF estimated whole area of abandoned cultivated land in Japan based on the survey results of the 1,172 municipalities.
The availability of well farmland and agricultural water should be ensured for improving the agricultural productivity and maintaining the food supply capability. It is believed that larger segments of farmlands and higher rates of improvement in production base such as farm load will ensure that more area of farmland is assigned to principal farmers. With respect to paddy fields, an improvement in the production base will make the utilization rate of cultivated land higher.

The total length of agricultural irrigation canals is 400,000 km, which is 10 times longer than the circumference of the earth. These comprise all the agricultural water, including core irrigation facilities such as 7,000 dams and 210,000 ponds. Many of these facilities need to be renewed.

With many agricultural irrigation facilities requiring renewal, the government promotes “Stock Management”, which is a method for the management of facilities by selecting efficient and effective measures such as whether repair or improvement in necessary parts is required is decided based on the functional diagnostics of the facilities.

The rate of farmland maintenance and farmland area assigned to principal farmers (March 2006)

System of “Stock Management” of core agricultural irrigation facilities

1. “Stock management” is a method for efficient functional maintenance of facilities via deliberate measures according to the situation of decreased performance and functional loss based on scheduled functional diagnostics and taking timely and accurate measures for such losses. In addition, the information on the facilities is collected and continuously utilized for maintaining the facilities.
(3) The current state of farm labor force

- In 2007, the number of persons newly engaged in farming decreased by 9.3% (7,570 persons) to 73,460. The number of new employees in agricultural corporations and other such organizations increased by 12.0% (780 persons) to 7,290, more than 50% of which were 39 years old or younger. Agricultural corporations and other such organizations are important employers for young people newly engaged in farming.

- Female farmers play important roles in Japanese agricultural activities. They account for 54% of the population mainly engaged in farming and 44% of the core persons mainly engaged in farming (figures are in 2008). However, the percentage of women who are agricultural committee members and board members of agricultural cooperatives remains lower.

- The number of Income-generating activities being undertaken by rural women is increasing, many of which use local agricultural products. It is necessary to improve the economic condition of women and create more favorable working environment for promoting their participation in farm management and community activities by appropriately evaluating the roles of women.

- There were 21,000 trainees and 11,000 technical interns in the agriculture, forestry, fisheries, and food sectors under the industrial training programs in FY2007. These figures demonstrate the upward trends. On the other hand, the number of improper conduct by employing bodies was 449, which was double the number recorded in the previous year (229 cases). Thus, it is important to improve the process and review the system.

The number of persons newly engaged in farming classified according to the employment status

The number of new employees in agriculture classified by age (2007)

The number of income-generating activities undertaken by rural women

Trainees in the agriculture and food sectors

Note: Trainees include persons not engaged in practical training.
(4) Fostering and securing of principal farmers

- The number of certified farmers has been increasing steadily irrespective of the decline in the number of population mainly engaged in farming. Especially, this can be partly attributed to the introduction of the Programs of Direct Payment for Paddy- and Upland-Field Farming (PDPPUFF) in 2007. The number of certified farmers has increased widely over recent years, with the number having reached 239,286 by the end of March 2008; this amounts to an increase of 20% in 3 years.
- The number of certified farmers who are less than 60 years old accounts for 70% of the total number of certified farmers. This rate is higher than the rate of core persons mainly engaged in farming.

### Number of certified farmers

- An increase of 20% (+47,653 persons)

### Age structures of certified farmers

- Below the age of 40 years
- 40 - 59
- Above the age of 65 years

### Number of community-based farm cooperatives

- The number of community-based farm cooperatives has increased recently partly due to the introduction of the PDPPUFF; this number was 13,436 in 2009, indicating an increase of 374 (2.7%) compared to the previous year. Presently, 5,655 community-based farm cooperatives, excluding corporations, have registered with the PDPPUFF.

### Number of agricultural production legal persons

- The number of agricultural production legal persons who can get farmland-use right has also increased; this number was 10,519 in 2008. The number of stock-company-type legal persons involved in farming (excluding special limited company) (permitted to be involved in agricultural activities in 2001) has also increased; the number of such legal persons was 832 in 2008.

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The number of applications received for the Programs of Direct Payment for Paddy- and Upland-field Farming (PDPPUFF) in 2008 was 84,274, which showed an increase of 16.4% (11,843) from the previous year. Applications received from certified farmers were 78,619 (showing an increase of 17.3% from the previous year) and those from community-based farm cooperatives were 5,655 (showing an increase of 5.0% from the previous year).

The number of applications utilizing a special municipal licensing system, which was introduced in 2008, was 10,569, and this number accounted for 12.5% of the total number of applications received. This system was mainly used in many rice production areas such as Hokkaido and Tohoku.

According to the survey based on the views of the participants in the program, 70% of the participants acclaimed the measures to mitigate the impact of the declines in revenue (compensation for declines in the turnover income) and 60% of participants acclaimed the measures to compensate for the disadvantages in production conditions (compensation for the production cost that cannot be covered under turnover income).

Concerning rice, the planned area of cultivation suggested by participants in this program has increased considerably compared to the prior measures for principal farmers. Concerning wheat, the planned area of cultivation has covered most areas of support targets under prior item measures. Concerning soybean, the planned area of cultivation greatly exceeded that of the support target area under prior item measures.

The government must promote these measures steadily with detailed operations to conform to actual situations.

**Number of applications received for participation in 2008**

<table>
<thead>
<tr>
<th>Management entities</th>
<th>Increase from the previous year</th>
<th>Rate of increase from the previous year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>84,247</td>
<td>11,843</td>
</tr>
<tr>
<td>Certified farmers</td>
<td>78,619</td>
<td>11,574</td>
</tr>
<tr>
<td>Individuals</td>
<td>74,540</td>
<td>11,125</td>
</tr>
<tr>
<td>Corporations</td>
<td>4,079</td>
<td>449</td>
</tr>
<tr>
<td>Community-based farm cooperatives</td>
<td>5,655</td>
<td>269</td>
</tr>
<tr>
<td>Specified farming communities</td>
<td>1,768</td>
<td>72</td>
</tr>
<tr>
<td>Others</td>
<td>3,887</td>
<td>197</td>
</tr>
</tbody>
</table>

Source: MAFF

**Number of applications utilizing a special municipal licensing system**

<table>
<thead>
<tr>
<th>Rank</th>
<th>Prefecture</th>
<th>Number of applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Niigata</td>
<td>3,162</td>
</tr>
<tr>
<td>2</td>
<td>Akita</td>
<td>1,202</td>
</tr>
<tr>
<td>3</td>
<td>Hokkaido</td>
<td>758</td>
</tr>
<tr>
<td>4</td>
<td>Iwate</td>
<td>523</td>
</tr>
<tr>
<td>5</td>
<td>Yamagata</td>
<td>500</td>
</tr>
</tbody>
</table>

Source: MAFF

**2008: Planned area of cultivation**

<table>
<thead>
<tr>
<th>Management entities</th>
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</tr>
</tbody>
</table>

Source: MAFF

**Views of participants in the PDPPUFF**

(Measures to mitigate the impact of the declines in revenue) (Measures to compensate for the disadvantage in production conditions)

**Source:** MAFF “Survey on estimation of the Programs of Direct Payment for Paddy- and Upland-field Farming” (November 2008)

**Notes:**
1) The figures for rice represent the rice plantation areas in 2008; for Wheat/barley, the figures represent the area of support target under “Wheat and barley farming income stabilization fund” in 2006; for soybeans, the figures represent the planned area of cultivation as a percentage of the area subjected to “soybean subsidies” in 2006; for beets and potatoes for starch, the figures represent the planned area of cultivation as a percentage of the area indexed for cultivation in 2007.
2) Figures in parentheses refer to the areas of support target under “Income Stabilization Program for Principal Farmers” and the provided for this.
According to the survey of community-based farm cooperatives in the PDPPUFF, although 90% of the cooperatives cultivate rice, the cooperatives cultivating only rice is not more than 10% of the total cooperatives. Of the total cooperatives, 80% are cultivating wheat or soybeans besides rice and 20% are cultivating vegetables or fruits, processing agricultural products, etc.

For 70 to 80% of the community-based farm cooperatives, more than 50% of their income is earned from or planted area is devoted to rice cultivation. Further, 30% of the cooperatives depend on rice cultivation for more than 80% of their income or planted area. Many cooperatives predominantly depend on the income earned from rice cultivation.

There are various issues for organizing community-based farm cooperatives, such as consensus-building in the community, securing a person who can lead the organization, and raising profits. Organizations around the country are taking various measures to ensure effective operation and management of the organization.

### Production status of the community-based farming cooperatives

(What does the organization produce or manage)  
(Percentage of area under rice cultivation, and the income earned from rice cultivation by the entire management (2007))

<table>
<thead>
<tr>
<th>Type</th>
<th>Percentage of Area Under Rice Cultivation (%)</th>
<th>Income from Rice Cultivation by the Entire Management (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rice only</td>
<td>8.0</td>
<td>Below 20%</td>
</tr>
<tr>
<td>Wheat and soybeans with rice</td>
<td>77.6</td>
<td>20~50</td>
</tr>
<tr>
<td>Wheat and soybeans</td>
<td>10.1</td>
<td>50~80</td>
</tr>
<tr>
<td>Vegetables and Fruits</td>
<td>20.8</td>
<td>80~100</td>
</tr>
<tr>
<td>Processing or direct sales of agricultural products</td>
<td>4.8</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: MAFF  
Notes: 1) This is the result of the questionnaire on the PDPPUFF surveyed for 500 organizations selected from community-based farm cooperatives based on aerial distribution and type of organization. (collection rate: 76.4%)

2) “Rice only” is the percentage of organizations that produce only rice; “Wheat and Soybeans with Rice” is the percentage of organizations that produce crops in 1 of following combinations: “Rice and Wheat,” “Rice and soybeans,” and “Rice, Wheat, and Soybean.” “Wheat and Soybean” is the percentage of organizations that produce crops in 1 of following combinations: “Wheat only,” “Soybean only,” “Wheat and Soybean” without rice production.

### Variable case of the organization of community-based farm cooperatives

**Establishment of a legal person with the consent of the community under the improvement project on land adjustment**  
Community-based farm cooperative in Oshu city, Iwate prefecture (incorporated in 2002)

- Members: 74 farm households
- Cultivated land under management: 42 ha
- Type: paddy rice, soybean, and vegetables (both indoors and outdoors); processing and sale
- Revenue (2008): 62 million JPY
- Action: Production of marketable rice by the introduction of specially grown rice and reducing the use of agricultural chemicals and chemical fertilizers. Practice of local consumption of local produce and multilateralization of management such as direct sale of rice flour bread using self-milling flour
- Effect: Realization of stable production of crops and more efficient agricultural production by implementing the system of land utilization involving block rotation of paddy rice and soybean.

**Practicing collective use of farmland considering 1 community as 1 farm**  
Community-based farm cooperative in Kurobe city, Toyama prefecture (incorporated in 2007)

- Members: 18 farm households
- Cultivated land under management: 14 ha
- Type: paddy rice, soybean, peach, and trustee farming
- Revenue (2008): 22.6 million JPY
- Action: Reduction of the production costs by disposal of personal machinery and conservation and management of large machineries that were purchased as an organization, bulk discount in production materials, etc
- Effect: Increase in agricultural income by the establishment of the calculated and efficient agricultural systems and multilateralization of management such as production of peach in recent years

**Employment of female and aged persons**  
Community-based farm cooperative in Koga city, Shiga prefecture (incorporated in 2003)

- Members: 56 farm households
- Cultivated land under management: 39 ha
- Type: paddy rice, wheat, soybean, and vegetables (both indoors and outdoors)
- Revenue (2008): 67.79 million JPY
- Action: Implemented division of labor according to age or work capacity such as fundamental activities in paddy field assigned to middle aged and young men and indoor vegetable farming assigned to females and aged persons.
- Effect: Increase in the average income of members by efficient management that was realized by motivating the members and arranging an environment in which members can work comfortably.

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(5) Various actions taken for strengthening the structure of agriculture and the bolstering of high-added value

- The government promotes R&D and technological development to resolve food, environmental and energy problems, to support the production and safety of food, and to respond to global environmental problems.
- In order to reduce labor requirement in agricultural practices, the government promotes the development of unmanned rice planter utilizing GPS. In addition, the government promotes technological development for the establishment of resource and energy-saving type agriculture equipment, such as production methods with reduced phosphoric acid input without reduction in the yield and development of new materials that can be used in horticulture facilities.
- The government promotes recycling of food wastes as feeds (eco feed) for the improvement of feed supply capacity and the feed self-sufficiency rate. The technique of feeding hogs on liquid feed made from food wastes was established by cooperation among government, industry and academia.
- The government promotes the development of revolutionary crops utilizing genomic information for opening the possibility of agriculture.

### Unmanned rice transplanter

Unmanned rice transplanter is under development. It makes unmanned rice transplanting operation in paddy fields. It locates the position using a high-precision GPS receiver and measures the direction and the inclination using an attitude sensor. Steering and transmission are controlled by a computer.

Source: NARC

### Development of rotation system in soybean cultivation to reduce phosphate fertilization by utilizing soil microorganisms

Planting host plant (corn etc.) as preceding crop for soybean cultivation can reduce phosphate fertilization by activating phosphate supplying soil microorganism.

Source: NARCH

### Development of revolutionary crops contributing to resolve food, environmental and energy problems

- Food
  - Crops that have resistivity for multi-bugs (Case: rice having compound resistance to planthopper)
  - Crops that can grow in bad environment (Case: drought tolerant wheat)
- Environment
  - Crops that effectively clean up contaminated soil (Case: high cadmium absorbency in rice)
- Energy
  - Biomass crops that have a high yield or that contain many component that can be converted to ethanol (Case: rice and corn with lower lignin levels)

Source: NIAS
The government promotes measures pursuant to the Ministry of Agriculture, Forestry and Fisheries (MAFF)’s Strategy on Intellectual Property (2007), such as creation of new demand and new industries utilizing R&D and rediscovering and utilizing techniques and know-hows in the field.

Strengthening the protection of intellectual property is being implemented internationally, such as the establishment of The East Asia Plant Variety Protection Forum.

In addition, MAFF promotes raising awareness and the dissemination of knowledge of intellectual property among agricultural, forestry, and fishery operators; extension advisors; and staffs of municipalities.

### Key points of MAFF’s Strategy on Intellectual Property

#### Creation/utilization
- Promotion of research and development and practical application of deliverables
- Rediscovering and utilizing techniques and know-hows in fields
- Rediscovery and utilizing regional resources (landscape of rural areas, food habits, etc.)
- Creation and utilization of local area brand
- Measures for developing Japanese brands

#### Protection
- Protection of breeder’s right
- Dealing with infringement matter in other countries
- By patenting
- Ensuring creator profit
- Strategical utilization as a nation or area

#### Actual status: Japanese people cannot adequately recognize intangible property as intellectual property and use it appropriately.

Dissemination and edification / cultivation of human resources

Source: MAFF

In 2008, the export value of agricultural, forestry and fisheries products and foods from Japan was 431.2 billion yen; this figure had decreased by 0.6% from the previous year. This decrease was mainly due to the decrease in fish catches, such as tuna and salmon. The percentages of exports according to destination were as follows; 70% to Asia, and 20% to the U.S., and according to country and area, it is in the following order; first to Hong-Kong, second to the U.S., third to South Korea.

The export value of agricultural products continued to increase and was 243.7 billion yen in 2008; this figure increased by 9.8% from the previous year. However, the year-to-year change in November and December 2008 showed a negative growth owing to the strong yen and global recessions. In overviewing the export item by item, the export value of Chinese-yam, strawberry, and beef increased compared to that in the previous year.

In June 2008, the government revised “Comprehensive export strategy for Japanese agricultural, forestry and fishery products and foods” that aimed at handling the brand problems and addition of new important export items to this strategy for further expanding export.

### Values of exports and export-expansion targets

Source: MAFF prepared on the base of MOF “Trade Statistics”

### Export trend of main items

<table>
<thead>
<tr>
<th>Item</th>
<th>Value of exports (2008)</th>
<th>Compared to previous year</th>
<th>Major market</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chinese yam</td>
<td>2.1 billion yen</td>
<td>111%</td>
<td>Hong-Kong and the U.S.</td>
</tr>
<tr>
<td>Strawberry</td>
<td>0.2 billion yen</td>
<td>158%</td>
<td>Hong-Kong, and Taiwan</td>
</tr>
<tr>
<td>Beef</td>
<td>4.1 billion yen</td>
<td>199%</td>
<td>Viet Nam, the U.S., and Hong-Kong</td>
</tr>
<tr>
<td>Apple</td>
<td>7.4 billion yen</td>
<td>92%</td>
<td>Taiwan</td>
</tr>
</tbody>
</table>

Source: MAFF prepared on the base of MOF “Trade Statistics”
(6) Situation of the promotion of measures for resources and environment

MAFF revised The Strategy for Addressing Global Warming in the Sector of Agriculture, Forestry and Fisheries in July 2008 to achieve the goals set under the Kyoto Protocol. In order to strengthen this strategy, the government has adopted the following measures to mitigate global warming, (1) contribution from the agriculture, forestry, and fishery industries to realize a low-carbon-society, (2) promoting visibility of the effects of CO2 reductions in the agriculture, forestry, and fishery sectors, (3) maximizing the functions agricultural soil as the sinks of greenhouse gases.

The Strategy for Addressing Global Warming in the Sector of Agriculture, Forestry and Fisheries

**I. Measures to Mitigate Global Warming**
- Accelerate policy making to achieve reduction targets
  - Forest carbon sink measures
  - Cyclical usage of biomass resources
  - Voluntary Action Plan on the Environment in the food industry
  - Greenhouse gas emissions reduction measures for greenhouse horticulture and agricultural machinery
  - Environmentally-friendly agriculture through the adjustment and reduction of fertilizer levels
  - Energy conservation measures for fishing boats
- Other measures to reduce emissions
  - Maximizing the functions of agricultural soil as the sinks of greenhouse gases
- Building systems to promote measures against global warming
  - Contributions from the agriculture, forestry and fishery industries to realize a low-carbon society
  - Promoting visibility of the effects of CO2 reductions in the agriculture, forestry and fishery sectors

**II. Measures to Adapt to Global Warming**
- Promoting measures to adapt to global warming
  - Widespread use of and guidance for existing technologies on-site
  - Trial runs of new technologies
  - Deliberation of adaptation measures based on impact assessments
- Promoting technical development
  - Development of technologies for stable production
  - Cultivation of species that resist high temperatures
  - Forecasts of impacts on the agriculture, forestry and fishery industries
  - Development of adaptive measures based on impact forecasts

**III. International Cooperation**
- Promoting sustainable forest management in developing countries
  - Initiatives to solve illegal logging issues
  - Support for sustainable forest management in developing countries to combat illegal logging and encourage actions for reducing emissions from deforestation
  - Active participation in and contribution to international rule making
- Cooperation by utilizing Japanese expertise and technology
  - Promotion of joint research with international research institutes for addressing the global warming issue

Comprehensively promote responses to global warming in agriculture, forestry, and fishery industries to contribute to global environmental protection in a positive manner.

Source: MAFF

Note: The articles underlined have been added to the Strategy in the revision in July, 2008.

It is important to reduce dependence on fossil resources for the realization of a low-carbon society. The government promotes inter-policy approach for CO2 sink and reduction throughout the region.

In order to enable consumers to select the agricultural, forestry and fishery products that are produced environmentally-friendly to reduce CO2 emissions, such as shift to energy saving machinery and reduction of the amount of fertilizer levels, the government promotes visibility of the effects of CO2 reductions.

In addition, to build up a farming system with an effective farmland management and agricultural water management in paddy field to sink CO2 in agricultural soil, the government proactively participates in the international negotiation by gathering more scientific knowledge.

Promoting visibility of the effects of CO2 reduction

Source: MAFF
In order to promote comprehensive utilization of biomasses, the government promotes the utilization of bio-fuel and accelerates the creation of biomass town, based on Biomass Nippon Strategy approved in a Cabinet meeting in March, 2006.

In addition to reducing property taxes on the basis of Bio-fuel Act, the government implemented demonstration project to produce bio-fuel consistently by the procurement of raw materials to supply of bio-fuel, and to produce bio-fuel from cellulose-based materials such as rice straw, which are consistent with supply of food.

In order to accelerate the creation of Biomass Town, the government supports actions, such as planning of the visions and improvement of the facilities of conversion and utilization of biomasses. The government aims to creation of 300 biomass towns by 2010, and 197 visions were published by the end of March 2009.

Key points of the Roadmap for the Significant Boosting the Production of Domestic Bio-fuel

1. Reduction of costs of collection and translation
   - Development of machineries to transport trees inexpensively from hillside forests and efficiently gather rice straw
   - Development of resource crops which will allow bio-ethanol to be produced in large volumes
2. Improvement the efficiency of bio-ethanol conversion
   - Development technologies to produce bio-ethanol from rice straws, thinned timber, and other materials in large volumes

Raw materials and potential yield

- Carbohydrates, starch (substandard agricultural products and by-
- Cellulose-based materials (including rice straws and thinned timber), resource crops

System

- Reviewing Japanese system based on systems of Europe, US and Brazil.

Table: Places adopted as bio-fuel production project

| Project of utilization of soft cellulose in Hyogo |
| Location: Akashi city, Hyogo |
| Capacity of facility: 800ℓ/year |
| Raw material: rice straw and wheat |

| Model area of utilization of soft cellulose in Akita |
| Location: Katagami city, Akita |
| Capacity of facility: 22.5ℓ/year |
| Raw material: rice straw |

| Project of utilization of soft cellulose in Hokkaido |
| Location: Eniwa city, Hokkaido |
| Capacity of facility: 1,040ℓ/year |
| Raw material: rice straw and wheat |

| Oenon Holdings |
| Location: Tomakomai City, Hokkaido |
| Capacity of facility: 15,000ℓ/year |
| Raw material: rice for nonfood |

Source: MAFF

Note: “①” is model areas of utilization of soft-cellulose, the others are fuel model demonstration projects.

Agriculture, forestry and fisheries are production activities operated by utilization of the circulatory function of nature and fostering animals and plants. Therefore, maintenance and progression of sustainable agriculture, forestry and fisheries are inevitably linked to the biodiversity conservation.

In order to promote activities for the biodiversity conservation based on the MAFF’s Strategy for Biodiversity, the government is considering the utilization of “living creature mark”, which expresses activities for the biodiversity conservation drawing organisms living in the local areas. In addition, the government promotes the development of quantitative indicators of biodiversity to enable to measure the relationship between biodiversity and “agriculture, forestry and fisheries industries” based on the scientific data.

Steady Promotion of the MAFF’s Strategy for Biodiversity Conservation

- Conservation of countrysides and Satouchi-Satoyama areas
  - Promotion of Sustainable Agriculture, such as organic farming
- Conservation of forests
  - Promotion of farm land consolidation for biodiversity
  - Proper management and conservation of the forests
- Conservation of underwater plant beds and tidelands
  - Support to fishermen-led activities to conserve underwater plant beds and tidelands

Examples of local activities

- Promotion of the biodiversity conservation-conscious agriculture, forestry and fisheries sector
- Announcing the measures at CBD COP10 (2010, Nagoya)
Section 3: Revitalization in rural areas and the promotion of co-existence and interactions

(1) The present state of rural areas

- The population of Japan is anticipated to decline for a long term hereafter. By classifying agricultural areas, it is estimated that the population in mountainous farming areas in the year 2035 will be approximately 70% of the current population, and the population aging rate in the year 2020 will increase up to 40%.
- Rural communities play various roles aside from agricultural production in local areas. At the present day there are 139 thousand rural communities nationwide in 2005, of which 110.9 thousand communities have maintained their community functions excluding rural communities included in urbanization promoting areas.
- In the depopulated areas, the function of community is weakening or difficult to maintain in 50% of communities which consist of 9 or fewer households or in 40% of communities in which the rate of aging population is more than 50%. When the average household membership is 2 or fewer, the above-mentioned percentage becomes higher.

Future population and the aging ratio
(2005= 100, by the classification of agricultural areas)

Recently, the damage caused by wildlife to agriculture, forestry and fisheries has become more severe and has spread nationwide because of the expansion of the habitation areas of specified wildlife and increase of abandoned cultivated lands by the progression of depopulation and aging in rural areas. The damage to agricultural products amounts to around 20 billion yen. Of this, 70% comes from animals and 30% from birds.

The Act on Special Measures for the Prevention of Damage due to Wildlife was in force in February 2008. The act facilitated municipalities to take measures for wildlife damages initiatively and to support the efforts such as the regulation of population, the prevention of damage and management of habitat environment comprehensively, when a municipality drafted a damage prevention plan.

Damage caused to agricultural crops by wildlife (FY2007)

Implementation of systematic and comprehensive actions to address damage caused by wildlife

- Obtaining a hunting license by staff of local entities concerned and municipalities, in response to decreasing of hunters
- Stimulating the dissemination of box trap in order to promote safety and effective capturing
- Stimulating the use of captured wildlife as local resources in order to promote dealing with captured wildlife properly
- Promoting the installation of broad-based guard fences in order to prevent encroachment by broad communities as a whole
- Introducing and demonstrating technique for the prevention damage prevention such as those using dogs
- Developing satoshi-satoyama areas by setting buffer zone (pasturing cattle) in consideration of habitat segregation
- Fostering human resources to instruct about measures to address wildlife damage and use of captured wildlife
In addition to food supply, agriculture plays various roles such as land conservation, water resources conservation, environmental conservation, creation of a good landscape, and cultural inheritance. Not only the local residents but also the entire nation benefits from these roles.

Agriculture has a close association with forestry and fisheries in rural areas, so agricultural lands, forests, and marine zones carry out multiple functions with close relationship, contributing to water, atmosphere, and biological and physical cycle in nature.

In rural areas, there are resources such as agricultural land and water, which are indispensable to supply food and carry out the multiple functions of agriculture. The appropriate management of these resources contributes to conserving and forming both environment and landscape in rural areas, such as circulative use of organic resources.

Multiple functions carried out by the agriculture, forestry and fisheries

Outline of rural resources

Agricultural land
- Paddy fields, upland fields etc.
- Partitioning of paddy fields developed (30 a or more) 61%
- Field paths at ends of fields developed 73%

(Role)
- Stable food supply
- Conservation of national lands
- Organic decomposition and the circulation of matter
- Development of beautiful landscapes

Environment and landscapes in rural areas
- Natural environment, biodiversity, beautiful rural area landscapes, etc.

(Role)
- Provision of a habitat for organisms
- Provision of freedom and comfort

Rural community
(Roles)
- Cooperative community activities
- The maintenance of cultural traditions

Agricultural-use water
- Agricultural-use water, irrigation canals, etc.
  Volume of irrigation water used: 54.9 billion tons
  Essential waterways: approx. 47,000 km
  Essential water-use facilities: approx. 7,000 sites
  Storage reservoirs: approx. 210,000 sites

(Role)
- Staple food supply
- Formation of sound water circulation system
- Provision of water for fire prevention, noncommercial water, close contact with water, water for melting snow
- Conservation of ecosystem
- Formation of landscapes

Organic resources
- Livestock manure, community discharged water and sewage, food waste, etc.

(Role)
- Formation of a part of the goods cycle

Natural cyclical function of agriculture

Matter recycling through organisms
(Roles)
- Promotion of the cyclical use of water, air, and matter
- Reduction of environmental load in connection with agricultural production

Source: MAFF
(Activities in hilly and mountainous areas)

- The hilly and mountainous areas cover 72% of Japan’s total land area. Both the number of farm households and the cultivated land under management in these areas account for 40% of farm households nationwide and the total cultivated land respectively. Multiple agricultural functions performed in hilly and mountainous areas benefit many people including the urban residents of the downstream areas. On the other hand, there are gaps with flat areas concerning conditions such as management size and production cost due to restrictions on agricultural land such as slope, small segment and irregular form, and depopulation and aging. Therefore, there is a concern about reduction in the multiple functions of agriculture as a result of the abandonment of cultivation.
- The government introduced the Measure of Direct Payment in Hilly and Mountainous Areas in FY2000, in order to offset the disadvantage of agricultural production, from the view of ensuring multiple functions through maintaining agricultural production.
- The measure was revised in FY2005 and has been implemented as a new measure. It was necessary to draft the community master plan to promote fostering principal farmers, advancement in productivity and enhancement of cooperation among communities. The measure has been implemented at a farmland of an area of 665 thousand ha by FY2007. As a result, there have been effects such as prevention of the arising abandonment of cultivation.
- When the interim evaluation was conducted in 2007, the measure was evaluated to be addressed smoothly. For example, 95% of the 28 thousands agreements of community which were subjected to evaluation, are excellent or good. The effectiveness of this measure is also evaluated by prefectures and municipalities for the vitalization of communities, as the number of times of meeting held in community increased.

The difference between hilly and mountainous areas and flatland farming areas (2005)

- (Production cost of rice per 10a)
- (Cultivated land under management per commercial farm households)
- (Ratio of commercial farm households by size)

Source: Statistics on Production Cost of Rice. The Census of Agriculture and Forestry (MAFF)

Note: Figures of cultivated land under management per commercial farm households and ratio of commercial farm households by size are presented in the figure except Hokkaido

Change of consultation in communities on the basis of the measure of direct payment in hilly and mountainous areas

- (Change of the number of times of meeting)
- (Change of meeting on joint operation)

Source: The result of the interim evaluation on the measure of direct payment in hilly and mountainous areas (released in June 2008) (MAFF)

Note: This survey was conducted by the representatives of community agreement by the questionnaire
Both the number of activity organizations and the cover area addressed by the Measures to Conserve and Improve Land, Water, and Environment increased in FY2008 compared with the previous year when the measures were introduced. By taking into consideration the actions that support farming activities, the supported area was observed to increase considerably by 50%.

- The actions to improve and conserve the rural environment such as ecological system, landscape and water quality shows a tendency that the number of items of activity becomes larger as the cover area of activity organization become broader. The more number of actions an activity organization takes for improving the rural environment, the higher a proportion it collaborates with school education and so on.

- According to the survey of activity organizations, concerning the supports to joint activities, more than 90% of the respondents answered that the measures are useful for the conservation of open channels and farm roads. Therefore, it is thought that the measures have effect on maintaining the functions of resources. In addition, new actions to revitalize local communities have been increasing including discussions about the development of local areas have doubled.

- Concerning supports to farming activities, areas under cultivation of activity organizations which decreased the use chemical fertilizers and pesticide by more than 50% in comparison with usual use increased 1.6 times, and 60% of the respondents answered that they intended to expand such areas. In addition, there are effects for expanding of sustainable agriculture such as increasing in sheeting compost produced locally.

### Actual achievement of the measures to conserve and improve land, water, and environment (as of November 15, 2008)

<table>
<thead>
<tr>
<th></th>
<th>FY2007</th>
<th>FY2008</th>
<th>Increasing rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of activity organization</td>
<td>17,122</td>
<td>18,978</td>
<td>10.8%</td>
</tr>
<tr>
<td>Support for farming activities</td>
<td>2,029</td>
<td>2,577</td>
<td>27.0%</td>
</tr>
<tr>
<td>Cover area</td>
<td>1,160,000ha</td>
<td>1,362,000ha</td>
<td>17.4%</td>
</tr>
<tr>
<td>Support for farming activities</td>
<td>43,000ha</td>
<td>66,000ha</td>
<td>53.5%</td>
</tr>
</tbody>
</table>

Source: MAFF

### The number of items and the covered areas of rural environment improving activities, and the relationship between the number of items and school education and so on (FY2007)

#### (The average number of activity items by covered areas)

<table>
<thead>
<tr>
<th>Cover area</th>
<th>Before introducing the measures</th>
<th>Actual achievement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 20ha</td>
<td><img src="image" alt="Less than 20ha" /></td>
<td><img src="image" alt="Actual achievement" /></td>
</tr>
<tr>
<td>20~50 ha</td>
<td><img src="image" alt="20~50 ha" /></td>
<td><img src="image" alt="Actual achievement" /></td>
</tr>
<tr>
<td>50~200 ha</td>
<td><img src="image" alt="50~200 ha" /></td>
<td><img src="image" alt="Actual achievement" /></td>
</tr>
<tr>
<td>More than 200ha</td>
<td><img src="image" alt="More than 200ha" /></td>
<td><img src="image" alt="Actual achievement" /></td>
</tr>
</tbody>
</table>

Source: MAFF

#### (Relation between the number of activity items and school education and so on)

<table>
<thead>
<tr>
<th>Collaboration</th>
<th>Before introducing the measures</th>
<th>At the present day</th>
</tr>
</thead>
<tbody>
<tr>
<td>No or ineffective response,</td>
<td><img src="image" alt="No or ineffective response," /></td>
<td><img src="image" alt="At the present day" /></td>
</tr>
<tr>
<td>Collaboration</td>
<td><img src="image" alt="Collaboration" /></td>
<td><img src="image" alt="At the present day" /></td>
</tr>
</tbody>
</table>

Source: MAFF

### The degree of usefulness for the conservation of resources and the number of discussions

#### (The degree of usefulness for conservation of resources)

- Very useful
- Rather useful
- Neither
- Not useful
- Not at all useful

Source: MAFF

#### (The number of times of discussions about the development of local areas)

- Before introducing the measures
- At the present day

Source: MAFF

Note: The questionnaire survey was conducted on 430 activity organizations sampled randomly from the areas implemented in FY2007.
(3) Revitalization of rural areas via the collaboration among the agricultural, commercial and industrial sectors

The rapid recession of Japan is continuing, especially business sentiment of restaurant and lodging industry is flagging remarkably. In addition, the business sentiment of food industry has remained stagnant for a long time.

The promotion of product development and market cultivation is a key to revitalize rural areas through the close collaboration between the primary industry and Small and Medium sized Enterprises (SME) including food processing industries and lodging service industry.

By supports such as the Act on Promotion of Business Activities by Collaboration Between SME Operators and Operators of Agriculture, Forestry and Fisheries which came into effect in July 2008, it is expected to realize the revitalization of local areas by employment creation and income improvement by not only utilizing human resources completely and know-hows in rural areas, but also broadening of multiple initiatives of collaboration among agricultural, commercial and industrial sectors which bring out originality and ingenuity.

Regarding collaboration between agriculture and related industries, it is indispensable for the agricultural sector to make a linkage with various industries including not only food industry but also restaurant industry and tourism industry. The initiatives to promote the local consumption of local produce by collaboration with local shopping areas where an increase and continuous state of empty shops are nationwide issues have made progress.

### Significance of the collaboration among agricultural, commercial, and industrial sectors

<table>
<thead>
<tr>
<th>Collaboration</th>
<th>Improvement of management</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Enhancement of the collaboration among agricultural, commercial and industrial sectors</strong></td>
<td><strong>Revitalization of rural economy</strong></td>
</tr>
<tr>
<td>Farmers, forest holders and fishermen</td>
<td>Collaborators' resources</td>
</tr>
<tr>
<td>Cultivation techniques, etc.</td>
<td><strong>Development of new value-added goods</strong></td>
</tr>
<tr>
<td>Respective management resources</td>
<td><strong>Prospect of new services</strong></td>
</tr>
<tr>
<td>Commercial and industrial managers</td>
<td><strong>Making meeting places</strong></td>
</tr>
<tr>
<td>Business know-hows, etc.</td>
<td><strong>Dispatch of experts</strong></td>
</tr>
</tbody>
</table>

Source: MAFF

### <Cases of the collaboration among agricultural, commercial, and industrial sectors>

<table>
<thead>
<tr>
<th>Collaboration through revitalization in local shopping areas</th>
<th>Collaboration through branding</th>
<th>Collaboration through introducing IT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Noshiro City, Akita Prefecture</td>
<td>Takashima City, Shiga Prefecture</td>
<td>Miyazaki City, Miyazaki Prefecture</td>
</tr>
<tr>
<td>Holding Yu-ichi (evening market) by bringing in agricultural products and processed food at an empty shop</td>
<td>Formulating a production center of healthy fruit “Ado-berry” and branding throughout the region</td>
<td>Stabilization of the breeding operation of cattle by utilizing IT</td>
</tr>
<tr>
<td>A group of farmers holds Yu-ichi at an empty shop in local shopping areas. Farmers bring and sell agricultural products and processed food by themselves. It gains popularity among people on their way home and housewives nearby. The shop has a long line of customers. Sales increased twice as compared with when they sold directly in front of a post</td>
<td>The region as a whole formulates a production center of “Ado-berry” (Boysenberry, rare fruit, originally from New Zealand), which is named after Ado River. Concerning “Ado-berry”, cultivation instruction, uniformed management of fruit, and certification by experts are conducted. “Ado-berry” is sold at department stores, roadside station, supermarket, and other such places.</td>
<td>By the collaboration among manufactures of communication devices, developer and marketing personel, university and institution, and dairy association, the equipment which makes it possible to find cattle in rut is developed. The equipment contributes to the stabilization of farm management, by realizing timely artificial insemination, and shortening of parturition intervals. This has been introduced in 800 farm households in the nation.</td>
</tr>
</tbody>
</table>
(4) Actions for creating employment in rural areas

- Owing to the worldwide financial crisis, Japan's economy is adversely affected and continuing to decline rapidly and in severe condition. Employment condition is also worsening rapidly; there is a decline in the number job openings to the applicant ratio.
- Due to the expectation from labor demand in primary industry, the government is strongly promoting support of taking job and other employment measures in order to advance employment creation at a rapid pace.
- In December 2008, MAFF established rural employment counseling counters. These consultation services are getting a lot of inquiries. The total number of consultations and inquiries gathered at this consultation service or other such consultation services in prefectural governments or other organizations is up to 22,656 (from December 24, 2008 to April 15, 2009). The total number of newcomers recruited in agriculture, forestry, and fisheries through the consultation services from December 2008 to April 15, 2009 is 1,370.
- In an agricultural sector, the government launched the agricultural employment program, which provide support for agricultural corporations to undertake on-the-job trainings for motivated human resources who have incentive to work. There are 1,226 participants in training courses at 1,057 agricultural corporations under this project.
- In order to foster human resources who can be leaders contributing to the revitalization of rural areas, the government launched the project of "Inaka-de Hataraki-Tai". This project provides practical training regarding the revitalization of rural areas to the people living in urban areas interested in activities and settlements in rural area through attachment to rural communities which seek for human resources mediated by NPO, universities, corporations and so on.

Outline of the agricultural employment program

- Job applicants: I'd like to work for agriculture, but I'm anxious about my lack of experience
- Job offers: There is short of young human resources, as aging progresses
- Matching is needed
- Establishment of the Agricultural Environment Program
  - Provision of job information
  - Holding of consult meeting for engagement in agriculture
  - Agricultural corporations employ job applicants and implement practical training
  - Subsidies on training costs for agricultural corporations, etc. (about 1,000 persons)
  - (Upper limit) 97,000Yen/month, the period is 12 months or less.

Outline of the project of “Inaka-de Hataraki-tai”

- The government: Support
  - (Training allowance, etc.)

- Intermediary organizations (Examples)
  - NPO
  - University
  - Corporation

- Human resources in urban area
  - Retired persons
  - Social men (job applicants)
  - Part timers
  - Students
  - Experts
  - etc.

- Needs in rural area
  - Conservation of terraced paddy
  - Interaction events
  - Planning and managing of these activities
    - Receiving organizations
      - Municipalities
    - Conferences for vitalization
    - NPOs acting in the region etc.

- Matching
  - Wishing to work in rural area
  - Needs for human resources not existing in rural area

- On the job training in rural area

Source: MAFF
(5) Revitalization in rural areas through the promotion of co-existence and interactions
(Importance of urban agriculture)

- In addition to the role of supplying fresh agricultural products to city residents, urban agriculture also plays various other roles such as providing locations for farming experiences and interactive activities through the use of allotment gardens and farm stands, serving as open spaces in case of a disaster, forming comfortable green spaces and landscape, and moderating the climate of urban centers.
- In recent years, allotment gardens have been developing every year as a place where the health of urban residents can be promoted, where they could find a purpose in life and foster interactions with others through farming experiences. The number of allotment gardens in the nation is 3,273 as of the end of FY2007; this number increased by 16% from the number 5 years ago.
- Various types of actions such as the development of school gardens for enhancing farming experiences and horticulture therapy and welfare gardens, which welfare corporations carry on for medical care, have progressed. In addition, the establishment of allotment gardens is contributing to a decrease in abandoned cultivated lands as well.
- Gardens for farming experiences are not only associated with the added effects of changing the thought process and lifestyle; for example, they have not only helped in increasing the frequency of serving vegetables at the table, but have also enabled farmers who provide allotment gardens to stabilize their farm management system.

The roles of urban agriculture

- Supply of fresh and safe agricultural products
  - The role of supply of fresh and safe agricultural products according to consumer needs and the role of Shokuiku (food education) such as providing information on “food” and “agriculture”

- Open spaces in case of a disaster
  - The role of serving open spaces in case of a disaster such as places where prevention from spreading of the fire is required, evacuation spaces in case of earthquake, and places for construction of temporary housing

- Locations for farming experiences and interactive activities
  - The role of interaction between producers and consumers through activities such as farming experiences of urban residents and school children, places where urban residents foster interactions with others and direct sale at farm stands

- Comfortable green spaces
  - The role of providing for “comfort” and “affluence” through green spaces and waterside spaces

Changes in the thought process and lifestyle compared to prior to participation in allotment gardens for farming experience (multiple answers accepted)

<table>
<thead>
<tr>
<th>Change in Thought/Lifestyle</th>
<th>Think so</th>
<th>Think so in some measure</th>
<th>Do not think so much</th>
<th>No idea</th>
<th>Do not think so at all</th>
<th>No answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency of serving up vegetables increased.</td>
<td><img src="image1" alt="" /></td>
<td><img src="image2" alt="" /></td>
<td><img src="image3" alt="" /></td>
<td><img src="image4" alt="" /></td>
<td><img src="image5" alt="" /></td>
<td><img src="image6" alt="" /></td>
</tr>
<tr>
<td>Interest in agricultural products increased</td>
<td><img src="image1" alt="" /></td>
<td><img src="image2" alt="" /></td>
<td><img src="image3" alt="" /></td>
<td><img src="image4" alt="" /></td>
<td><img src="image5" alt="" /></td>
<td><img src="image6" alt="" /></td>
</tr>
<tr>
<td>Concern regarding safety of food increased.</td>
<td><img src="image1" alt="" /></td>
<td><img src="image2" alt="" /></td>
<td><img src="image3" alt="" /></td>
<td><img src="image4" alt="" /></td>
<td><img src="image5" alt="" /></td>
<td><img src="image6" alt="" /></td>
</tr>
<tr>
<td>Understanding about agriculture proceeded.</td>
<td><img src="image1" alt="" /></td>
<td><img src="image2" alt="" /></td>
<td><img src="image3" alt="" /></td>
<td><img src="image4" alt="" /></td>
<td><img src="image5" alt="" /></td>
<td><img src="image6" alt="" /></td>
</tr>
<tr>
<td>Families could feed upon more vegetables.</td>
<td><img src="image1" alt="" /></td>
<td><img src="image2" alt="" /></td>
<td><img src="image3" alt="" /></td>
<td><img src="image4" alt="" /></td>
<td><img src="image5" alt="" /></td>
<td><img src="image6" alt="" /></td>
</tr>
<tr>
<td>Healthy dietary habits implemented.</td>
<td><img src="image1" alt="" /></td>
<td><img src="image2" alt="" /></td>
<td><img src="image3" alt="" /></td>
<td><img src="image4" alt="" /></td>
<td><img src="image5" alt="" /></td>
<td><img src="image6" alt="" /></td>
</tr>
<tr>
<td>A variety of foods were cooked following an increase in the quantities of vegetables harvested.</td>
<td><img src="image1" alt="" /></td>
<td><img src="image2" alt="" /></td>
<td><img src="image3" alt="" /></td>
<td><img src="image4" alt="" /></td>
<td><img src="image5" alt="" /></td>
<td><img src="image6" alt="" /></td>
</tr>
<tr>
<td>Frequency of cooking at home increased.</td>
<td><img src="image1" alt="" /></td>
<td><img src="image2" alt="" /></td>
<td><img src="image3" alt="" /></td>
<td><img src="image4" alt="" /></td>
<td><img src="image5" alt="" /></td>
<td><img src="image6" alt="" /></td>
</tr>
<tr>
<td>Cooking repertoire increased.</td>
<td><img src="image1" alt="" /></td>
<td><img src="image2" alt="" /></td>
<td><img src="image3" alt="" /></td>
<td><img src="image4" alt="" /></td>
<td><img src="image5" alt="" /></td>
<td><img src="image6" alt="" /></td>
</tr>
</tbody>
</table>

Source: The survey on the current status and evaluation of activities on gardens for farming experiences (released in April 2008)(Tokyo Noguyo Kaigi (Agriculture Committee))

Note: 680 persons who participated in allotment gardens were surveyed. (Collection rate: 84.9%)
In order to revitalize rural areas and to sufficiently indicate the role played by them, it is important to promote co-existence and interaction between urban and rural areas, in which persons, goods and information move in and out continuously. Among the initiatives taken, green tourism initiatives to enjoy interactions with nature, culture, and people in rural areas are undertaken over different durations such as a day trip, long-term stay and 2-area inhabitation, in which people stay at 2 places periodically and repetitively.  

70% of urban residents are interested in visiting and spending time in rural areas thereafter. Generally, it is observed that the greater the number of times people visit rural areas, the more they will be interested or willing to visit rural areas thereafter. On the other hand, the proportion of people experiencing tourism for enjoyment of farming experiences and staying in rural areas is only 3%; therefore there is no correlation between their intention and action.

In order to develop green tourism initiatives, unified provision of regional information is important; this would involve promotion of visits by visitors throughout the region on a basis of a combination between farmer accommodation, farmer restaurants, or pick-your own farms and non-agricultural tourism resources or facilities.

Co-existence and interactions between urban and rural areas

<table>
<thead>
<tr>
<th>Co-existence and interactions between urban and rural areas</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A day trip</td>
<td>short stay</td>
</tr>
<tr>
<td>Trainings for engagement in agriculture</td>
<td></td>
</tr>
<tr>
<td>Volunteer for farm support</td>
<td></td>
</tr>
<tr>
<td>Hands-on agricultural studies for children</td>
<td></td>
</tr>
<tr>
<td>Stay-type allotment gardens</td>
<td></td>
</tr>
<tr>
<td>Use of allotment gardens, various hands-on agricultural experiences</td>
<td></td>
</tr>
<tr>
<td>Use of private accommodations by farmers</td>
<td></td>
</tr>
<tr>
<td>Use of pick-your-own farms</td>
<td></td>
</tr>
<tr>
<td>Use of restaurants by farmers</td>
<td></td>
</tr>
<tr>
<td>Use of farm stands</td>
<td></td>
</tr>
</tbody>
</table>

Source: MAFF

Experiences of having visited rural areas, and interest and intention of re-visiting them

Source: The survey on promoting cooperation and interactions between urban and rural areas (Released in March 2008) (MLIT)

Note: The questionnaire survey was conducted between male and female monitors resident in Tokyo’s 23 wards and government designated cities, which were registered on the internet survey company. (The total number of responses is 20,000)
Hands-on agricultural and forestry experiences not only create interest among children regarding nature, life, and food but also help them to cool down and get over their feelings of anger and anxiousness. In particular, the hands-on agricultural experiences with lodging have higher mental effects on children; these effects include emotional stability and improvement of activeness and independence. The Children’s Rural Area Interaction Project was started in FY 2008, and 16,000 elementary school students carried out hands-on activities at model places. There is a tendency that acceptance places expand, for example, more than half of municipalities intend to accept children’s extended stay and experience-oriented activities.

In order to promote hands-on studies by children, coordinators who are well aware about the requirements of the school with respect to acceptance places and they coordinate schools with individual acceptance bodies such as farmers in the area play important roles.

Experiences of the elementary, junior high, and high school students living on a farm not only have economical effect to acceptance places but also ripple effects which make both farmers and places to come alive by scene of children’s jubilation.

### Agricultural hands-on studies with and without living on the farm and educational effects

<table>
<thead>
<tr>
<th>Mental aspect</th>
<th>Develop broaden values</th>
<th>Develop endurance and patience</th>
<th>Develop activeness and independence</th>
<th>Stabilize emotion</th>
<th>Improve imagination</th>
<th>Create cheerfulness and vitality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aspect on social life</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aspect on linkage with nature</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: The analysis on the linkage between the way of hands-on agricultural studies and educational effect (Released in June 2006) (National Institute for Rural Engineering)

Note: 1) This analysis is based on the questionnaire survey conducted on 540 elementary schools which were sampled randomly from public elementary schools nationwide and 155 ones from Tokyo. (Collection rate: 30.2%)

2) The evaluation was conducted in 5 stages (Think so, Think so in some measure, No idea, Do not think so much, and Do not think so at all)

### Acceptance achievement and intention hereafter on the extended stay and experience-oriented activities of elementary school students

<table>
<thead>
<tr>
<th>Acceptance achievement until now</th>
<th>Yes</th>
<th>No</th>
<th>No idea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have an intention to accept them hereafter</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: The survey on promoting cooperation and interactions between urban and rural areas (Released in March 2008) (MLIT)

Note: The questionnaire survey was conducted of 1,162 municipalities designated as depopulated area, developing mountain villages, peninsulas development area, remote islands development area and designated rural areas as of October 1, 2007. (Collection rate: 45.8%)
In order to revitalize rural areas by promoting co-existence and interactions with urban areas, human resources such as regional leaders who get together the people in the area, external experts who can evaluate objectively and utilize both regions and resources, and leaders who act substantially in the area are needed. Therefore, it is important to support fostering and inviting such human resources.

80% of the citizens answered the questionnaire saying that they would like to support farm works and environmental conservation activities at rural areas in which the vitality of community has dropped. It is important to create an environment enabling the conversion of urban residents with such intentions into leaders of regional activities.

The return to rural areas and the proportion to the laboring population of baby boomers are increasing. It is expected for such human resources to utilize their experiences and techniques in the areas. For this, it is important to improve the living environment, to create employment opportunities and to support them to tackle a task smoothly.

Amid the declining population of Japan, it is important to interact with not only urban residents but also municipalities, universities, NPO, and companies. As a result, activities useful to both urban and rural are developed, and thus the cooperation of urban and rural areas leads to the vitalization of rural areas.

### Intention on maintenance activities of low vital agriculture and rural areas

<table>
<thead>
<tr>
<th>Intention</th>
<th>Number of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have a will to go to low vital areas and communities, and to support farm activities and environmental conservation activities, and to maintain traditional culture such as festivals</td>
<td>350</td>
</tr>
<tr>
<td>If given the opportunity, may go to low vital areas and communities, and to support farm activities and environmental conservation activities, and to maintain traditional culture such as festivals</td>
<td>200</td>
</tr>
<tr>
<td>Do not think about supporting farm activities and environmental conservation activities, and to maintain traditional culture such as festivals, as local areas should do by themselves</td>
<td>100</td>
</tr>
<tr>
<td>Others</td>
<td>50</td>
</tr>
</tbody>
</table>

Source: The opinion survey on the roles of food, agriculture and rural areas (Released in November 2006) (Cabinet Office)

Note: The survey was conducted nationwide on 5,000 persons who are 20 years old or more. (Collection rate: 62.9%)

### Actions for fostering human resources on young people and baby boomers

1. **Action of training for baby boomers to engage in agriculture**
   As employees in non-agricultural sector and persons who are interested in agriculture and return to rural areas are increasing, Yamaguchi prefectural government implements the Yamaguchi Shu-Nou Shien Juku, which is a training course for engaging in agriculture by utilizing the facilities of Prefectural Agricultural College. As the applicants for these training courses with hands-on experiences are considerably more than the fixed number every year, the prefectural government preferentially selects the students with urgency such as persons who will retire soon and take over agriculture conducted by their parents.
   The students belong to a wide group ranging from 20s to 70s, especially there are a lot of people in the late 50s to early 60s who are supposed to engage in agriculture with their retirement as a turning point. So far the ones who finished the training course are more than 350, they have engaged in agriculture in different areas in the prefecture. And after they engaged in agriculture, in order to step up to be a certified farmer, it is planed to linkage with training by JA.

2. **Action of fostering university students who contribute to the vitalization of rural areas in the future**
   Meiji University, School of Agriculture, Department of Agri-food and Environment Policy has commenced special entrance examination since FY2002 for the applicants who aim to contribute to the vitalization in rural areas and to be a leader in the future. In the examination, not only a passion for agriculture and rural areas is given priority but also the willingness to contribute to the revitalization of rural areas in the future, by group discussion, presentation and interview. Students who are admitted following this examination have a high motivation to study; they form a circle to study on agricultural problems in order to deal with issues in rural areas. So far there are 31 graduates, they are expected to give good performances in rural areas, including their engagement in agriculture and agricultural cooperatives.
Measures for food, agriculture, and rural areas for the FY2009

The government established the council of ministries for agricultural policy reform. From now on, the current agricultural policy will be reformed by the government as a whole and the current Basic Plan for Food, Agriculture and Rural Areas will also be revised. The government specifically focuses on the development of the following policy measures.

1 Reform of the Ministry of Agriculture, Forestry and Fisheries
Ministry of Agriculture, Forestry and Fisheries (MAFF) established “Task force on MAFF reform” and “Office for MAFF reform” to enable it to develop policies from the viewpoint of citizens and recover the trust of the people in this policy.
MAFF will review its current policy decision process and reform its operations and administrative system.

2 Strengthening of the food supply capacity
Since Japan is the world's largest importer of agricultural products, it is important to strengthen the food supply capacity developing its agricultural sector in a sustainable way and to raise the food self-sufficiency rate. Therefore, it is necessary to analyze the current state of the elements that make up the food supply capacity – farmland, agricultural water, farmers, and agricultural technology – and implement effective measures for each element.
With respect to the farmland, the government restricts its diversion to secure the prime land and promotes motivated farmers to consolidate the farmland by changing the base of the farmland lease system from landowner oriented to land borrower oriented approach. The government also improves the agricultural land in a comprehensive and systematic manner on the basis of long term land reform program (from FY2008 to FY2012). At the same time, it maintains agricultural infrastructure by securing a stable agricultural water supply function and drainage condition. In addition, the year 2009 is defined as "First Year of the turning-point for the extensive use of paddy fields" and the government promotes farmers to use paddy fields extensively to boost full-scale domestic production of wheat, soybean, feed crop, and rice.
Regarding farmers, the government pursues steady implementation of support measures for core farmers, including the program of direct payment for paddy-field farming. It also promotes highly-motivated young people to enter into the agricultural sector through the consultancy for engaging into agriculture and the practical training programs provided by agricultural production corporations.
Regarding agricultural technology, the government accelerates to develop energy-, labor-, and cost-saving technologies. It also creates, protects, and utilizes intellectual property strategically to make fulfill the agricultural potential.

3 Revitalization of rural areas
The rural areas serve as a foundation for the sustainable development of agriculture, forestry, and fisheries. They also play a role in the provision of employment opportunities and the fulfillment of multifunctionality. The government promotes local creativities to revitalize rural areas, revive local economies, and expand employment opportunities.
Regarding the reinforcing the links among agriculture, commerce and manufacturing industry, the government facilitates new rural businesses including promoting the sales of local products and the development of new local products. It also aims to develop human resources and utilize
local resources to revitalize local economies. In addition, harmonious co-existence and interactions between urban and rural areas, and the establishment of new farm stands are promoted. Moreover, the government pays part of the costs for training programs for job seekers aiming to learn technical know-how and business management techniques provided by agricultural production corporations to increase the number of new employment in the primary industry. Concerning the promotion of Japanese food export, the government has set a target of the export value up to 1 trillion yen by 2013. To achieve this target, the government upgrades the export environment and supports highly-motivated farmers, fishermen, food processors and exporters.

4 Food safety and consumer confidence

Amid heightened anxiety about food safety, triggered mainly by the tainted rice scandal and the incident concerning China-made frozen dumplings laced with a toxic insecticide, the government will strengthen its effort towards the restoration of consumers’ confidence in food safety. Regarding rice and processed rice products, the government will improve the current rice distribution system by the introduction of the traceability system and the system of information transmission about geographic indication of origin for rice. Regarding food safety improvement from the farm to the table, the government will promote risk management on the basis scientific principle, supervise the use of production material such as agricultural chemicals and promote the introduction of manufacturing process controls such as good agricultural practice (GAP) and Hazard Analysis and Critical Control Points (HACCP) to food producers. Moreover, it will tighten controls over improper food labeling by the food labeling G-men and familiarize food industries with food related laws and regulations.

5 Promotion of resources and environmental measures

The government will work on the improvement of agricultural soil as the function of soil organic carbon stock and the visualization of greenhouse gas reduction effect in the primal industry. It will also develop the sustainable biofuel production technologies which use nonfood resources including rice straws, thinned timber and waste wood. In addition, the conservation of biodiversity in the primal industry will be promoted.

6 Engage in international negotiations

With respect to the World Trade Organization (WTO) agricultural negotiations, the government will strategically engage in the negotiations with a basic principle of “coexistence of various types of agriculture”, so that our arguments as a net food importing country will be properly reflected to the final outcome, while duly considering what is needed for future development of domestic agriculture. The government will also engaged in Economic Partnership Agreement (EPA) negotiations such as the Japan-Australia negotiation, while considering the national economic and diplomatic interests, and noting national food security and building stronger agriculture, based on the principle: “to protect what should be protected.”
## 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>Self-sufficiency ratio (calorie basis)</td>
<td>40% (FY2007) est.</td>
<td>FY 2007</td>
<td>Target: 45% (FY2015)</td>
</tr>
<tr>
<td></td>
<td>66% (FY2007) est.</td>
<td>FY 2007</td>
<td>Target: 76% (FY2015)</td>
</tr>
<tr>
<td>The consumption volume (per year per capita)</td>
<td>Rice 112 kg (1965) -&gt; 61 kg (2007)</td>
<td>FY 2007 est.</td>
<td>Peaked at 118 kg (FY1962)</td>
</tr>
<tr>
<td>Domestic production of the food industry</td>
<td>85,863.5 billion yen</td>
<td>FY 2006</td>
<td>85,528.9 billion yen in FY2005</td>
</tr>
<tr>
<td>Percentage of all industries</td>
<td>9%</td>
<td>FY 2006</td>
<td>9% in FY2004</td>
</tr>
<tr>
<td>Workers in the food industry</td>
<td>7.75 million persons</td>
<td>2005</td>
<td>976 trillion yen attributed to all industries (2006)</td>
</tr>
<tr>
<td>Percentage of the total workforce</td>
<td>13%</td>
<td>2005</td>
<td>13% in 2000</td>
</tr>
<tr>
<td>Imports of agricultural, forestry, and fishery products</td>
<td>8,708.2 billion yen</td>
<td>2008</td>
<td>Agricultural products: 5,982.1 billion yen;</td>
</tr>
<tr>
<td>Exports of agricultural, forestry, and fishery products</td>
<td>431.2 billion yen</td>
<td>2008</td>
<td>forestry products: 1,156.5 billion yen; fishery products: 1,589.6 billion yen</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>All industries</td>
<td>515,857.9 billion yen</td>
<td>FY 2007</td>
<td>1.2% of total domestic production</td>
</tr>
<tr>
<td>Agriculture, forestry, and fishery</td>
<td>6,017.6 billion yen</td>
<td>FY 2006</td>
<td>Peak at 7,853.5 billion yen (1990)</td>
</tr>
<tr>
<td>Agriculture</td>
<td>4,700.7 billion yen</td>
<td>FY 2006</td>
<td>0.9% of all industries</td>
</tr>
<tr>
<td>Forestry</td>
<td>477.4 billion yen</td>
<td>2007</td>
<td>0.1% of all industries</td>
</tr>
<tr>
<td>Fisheries</td>
<td>839.4 billion yen</td>
<td>FY 2006</td>
<td>0.2% of all industries</td>
</tr>
<tr>
<td>Production of paddy field rice (rice-crop index)</td>
<td>8,815,000 tons (102)</td>
<td>2008</td>
<td></td>
</tr>
<tr>
<td>Total number of farm households</td>
<td>2.52 million households</td>
<td>2006</td>
<td>Peak at 6.18 million households (1950)</td>
</tr>
<tr>
<td>Commercial farm households</td>
<td>1.75 million households</td>
<td>2006</td>
<td>When statistics were first tallied: 3.31 million households (1985)</td>
</tr>
<tr>
<td>Business farm households</td>
<td>0.37 million households</td>
<td>2006</td>
<td>When statistics were first tallied: 0.82 million households (1990)</td>
</tr>
<tr>
<td>Population mainly engaged in farming</td>
<td>2.99 million persons</td>
<td>2008</td>
<td>Peak at 14.54 million persons (1960)</td>
</tr>
<tr>
<td>Rate of those aged 65 years or older</td>
<td>60%</td>
<td>2008</td>
<td>Number of those aged 65 years or older: 1.80 million persons</td>
</tr>
<tr>
<td>Core persons mainly engaged in farming</td>
<td>1.97 million persons</td>
<td>2008</td>
<td>Peak at 11.75 million persons (1960)</td>
</tr>
<tr>
<td>Those aged 65 years or older</td>
<td>59%</td>
<td>2008</td>
<td>Outlook: 1.46 million persons (2015)</td>
</tr>
<tr>
<td>Persons newly engaged in farming</td>
<td>66,000 (73,000) persons</td>
<td>2007</td>
<td>Number of those aged 65 years or older: 1.17 million persons</td>
</tr>
<tr>
<td>Those aged 39 years or younger</td>
<td>10,000 (14,000) persons</td>
<td>2007</td>
<td>Outlook: 0.90 million persons (2015)</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><strong>Outlook for agricultural structure (2015)</strong></td>
</tr>
<tr>
<td>Principal farmers</td>
<td>244,375 management entities</td>
<td>End of September 2008</td>
<td>Stable, efficient farming</td>
</tr>
<tr>
<td>Agricultural corporations (excluding single-household corporations)</td>
<td>8,700 corporations</td>
<td>2005</td>
<td>Family farm managements: approx. 330,000 to 370,000 households</td>
</tr>
<tr>
<td>Community based farm cooperatives</td>
<td>13,436 cooperatives</td>
<td>February 2009</td>
<td>Corporate managements: approx. 10,000 cooperations</td>
</tr>
<tr>
<td>Specified farming communities</td>
<td>1,836 communities</td>
<td>End of September 2008</td>
<td>Community based farm cooperatives: approx. 20,000 to 40,000 cooperatives</td>
</tr>
<tr>
<td>Specified agricultural corporations</td>
<td>729 corporations</td>
<td>End of September 2008</td>
<td></td>
</tr>
<tr>
<td><strong>Agricultural land</strong></td>
<td></td>
<td></td>
<td><strong>Area figures under 2008 cultivation plan:</strong></td>
</tr>
<tr>
<td>Agricultural production legal persons</td>
<td>10,519 legal persons</td>
<td>January 2008</td>
<td>832 stock corporations (excluding special limited companies)</td>
</tr>
<tr>
<td>Lease-type corporate entrants</td>
<td>320 corporations</td>
<td>September 2008</td>
<td>Target: 500 corporations (FY2010)</td>
</tr>
<tr>
<td><strong>Applications for Programs of Direct Payment for Paddy-field Farming and Upland-field Farming</strong></td>
<td>84,274 management entities</td>
<td>2008</td>
<td><strong>Area figures under 2008 cultivation plan:</strong></td>
</tr>
<tr>
<td><strong>Agriculture</strong></td>
<td></td>
<td></td>
<td><strong>Outlook for agricultural structure (2015)</strong></td>
</tr>
<tr>
<td>Cultivated land under management</td>
<td>4.63 million ha</td>
<td>2008</td>
<td><strong>Peaked at 6.09 million ha (1961)</strong></td>
</tr>
<tr>
<td>Paddy fields</td>
<td>2.52 million ha</td>
<td>2008</td>
<td>Target: 4.50 million ha (2015)</td>
</tr>
<tr>
<td>Upland fields</td>
<td>2.11 million ha</td>
<td>2008</td>
<td>Peaked at 3.44 million ha (1969)</td>
</tr>
<tr>
<td>Abandoned cultivated land</td>
<td>0.39 million ha</td>
<td>2005</td>
<td>Peaked at 2.72 million ha (1958)</td>
</tr>
<tr>
<td>Rate of use of cultivated land</td>
<td>93%</td>
<td>2007</td>
<td>Peaked at 138% (1966)</td>
</tr>
<tr>
<td><strong>Area of agricultural land operated by principal farmers</strong></td>
<td>2.10 million ha</td>
<td>FY2007</td>
<td><strong>Percentage of all agricultural land:</strong></td>
</tr>
<tr>
<td><strong>Farming</strong></td>
<td></td>
<td></td>
<td><strong>45% (FY2007)</strong></td>
</tr>
<tr>
<td>All income of farm household</td>
<td>4.84 million yen</td>
<td>2007</td>
<td><strong>Target: Approx. 70%–80% of all agricultural land (2015)</strong></td>
</tr>
<tr>
<td>Agricultural income</td>
<td>1.20 million yen</td>
<td>2007</td>
<td></td>
</tr>
<tr>
<td>All income of business farm household</td>
<td>5.48 million yen</td>
<td>2007</td>
<td></td>
</tr>
<tr>
<td>Agricultural income</td>
<td>4.25 million yen</td>
<td>2007</td>
<td></td>
</tr>
<tr>
<td>General agricultural cooperatives</td>
<td>844 cooperatives</td>
<td>FY2006</td>
<td><strong>Peaked at 13,314 agricultural cooperatives (1950); 2,472 agricultural cooperatives in 1996</strong></td>
</tr>
<tr>
<td>Members of agricultural cooperatives</td>
<td>9.32 million</td>
<td>FY2006</td>
<td>Consisting of 4.94 million regular members and 4.38 million associate members</td>
</tr>
<tr>
<td>Total amount of savings deposited with agricultural cooperatives</td>
<td>82,915.0 billion yen</td>
<td>End of December 2008</td>
<td>67,656.2 billion yen in 1995</td>
</tr>
<tr>
<td>Agricultural committees</td>
<td>1,818 committees</td>
<td>October 2007</td>
<td>1,843 committees as of October 2006</td>
</tr>
<tr>
<td>Agricultural committee members</td>
<td>38,579 persons</td>
<td>October 2007</td>
<td>1,658 female members (4.3%)</td>
</tr>
<tr>
<td>Agricultural mutual relief associations.</td>
<td>275 associations</td>
<td>April 2008</td>
<td>Peaked at 10,907 associations (1955)</td>
</tr>
<tr>
<td>Land improvement districts</td>
<td>5,474 districts</td>
<td>End of March 2008</td>
<td><strong>Peaked at 13,163 improvement districts (1961)</strong></td>
</tr>
<tr>
<td>Number of extension advisors</td>
<td>7,790 persons</td>
<td>Beginning of FY2008</td>
<td><strong>Peaked at 13,748 persons (1965)</strong></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>Persons aged 65 years and older</td>
<td>2.45 million persons</td>
<td>2008</td>
<td>3.06 million persons in 1998</td>
</tr>
<tr>
<td>Percentage of total population</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elderly persons (aged 65 years and older) as a percentage of the population of farm households</td>
<td>6%</td>
<td>2008</td>
<td>9% in 1998</td>
</tr>
<tr>
<td>Elderly persons (aged 65 years and older) as a percentage of the total population</td>
<td>34%</td>
<td>2008</td>
<td>27% in 1998</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>Current status of rural areas</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Population of farm households</td>
<td>11.31 million persons in 1998</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Persons aged 65 years and older</td>
<td>3.06 million persons in 1998</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentage of total population</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elderly persons (aged 65 years and older) as a percentage of the population of farm households</td>
<td>9% in 1998</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elderly persons (aged 65 years and older) as a percentage of the total population</td>
<td>27% in 1998</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Environment

<table>
<thead>
<tr>
<th>Item</th>
<th>Data</th>
<th>Year</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Certified eco-farmers</td>
<td>178,622</td>
<td>End of September 2008</td>
<td>Target: 200,000 (end of FY2009)</td>
</tr>
<tr>
<td>Biomass town concept declarations</td>
<td>197 municipalities</td>
<td>End of March 2009</td>
<td>Target: 300 municipalities (2010)</td>
</tr>
</tbody>
</table>

### Coexistence

<table>
<thead>
<tr>
<th>Item</th>
<th>Data</th>
<th>Year</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban agriculture (agriculture in urban areas)</td>
<td>3,273 gardens</td>
<td>End of March 2008</td>
<td>2,319 gardens in March 2000</td>
</tr>
<tr>
<td>Monetary amount of production output</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>

### Japanese agricultural output (2007)

(Monetary agricultural output in Japan by item)

- **Fishery industry**: 1,653.9 billion yen (16%)
- **Forestry industry**: 441.4 billion yen (4%)
- **Agricultural industry**: 8,192.7 billion yen (80%)
- **Total**: 10,288.0 billion yen (100%)

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

- **Fishery industry**: 1,653.9 billion yen (16%)
- **Forestry industry**: 441.4 billion yen (4%)
- **Agricultural industry**: 8,192.7 billion yen (80%)
- **Total**: 10,288.0 billion yen (100%)

#### Livestock

- **Beef cows**: 460.1 billion yen (6%)
- **Dairy cows**: 744.1 billion yen (9%)
- **Pork**: 498.0 billion yen (6%)
- **Poultry**: 650.9 billion yen (8%)

#### Other

- **Other** (6%):
  - **Flowers**: 401.6 billion yen (5%)
  - **Fruits**: 757.0 billion yen (9%)
  - **Vegetables**: 2,057.4 billion yen (25%)
  - **Tubers and roots**: 201.5 billion yen (2%)
  - **Beans**: 78.2 billion yen (1%)

#### Wheat/barley

- **Wheat/barley**: 146.1 billion yen

#### Rice

- **Rice**: 1,314.6 billion yen (22%)

#### Vegetable

- **Vegetable**: 2,057.4 billion yen (25%)

#### Other (6%)

- **Other** (6%):
  - **Flowers**: 401.6 billion yen (5%)
  - **Fruits**: 757.0 billion yen (9%)
  - **Vegetables**: 2,057.4 billion yen (25%)
  - **Tubers and roots**: 201.5 billion yen (2%)
  - **Beans**: 78.2 billion yen (1%)

Source: MAFF

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

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

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.

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 with respects to 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. Since, 2007, 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).

Community based farm cooperative
A community based farm cooperative consists of farming activities through which farm households in a community that are located in the same region 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.

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 2 or more countries by means 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.

Good Agricultural Practice (GAP)
The concept of GAP refers to a sequence of agricultural process-checking practices formulated by the farmers according to crops, local conditions, so that they can (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 records and identify improvement points, and (4) utilize these improvement points for planting next 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” with respect to 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 with regards to rice, wheat/barley, soybeans, greenhouse vegetables, open-field vegetables, fruit, flowers and tea.
Greenhouse gases (GHG)

Under the Kyoto Protocol, signatories are obliged to reduce the emissions of greenhouse gases consisting of carbon dioxide, methane (which is generated in places such as paddy fields and final waste treatment sites), nitrogen monoxide (which is generated during processes of synthesizing 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 are reflected off the ground.

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. It refers to foods with a short shelf life that are prepared and processed outside 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.

Japanese Food Guide Spinning Top

The Japanese Food Guide Spinning Top serves as a balanced meal guide presents suggestions regarding what to eat and the portions thereof per day in order to link Japan’s Dietary Guidelines formulated in the year 2000 to specific actions with a view of realizing a physically and mentally healthy and well-rounded dietary pattern. Depicted as a spinning top, the Guide presents targeted daily consumption volumes using the 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 the year 2005 by the Ministry of Health, Labour and Welfare and the Ministry of Agriculture, Forestry and Fisheries.

Labeling of CO2 reduction effect

This labeling refers to a means of displaying to consumers in an easy manner regarding the effort of CO2 emission, such as the state of emission, or reduction of emission, absorption and storage of GHG at the stages of manufacture, production, procurement, processing, distribution, sale, consumption, and disposal concerning production and law materials.

MA rice (Minimum Access rice)

Based on the GATT Uruguay Round agreement in 1993, which obligated member countries to provide minimum market access opportunities for products with no significant import, Japan imports through state trading so-called “MA rice (Minimum Access rice)”, whose volume currently is 767,000 tons per year on a brown rice basis.

Programs of Direct Payment for Paddy- and Upland-Field Farming (PDPPUFF)

The programs are targeted at paddy and upland crop producers, which started as Programs of Direct Payment for Land-extensive Farming in 2007.

The programs were reviewed in 2008, because the information concerning these programs is not sufficient in rural communities.

In 2008, after conducting a review, the government found that most farmers were unfamiliar with the measure. Upon reviewing, the government made the following changes to it:

- A change in area requirements for small-scale and/or aging farmers
- Removal of and making the age restriction parameter flexible
- Making the requirement for the establishment of commodity based farm co-operative flexible
- Support for advanced upland crop farmers
- Enhancement of compensation to the impact of revenue reductions
- Unification of various farm subsidization and the simplification of application procedures for the subsidies
- A change in its name from Program of Direct Payment for Land-extensive Farming to PDPPUFF.
Special municipal licensing system
The special treatment waives the area requirements of PDPPUFF for small-scale and/or aging farmers, which is introduced in the production year 2008.
In principle, certified farmers and community based farm co-operatives need to cultivate at least 4 ha (10 ha in Hokkaido) and 20 ha respectively to participate PDPPUFF. However, these area requirements are waived for small-scale and/or aging farmers if local core farmers and municipal governments accept such a waiver.

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 amassing over half of the agricultural land in the area, which 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.

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, which 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.

Stabilization System of Compound Feed Prices
The Stabilization System of Compound Feed Prices is a system for granting compensation payment to livestock farmers that run 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 by the Japanese government and the compound feed manufacturers. The practice of abnormal compensation payment is invoked during times of steep, extraordinary increases in prices that cannot be sufficiently compensated by invoking the practice of normal compensation payment.