Annual Report on Food, Agriculture and Rural Areas in Japan

Part 1  Trend of Food, Agriculture, and Rural Areas

FY 2000 (Summary)

(Provisional Translation)
Preface

In this 21st Century, the Japanese socioeconomic system is changing dramatically from the mass-production type industrial society with emphasis on efficiency to the recycling-oriented society based on diversification, software utilization, and resource conservation. Thus, the efficiency and the material wealth that have been pursued so far are under review.

Under these circumstances, a new insight is given to the values of food, which is the fundamental of our “everyday life” and the values of agriculture and rural areas that support food production, and expectations are growing as to their roles as the basis for safety and security.

In response to such growing expectations of this age, the Basic Law on Food, Agriculture, and Rural Areas as promulgated and enforced on July 1999, thoroughly reviewed the Agricultural Basic Law that was established within the background of rapid economic growth and sets up a new policy-making scheme under the new principles.

The Food, Agriculture, and Rural Area Basic Plan that was established in March 2000 indicates a desirable food consumption form that provides the outlook for the next 10 years ahead, targets of efforts to be made in agricultural production, securing of agricultural resources that are required for implementation of these tasks, and prospect of agricultural management and structure. The plan also presents targets for a food self-sufficiency ratio to be achieved based on all of these efforts.

In the future, governments at all levels, including national, local and municipalities, farmers, consumers, and any other relevant parties should work together according to this Basic Plan to promote sustainable development of agriculture and rural areas, to secure stable food supply, and to fulfill multi-functionality.

The Food, Agriculture, and Rural Area White Paper of year 2000 was prepared under these basic assumptions. The White Paper provides relevant information on the necessities for infiltration of the principles of the Basic Law and actualization of the Basic Plan through analysis and verification of the trends and objectives of foods, agriculture, and rural areas and statuses of infiltration and operation of the actual policies according to the Basic Plan so that public understanding and support can be obtained from the Nation.

This booklet summarizes the important points of the White Paper for easy reference. We hope that this booklet will help you, as a member of the Japanese Nation, to understand the current situation regarding food, agriculture, and rural areas in Japan and the future ideal in this new age.
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Chapter I  Securing a Stable Food Supply

Section 1  Food Consumption and Dietary Patterns in Japan

(1) Current Situation of Food Consumption

- In 1999, the prices of fresh vegetables and fresh foods that previously made sharp increases have dropped, however, the food price, as a whole, is steady (down by 1.2% from the previous year). The real food consumption expenditure per person in non-farming household (food expenditure) in 2000 declined by 1.3% from the previous year while the entire expenditure is stagnant. During the period from April to December, 2000, food prices were slightly weak (down by 1.9% from the previous year), while the food expenditures remained almost unchanged (up by 0.1% from the previous year).

- The change of the dietary patterns in Japan that occurred in the process of economic growth is exceptionally dramatic by the world standards. Under these circumstances, the style of food expenditures has also changed dramatically as reflected in the substitution of home-made dishes at home meals with prepared foods and eating-out under the background of an increase of single-member households and diversified lifestyles. In 2000, prepared foods and eating-out comprise 27% of total food expenditures.

- As a result of the decrease in the popularity cooking fresh foods at home, the knowledge and interest of consumers towards these foods deteriorated, further widening the gap between ‘diet’ and ‘agriculture’. To close the gap between these, more efforts are necessary by providing information for enhancement of the connection between these factors and providing opportunities for farming experience.
Table - 1  Real Food Consumption per Person in Non-Farming Households (All the Households Nationwide)

(Year-on-Year Changes)

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Consumption expenditures</td>
<td>1,171.6</td>
<td>▲ 2.4</td>
<td>▲ 0.1</td>
<td>▲ 0.9</td>
<td>▲ 0.9</td>
</tr>
<tr>
<td>Food expenditures</td>
<td>303.7</td>
<td>▲ 1.3</td>
<td>▲ 0.1</td>
<td>▲ 1.3</td>
<td>▲ 0.1</td>
</tr>
</tbody>
</table>

By type of foods

<table>
<thead>
<tr>
<th>Type of Foods</th>
<th>FY 1999 Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staple food</td>
<td>▲ 2.7</td>
</tr>
<tr>
<td>Supplementary food</td>
<td>▲ 1.0</td>
</tr>
<tr>
<td>Luxury</td>
<td>▲ 1.5</td>
</tr>
<tr>
<td>Eating-out</td>
<td>▲ 0.9</td>
</tr>
</tbody>
</table>

Figure - 1  Transition of PFC Balance in Each Country

Figure - 2  Changing Consumer Awareness

Require more quality indication on agriculture products.
The distance between agricultural products and the production location is too great.
Not closely related to agricultural images.
Retail stores should provide more information of the production sites to consumers.
Agricultural producers have not provided information that is required by consumers.

Figure - 3  Component Values of Seasonal Food Items by Season

The Science and Technology Agency (now: Ministry of Education, Culture, Sports, Science and Technology) compiled a “Japan Food Standard Component Table, Revision 5” in November 2000. The table includes fluctuations of seasonal food according to the season and nutritional comparison between domestically produced foods and imported foods.
(2) Problems in Dietary Patterns

Although Japanese dietary patterns are now so varied that there is said to be “overabundance”, that we are said to be living in “the age of overabundance,” there are increasingly growing concerns over excess or insufficient nutritional intake such as excessive intake of fat or unbalanced diets. These concerns need attention in terms of prevention of lifestyle diseases.

Another problem is “food loss” observed at every stage from production to consumption; waste of expired food and leftovers at eateries and homes. The result of research by the “Food Loss Statistical Research” that investigated, for the first time in Japan, the actual condition of the loss of edible portions indicates that the portion accounts for 7.7% in average on general households (1,000 households) and 6.6% on average in households with 3 or more members of 65 years of age or older. These rates are comparatively low.

The loss rate in the consumption stage in the food service industry accounts for 5.1%, which is comparatively high due to the leftovers from wedding receptions and banquets. Reduction of these food waste is important in such a country as Japan with low food self-sufficiency ratio in terms of effective use of resources, reduction of waste processing cost, and reduction of the environmental burden associated with processing of waste.

The change of eating habits associated with the change of lifestyle such as ‘skipped meals’ is also a problem. The disturbance of children’s eating habits due to less opportunities for family members to eat together is likely to impose a serious influence on inheritance of our food culture as well as the psychological and physical growth of children.
Table - 2 Nutritional Intake by Gender and by Age Group (1999)

(Unit %)

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Total</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Energy</td>
<td>Calcium</td>
<td>Iron</td>
</tr>
<tr>
<td></td>
<td>Energy</td>
<td>Calcium</td>
<td>Iron</td>
</tr>
<tr>
<td></td>
<td>Energy</td>
<td>Calcium</td>
<td>Iron</td>
</tr>
<tr>
<td></td>
<td>Energy</td>
<td>Calcium</td>
<td>Iron</td>
</tr>
<tr>
<td>Total</td>
<td>99</td>
<td>94</td>
<td>108</td>
</tr>
<tr>
<td>7 - 14 years</td>
<td>93</td>
<td>101</td>
<td>96</td>
</tr>
<tr>
<td>15 - 19</td>
<td>91</td>
<td>82</td>
<td>95</td>
</tr>
<tr>
<td>20 - 29</td>
<td>91</td>
<td>85</td>
<td>99</td>
</tr>
<tr>
<td>30 - 39</td>
<td>93</td>
<td>83</td>
<td>99</td>
</tr>
<tr>
<td>40 - 49</td>
<td>98</td>
<td>89</td>
<td>107</td>
</tr>
<tr>
<td>50 - 59</td>
<td>103</td>
<td>102</td>
<td>117</td>
</tr>
<tr>
<td>60 - 69</td>
<td>110</td>
<td>107</td>
<td>129</td>
</tr>
<tr>
<td>70 and over</td>
<td>115</td>
<td>96</td>
<td>114</td>
</tr>
</tbody>
</table>

Figure - 4 Food waste rate in the consumption stage

- Total number of households
- Single-member households
- Two-member households
- Households comprising 3 or more members (without the aged)
- Households comprising 3 or more members (with the aged)
- Total in the food service industry
- Wedding reception
- Banquet
- Accommodation such as inns
- General eateries

Figure – 5 Children’s Breakfast Status

- Total
- 3rd and 4th Grades
- 5th and 6th Grades
- Junior High School
- Senior High School

- Males
  - Skipped breakfast more than half
  - Hardly taking breakfast

- Females
  - Total
  - 3rd and 4th Grades
  - 5th and 6th Grades
  - Junior High School
  - Senior High School
(3) Promotion of guidelines for dietary patterns

In dealing with such problems, every person within the nation should review his or her own dietary patterns. As the guidelines, the Ministry of Agriculture, Forestry, and Fisheries, the Ministry of Education, and the Ministry of Health and Welfare jointly prepared “Dietary Guidelines” as the guidelines for reviewing individual dietary patterns, consisting of 10 items regarding improvement of nutritional balance and reduction of loss and waste in dietary patterns (Cabinet decision made in March 2000).

Promotion as activities on the national scale including education in schools, households, workplaces, and regions is necessary with support of the government and related organizations to spread and stabilize these guidelines.
Table - 3  Dietary Guidelines

- Enjoy your meals.
  - Have delicious and healthy meals that are good for your mind and body.
  - Aim to achieve a longer healthy life through your diary meals.
  - Enjoy communication at the table with your family and/or other people and participate in the preparation of meals.

- Establish a healthy rhythm by keeping regular hours for meals.
  - Have a breakfast to make a good start to the day.
  - Avoid large snacks before bedtime and between meals.
  - If you drink alcoholic beverages, do so in moderation.

- Eat well-balanced meals with staple food, as well as main and side dishes.
  - Make a good combination of various foods.
  - Try to cook in various ways.
  - Combine wisely home-made meals with eating out, eating processed and prepared foods.

- Eat enough grains such as rice and other cereals.
  - Eat grains at every meal to maintain sufficient intake of enough from carbohydrate.
  - Make the best use of grains such as rice and other cereals, suited to Japan's climate and soil conditions.

- Combine vegetables, fruits, milk products, beans and fish in your diet.
  - Eat enough of vegetables and fruits everyday to get vitamins, minerals and fibers.
  - Drink milk and eat green/yellow vegetables, beans, and small fish to get a sufficient amount of calcium intake.

- Avoid too much salt and fat.
  - Avoid salty foods and reduce the amount of salt intake to less than 10 grams per day.
  - Avoid oily and fatty foods and make a balanced choice of fat from animal, plant, and fish.
  - Check nutrition labels in choosing foods and setting menus.

- Learn your healthy body weight and balance the calories you eat with physical activity.
  - Weigh yourself as soon as you feel like you have gained someweight.
  - Have a habit of appropriate physical exercise.
  - Good health is essential to beauty. Do not attempt to lose too much weight.
  - Chew your food well and do not eat too quickly.

- Take advantage of your dietary culture and local food products, while incorporating new and different dishes.
  - Enjoy nature's bounty and the changing seasons by using local food products and ingredients in seasons, and by enjoying holiday and special-occasion dishes.
  - Respect your dietary culture and apply it to daily diet.
  - Acquire knowledge of foods and cooking.
  - Be open to trying new foods and dishes.

- Reduce leftovers and waste through proper cooking and storage methods.
  - Avoid buying and cooking too much food. Try to gauge how much food you need to avoid leftovers.
  - Pay attention to “best by” and “consume by” dates on food products.
  - Check the contents of your refrigerator and cupboards on a regular basis and try to create menus that maximize what you have.

- Assess your daily eating.
  - Set your own health goals and have a habit to assess your diet.
  - Think and talk about your diet with your family and friends.
  - Learn and practice healthy eating habits at school and at home.
  - Promote appreciation of good eating habits from a early stage of life.
Section 2  Food Self-sufficiency Ratio and Food Security

(1) Food Self-sufficiency Ratio

The food self-sufficiency ratio in Japan showed sharp decreases during the period from 1965 to 1999, down from 73% to 40% on a calorie supply basis and 63% to 27% on a grain basis. The major factors of this phenomenon are decrease of consumption of rice, which is a Japan’s self-sufficient item, due to diversified dietary patterns of the nation and a dramatic increase of import of feed grains and oilseeds that is caused by increasing of consumption of animal products and fats and oils which are largely dependent on imported.

The public opinion survey that was implemented in 2000 regarding the food self-sufficiency ratio in Japan indicates that more than half of the nation recognized the rate to be too low. The stable supply of foods for the nation under these circumstances is an important duty for the Government. The basic solution for the problem is to increase domestic agricultural production to ensure stable food supply since there are limitations on stockpiling and importation of foods.

The subjects to be tackled by related parties including producers, consumers, and food industries are to be clarified in the Food, Agriculture, and Rural Area Basic Plan (decided in the cabinet meeting in March 2000) and the targets of the food self-sufficiency ratios were set (45% on a total calorie basis, 30% on a grain basis, 62% on a grain-for-stable foods basis). Integrated promotion by concerned parties for achievement of these targets is important in terms of both production and consumption.

The food self-sufficiency ratio on a supply calorie basis became stable in 1999 despite the consistent downturn in the past, maintaining a level of 40%, the same level as in the previous year.
Figure – 6  Change of Food Consumption Structure

(Change of calorie supply per person per day (total amount) and Ratio by Item) kcal/person

Table - 4  Change of Self-sufficiency Ratio of Agricultural and Fishery Products as Food
(Unt. %)

<table>
<thead>
<tr>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Rice</td>
<td>95</td>
<td>110</td>
<td>107</td>
<td>103</td>
<td>99</td>
<td>90</td>
<td>93</td>
</tr>
<tr>
<td>Wheat</td>
<td>28</td>
<td>4</td>
<td>14</td>
<td>7</td>
<td>9</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>Beans</td>
<td>25</td>
<td>9</td>
<td>8</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Vegetables</td>
<td>100</td>
<td>99</td>
<td>95</td>
<td>85</td>
<td>86</td>
<td>84</td>
<td>83</td>
</tr>
<tr>
<td>Fruits</td>
<td>90</td>
<td>84</td>
<td>77</td>
<td>49</td>
<td>53</td>
<td>49</td>
<td>49</td>
</tr>
<tr>
<td>Eggs</td>
<td>100</td>
<td>97</td>
<td>98</td>
<td>96</td>
<td>96</td>
<td>96</td>
<td>96</td>
</tr>
<tr>
<td>Milk and daily products</td>
<td>86</td>
<td>81</td>
<td>85</td>
<td>72</td>
<td>71</td>
<td>71</td>
<td>70</td>
</tr>
<tr>
<td>Meat (excluding whale meat)</td>
<td>90</td>
<td>77</td>
<td>81</td>
<td>57</td>
<td>56</td>
<td>55</td>
<td>54</td>
</tr>
<tr>
<td>Sugar</td>
<td>31</td>
<td>15</td>
<td>33</td>
<td>31</td>
<td>29</td>
<td>32</td>
<td>31</td>
</tr>
<tr>
<td>Fishery products</td>
<td>109</td>
<td>102</td>
<td>96</td>
<td>75</td>
<td>73</td>
<td>66</td>
<td>65</td>
</tr>
</tbody>
</table>

Self-sufficiency ratio of grain (food + feed) | 62 | 40 | 31 | 30 | 28 | (26) | 27 | (26) | 27 |

Self-sufficiency ratio of grain as the main food | 80 | 69 | 69 | 64 | 62 | (57) | 59 | (58) | 59 |

Total food self-sufficiency ratio based on calorie supply | 73 | 54 | 53 | 43 | 41 | (39) | 40 | (39) | 40 |

Total food self-sufficiency ratio on the amount of money | 86 | 83 | 82 | 74 | 71 | 70 | 72 |

Table - 5  Practical Objectives for Achieving Food Self-Sufficiency Target Ratio

<table>
<thead>
<tr>
<th>Practical objective</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Producer</strong></td>
</tr>
<tr>
<td>Solution to prevention of abandonment of cultivation and improvement of cultivated land utilization rate</td>
</tr>
<tr>
<td>Cost reduction and production corresponding to consumer requirements</td>
</tr>
<tr>
<td><strong>Food industry business</strong></td>
</tr>
<tr>
<td>Enhancement of cooperation with producers through exploitation of sales routes and development of new products</td>
</tr>
<tr>
<td>Completing indication of place of origin to enable consumers to select appropriate items</td>
</tr>
<tr>
<td><strong>Consumer</strong></td>
</tr>
<tr>
<td>Understanding of agriculture and situations of food supply/demand in Japan</td>
</tr>
<tr>
<td>Improvement of nutritional balance and review of dietary patterns such as waste of expired food and left-over</td>
</tr>
<tr>
<td><strong>Government</strong></td>
</tr>
<tr>
<td>&lt;Production&gt; For full-scale production of wheat, soybeans, and feed crops</td>
</tr>
<tr>
<td>Securing proper agricultural land and promotion of fluidization</td>
</tr>
<tr>
<td>Enhancement of productivity through improvement of production foundation</td>
</tr>
<tr>
<td>Enhancement of single harvesting and quality by development and introduction of technologies</td>
</tr>
<tr>
<td>Promotion of production that immediately responds to requirements of consumers and food processing industry</td>
</tr>
<tr>
<td>&lt;Consumption&gt; Development of national movement based on the dietary pattern guideline that was prepared for reviewing dietary patterns such as achievement of balanced nutrition and reduction of left-over food and food waste</td>
</tr>
</tbody>
</table>
(2) Food Security

Eighty percent of the nation indicated the apprehension towards future prospect of food security in Japan. To secure a stable food supply, it is essential to make efforts to increase domestic production first and then assure the availability of stable imports and proper stockpiles.

To achieve these objectives, it is necessary to secure and enhance food supply capabilities by securing and improving agricultural land and securing and training farmers as well as to improve the information collection system and diversify risks by importing from several countries. Proper and effective stockpiling of staple foods is also required.

Food security is also necessary to guarantee the minimum domestic supply in the event of an emergency. For this purpose, specific measures should be developed according to the degree of the emergency and a manual should be prepared for taking the necessary actions effectively.
Figure - 7 Nation's Awareness Regarding Future Food Supply in Japan

(Reason for insecurity in future food supply in Japan) (Multiple answers)
Section 3  Food Industry Supporting a Stable Food Supply and Supply of Safe and Quality Foods

(1) Food Industry

- The total domestic production of the agricultural and food industries is about 55.8 trillion yen (1998), which accounts for 10% of all the industries, forming the major industrial field in the Japanese economy. According to the component ratio of each industry in the total domestic production of agricultural and food industries, the added value generated by the food industry that connects ‘diet’ and ‘agriculture’ comprises a large proportion in the Japanese food system.

- With diversification of the retail industry such as an increase of shares of food supermarkets in response to changes of national life-style, the distribution routes are also diversifying such as direct distribution from producers and direct transactions between large producers and larger users. Under these circumstances, efficiency improvement and enhancement of food distribution for cost reduction of food manufacturing and distribution sectors, clarification of distribution cost, and clarification of distribution systems by reviewing commercial practices are important to promote establishment of rational food prices.

- Under the situation where the food industry is becoming more dependent on importation of foods, association between the food industry and agriculture brings advantages to both parties; securing of stable supply of ingredients for the food industry and increase of demand for domestic agricultural products for the agricultural industry. For active promotion of the association, comprehensive support is necessary including the mechanism for accurately matching the information and requirements of both parties.
For reduction of environmental burdens because of business activities such as reduction of waste and promotion of recycling in the food industry, it is important to create a mechanism that can conform to the recycling-based socioeconomic system based on role-sharing between interested parties.

It is also necessary to further promote the spread and explanation of legislation of the Container and the Law on Recycling Containers and Packaging that was enforced in April, 2000 on a full scale and that was expanded by target businesses dramatically, and also it is necessary to develop the technology for re-commercialization.
Figure 12: Efforts for applying the concepts of lighter weight, resource-recycling, and less environmental impacts for container packaging (Multiple answers)

- Applying the concept of lighter weight and simplification for container packaging
- Changing the material of the container packaging to the material that can be more easily re-commercialized
- Using recycled paper for packaging
- Installing boxes for recycling
- Switching to the item that enables replacement of the contents
- Indicating the material that is used for the container packaging
- Using returnable containers
- Using reusable containers
- Food manufacturing industry
- Food retail industry
(2) Securing Food Safety and Improving Labeling and Standardization Systems

- Incidents related to food safety have occurred repeatedly including a large-scale food poisoning accident that occurred in June 2000 involving processed milk products. Large-scale food poisoning accidents, cause increasing consumer insecurities. It is important to establish a consistent sanitation control system throughout each stage from production to consumption to recover confidence for with regard to food safety.

- The revised Japanese Agricultural Standards (JAS) Law was enacted in June 2000, which covers the improvement of the food labeling system such as mandatory description of country of origin for any perishable foods and its establishment, as well as the establishment of an inspection and certification system. For labeling of country of origin of perishable foods, the degree of consumer recognition is high, however, responses from specialized shops are slow and further spread and explanation of the system and research and improvement instructions for shops are necessary.

  With regard to labeling of country of origin of processed foods, quality label standards of pickled plums and pickled onions were announced in December 2000 and will be applied from October 2001.

- The inspection and certification system of organic foods that was introduced allows “organic” labeling by attaching an organic JAS mark only for the foods that passed the inspection of the Organic JAS Standard. For steady implementation of this system, further efforts are necessary to provide information on the significance and contents of the system to consumers and for the spread and promotion of the system.
Figure - 13  Intention of Consumers Regarding Food Safety

[ Items with high insecurity responses (multiple answers)]

Note: Explanation and instruction were given, on the spot, to the shops that did not provide indications.

Figure - 14  Place of Origin Indication Status
(Research implemented from January to February 2001)

Indicated in all the items  Indicated in most items  Indicated in about half of the items  Indicated in some items  No indication

Note: Explanation and instruction were given, on the spot, to the shops that did not provide indications.
Section 4  World Food Supply/Demand and Trends in Agricultural Policies

(1) Trends in world Grain Supply/Demand

- For the world grain supply/demand in 2000/2001, grain production is assumed to decline due to the decrease of cropping areas in the major producer countries while the consumption is assumed to be almost the same as in the previous year.

- The world agricultural product trade is divided into two opposite sides; export countries/regions including North America and Oceania and import countries/regions including Japan, Asia, and Africa. In the grain supply/demand structure of Asia and Africa, the amount of import is increasing, the domestic grain production does not catch up with the increase of demand, and the shortage is supplemented by import from other countries.

- The rate of increase in the world grain production is stagnant. The rate of increase of the yield, which is a major factor of the increase of crop production, is dropping and the harvested areas have been decreasing since the 1980’s. With the anticipation of the population growth and sharp increases in grain demand due to the increased consumption of animal products, various restraints such as limited expansion of agricultural land more visible environment problems have been observed in the area of production. Thus, global food supply and demand might get tighter in the mid- and long-terms.

(2) Trend in Agricultural Trade in Japan

Most of the major agricultural imports such as grains in Japan rely on a small number of countries, such as the USA, while the overall demand is increasing with the background of advancement and diversification of consumer requirements.
Figure - 15 Net Export (Import) Amount of Grain by Region

Figure - 16 Contribution to Increase Ratio of World Grain Production by Factor

Table - 6 Transition of exporters of agricultural products to Japan

(Unit: million dollars, %)

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</tr>
</thead>
<tbody>
<tr>
<td>Export amount</td>
<td>12,560</td>
<td>27,322</td>
<td>36,702</td>
<td>64.3</td>
<td>57.8</td>
<td>49.6</td>
</tr>
<tr>
<td>Advanced countries</td>
<td>8,070</td>
<td>15,779</td>
<td>18,222</td>
<td>35.7</td>
<td>33.4</td>
<td>27.8</td>
</tr>
<tr>
<td>USA</td>
<td>4,489</td>
<td>9,126</td>
<td>10,209</td>
<td>7.0</td>
<td>10.6</td>
<td>10.0</td>
</tr>
<tr>
<td>EU</td>
<td>877</td>
<td>2,885</td>
<td>3,671</td>
<td>35.0</td>
<td>40.6</td>
<td>49.7</td>
</tr>
<tr>
<td>Developing countries</td>
<td>4,399</td>
<td>11,097</td>
<td>18,240</td>
<td>7.0</td>
<td>10.6</td>
<td>10.0</td>
</tr>
<tr>
<td>East and South East Asia</td>
<td>3,247</td>
<td>9,087</td>
<td>14,421</td>
<td>25.9</td>
<td>33.3</td>
<td>39.3</td>
</tr>
<tr>
<td>Africa</td>
<td>244</td>
<td>570</td>
<td>944</td>
<td>1.9</td>
<td>2.1</td>
<td>2.6</td>
</tr>
<tr>
<td>Central and South America</td>
<td>828</td>
<td>1,276</td>
<td>2,667</td>
<td>6.6</td>
<td>4.7</td>
<td>7.3</td>
</tr>
</tbody>
</table>
(3) **Trends in Price Gap between Japan and Other Countries**

Food product retail prices in 1999 in Japan (Tokyo) were 20% to 30% higher than those in other major foreign cities. The price gap is increasing due to the maintenance of high Yen value. The factors for the price gap were observed at every stage from production, distribution to processing. It is necessary to make efforts to reduce the overall cost in agriculture and related industries.

(4) **International Cooperation**

In promotion of international cooperation, it is necessary to promote effective and efficient cooperation by clarifying the fields and regions to be emphasized for cooperation, preparing cooperation policies for agriculture by country, and associating the policies with domestic policies.

It is also necessary to link between ODA and Japan’s foreign polices and important policies relating to national interests, and also to link WTO agricultural negotiations and ODA.
Figure - 17 Change Factors of Internal/External Price Differences Regarding Food Items between Japan and USA

Figure - 18 Results of Food and Agricultural Fields Aid in Major Countries (1998)

Case Prevention and elimination of serious livestock infectious diseases within the Indochina region
Introduces the cases of international cooperation such as facility construction of and dispatch of specialists to National Livestock Sanitation and Production Research Center in Thailand.
Section 5 Movements Regarding the WTO

(1) Positioning the WTO Agricultural Negotiations

- Japan accepted the Uruguay Round Agreement on Agriculture and has been steadily implementing this agreement.

- The agricultural negotiations in the WTO are important in the sense that the future direction of world agricultural trade rules for the 21st Century are thereby to be determined. For Japan, it is extremely important in that the basic principles of the Basic Law on Food, Agriculture, and Rural Areas and accompanying measures must be properly recognized in accordance with global rules.

- The Japanese Government is to continue to work on gaining international understanding through various opportunities for discussions with other countries to appreciate the Japanese stance internationally. More countries started to show understanding of the Japanese stance as a result of the active efforts made in international conferences.
Securing food security
Maintenance and demonstration of multi-functionality of agriculture such as conservation of land and environment
Establishment of fair and impartial trade rules for each country
Necessity for actions such as a certain subsidy for maintaining domestic agriculture
Further liberalization of trade by reduction of custom duties
Necessity for active efforts regarding biotechnology such as genetically modified food
Others
Don't know

Figure - 19  Opinions to Be Presented by Japan in WTO Agricultural Negotiations
(2) Proposal of Japan for Negotiations and Future Issues in WTO Agricultural Negotiations

To compile a proposal of negotiations of Japan, the Japanese Government collected opinions by providing information to the public through Internet homepages, holding public opinion survey, and “meetings for listening opinions” through local agricultural policies bureaus. The Government prepared a negotiation proposal that can gain consent from the nation based on the opinions from a wide level across the nation and Government submitted the proposal as the “Japanese Proposal of WTO Agricultural Negotiations” to the WTO administration in December 2000.

The basic target of the Japan's negotiating proposal is “coexistence of various types of agricultures.” Based on this target, the proposal clarifies the policies of each issue in terms of pursuit of positioning, as the basic important items, verification of UR Agreement implementation statuses, multi-functionality of agriculture as the issue of global agricultural policies, Consideration of the multi-functionality of agriculture, Ensuring food security, and redressing the imbalances between rules and disciplines applied to agricultural exporting counties and those applied to importing countries.

The Japanese government needs to make tireless efforts in negotiations while strengthening the ties with countries the Friends of the Multi-functionally countries in terms of multi-functionality, and gaining support from developing countries in order to present the Japanese proposal internationally. It is necessary to promote transparency of the negotiation processes, such as disclosure of related information, and to proceed with the negotiations after obtaining complete agreement at the national level.
Table - 7 OUTLINE OF JAPAN’S NEGOTIATING PROPOSAL

<table>
<thead>
<tr>
<th>Japan's negotiating proposal is built on the basic philosophy of “co-existence of various types of agriculture”, and pursues following five points:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Consideration of the multi-functionality of agriculture</td>
</tr>
<tr>
<td>2. Ensuring food security which is a basis for each country</td>
</tr>
<tr>
<td>3. Redressing the imbalance in rules and disciplines applied to agricultural exporting and importing countries</td>
</tr>
<tr>
<td>4. Consideration for developing countries</td>
</tr>
<tr>
<td>5. Consideration for concerns by consumers and the civil society</td>
</tr>
</tbody>
</table>

1. Basic elements to be considered in the negotiations
   - Examining the implementation of the UR agreements
   - Pursuit of multi-functionality of agriculture and food security as the major issues of the agricultural policies worldwide

2. Proposal on market Access
   - Tariff Levels
     - To determine appropriate tariff levels in a way that gives flexibility in individual products, taking into account and such factors as respective country's actual situation of production and consumption on each product as well as international supply and demand situation
   - Access Opportunities
     - To review the current system which lacks in balance between the importing and exporting countries in the terms of their rights and obligations
     - To set access opportunities with sufficient consideration given to factors such as securing multi-functionality of agriculture and food security, taking into account the current agricultural situation and progress of structural reform in each country
     - To review the level of access opportunities taking into account the latest quantity of consumption
     - To improve the current rule which requires Members to maintain the extra level of access opportunities of the products to which the special treatment (Annex5) had been applied, even after the said treatment ceased to apply during the implementation period
   - Safeguard
     - To introduce a new framework of safeguard mechanism for agricultural products, in view of their seasonal and perishable nature, so as to allow timely and effective actions

3. Proposal on Domestic Support
   - Rules and Disciplines on Domestic Support
     - To maintain the basic framework of present rules on domestic support (‘Green’, ‘Blue’ and ‘Amber’)
     - To improve the criteria of ‘Green Box’, in light of experiences to date from implementing the Uruguay Round agreements, in order to promote agricultural policy reform reflecting the real situation of agriculture
   - Levels of Domestic Support
     - To determine realistic Total AMS commitment levels in order not to undermine the multi-functionality of agriculture in each country

4. Proposal on Export Competition
   - Strengthening disciplines on export promoting measures; e.g. to further reduce export subsidies
   - Strengthening disciplines on export restrictive measures, including export prohibitions/restrictions and export tax; e.g. to replace them by export tax

5. Proposal on State Trading
   - Establishing appropriate disciplines on state trading to improve its transparency and predictability, in view of its impact on international market
   - Marking further disciplines on export state trading obligatory, including quarterly notifications of exports, prohibition of financial assistance from the government and contribution to the stabilisation of international market

6. Proposal on Consideration for Developing Countries
   - Securing the flexibility in rules and disciplines on border measures, domestic support, exports and state trading
   - Examining a possible framework of international food stockholding, which compliments bilateral and multilateral schemes for food assistance and can lend food in case of temporary shortage

7. Proposal on Concerns by Consumers and Civil Society
   - Stabilising domestic food supply
   - Examining trade rules with ensuring food safety to the public as the first priority
   - Providing information that enhances consumers' confidence in choosing food
   - Disclosure of information on WTO agricultural negotiations
Examples of Pilot Efforts by Local Governments

The Basic Law on Food, Agriculture and Rural Areas specifies that local governments are responsible for formulating and implementing polices that suit their regional characteristics. The following are some example of pilot activities by some local governments:

[Aomori Prefecture]

Has been making detailed efforts ranging from support of hands-on experience of farming by primary and secondary school children in the Prefecture to reduction of the load for acquisition of farming lands by new engaged in farming outside of Aomori Prefecture in order to foster farmers based on the “Aomori New Farming Promotion Act” that was established in December 1999.

Has been promoting an increase of consumption of locally produced agricultural products such as consumption of milk produced locally in school canteens, distribution of booklets promoting the effects of apples in health, and approval of “traditional dishes as traditional assets.”

Held a “Tohoku Premier Summit” together with Iwate Prefecture and Akita Prefecture and summarized “Tohoku North Food Base Declaration” in 2000.

[Mie Prefecture]

Has been implementing “Mie Prefecture Movement for Promotion of Local Consumption of Local Products” since July 2000 through cooperation between the administration and private bodies based on the fact that about 80% of residents in Mie Prefecture are consciously purchasing locally produced products.

Has been promoting consumption measures such as use of locally produced rice in school canteens and expansion of local rice production by contract culture in order to improve the health of local residents through “local consumption of local products” and to develop a food culture.

Making efforts in handling environmental issues that are attracting much attention from consumers by using locally produced rice with non-washing process in the canteen of the local government offices of the Prefecture.
[Nankoku City, Kouchi Prefecture]

All the primary schools in the City serve the rice that is produced locally in their lunch canteens, and school children can have rice that has just been cooked in their own schools.

Rice that is used in canteens is grown in terraced paddy fields in the area and producers can confidently continue farming by securing stable demand, thereby contributing to conservation of terraced paddy fields.

Holding a “Parent-children seminar” that provides parents and children with opportunities for a series of rice growing activities as a part of the exchange between producers and children. Opportunities for producers to provide lessons to children by visiting schools are also made available.

[Aya-cho, Miyazaki Prefecture]

Has been implementing sustainable agriculture in the entire town based on the “Bylaws Regarding Promotion of Natural Ecological Agriculture” that was established in 1988. The town also supports the core farmers in the specific management stability system that was established in 2000.

Has been adopting the method of generating compost by mixing garbage (700 tons per year) collected from general households and offices in the town and cow manure in a compost processing facility.

Implementing active communication with consumers through projects such as “Food Culture Forum” and “Harvesting Training”. The number of people who have moved into the town is increasing including new engaged in farming and the regional development with cooperation of new residents is also taken up as an issue.
Chapter II  Sustainable Development of Agriculture

Section 1  Securing and Fostering Core farmers and Agriculture Management

(1) Trends of Farmers and Agricultural Workforce

- The total number of farm household in 2000 is 3,120,000, which is a 9.4% decrease compared to that of 1995. Of these farms, the number of commercial farm household is 2,340,000, which is a 11.9% decrease compared to that of 1995. Among the commercial farm households, the proportion of the farm household with farming as the main income (Business farm household) is decreasing and in 2000, Side-business form household account for more than half (52.9%) of the commercial farm household.

- The change of the farm management scales indicates that the number of large farms of 4.0ha or more is increasing while the number of farms less than that size is decreasing. However, recently the speed of expansion of the cultivated land under management scales is slowing down.

- The population mainly engaged in farming in 2000 is 3890,000, which is down to a level of about 70% of that of 1985. Of the population, the number of persons mainly engaged in farming with high degree of engagement in agricultural production (core male regular farm worker engaged in farming) is 2,400,000, which is down to a level of about 70% of that of 1985, in the same way as for the population mainly engaged in farming.

  Among the population mainly engaged in farming, the proportion of those 65 years of age or older has exceeded 50% in 2000 for the first time, indicating aging as well as reduction of the farming force. In particular, there is much retirement of those in the “Showa one-digit Generation” (applicable to the age groups of 60 to 64, and 55 to 59 in 1990) who have been the center of the farming force up to the present time.

- The number of new person mainly engaged in farming (12,000 in 1999) is increasing due to change of the view in occupation and improvement of farming support measures, however, the level is still inadequate. Therefore, more detail support measures are necessary such as support of farming corresponding to diversified farming routes and follow-up for management stabilization measures after farming.
The farming household refers to the household whose current farming area is 10 a or more (research date: February 1) or the household whose agricultural product sales amount is 150,000 yen or more during the year before the research date even if the farming area is less than 10 a. Since the farming area of 5 a or more was applied to West Japan till 1960, the value is not strictly accurate.

2. The commercial farm household refers to the household whose farming area is 30 a or more or the agricultural sales amount is 500,000 yen or more.

3. The non-commercial farming household refers to the household whose farming area is less than 30 a and the agricultural product sales amount is less than 500,000 yen.

4. The side business farming household refers to the household without farming workers of less than 65 years old who are engaged in farming for 60 days or more per year.
(2) Trends in Various Workforce

a. Training and securing efficient and stable agricultural management

Training and securing of Workforce are the important and urgent objectives in order to continuously maintain and increase agricultural production in Japan. It is important to establish an agricultural structure where “effective and stable agricultural management” bears a considerable part of agricultural production through fostering workforce of various forms such as corporations and production organizations.

To achieve this objective, it is necessary to promote improvement of the agricultural production base and policies for expansion of agricultural management scale for realization of the outlook of the agricultural production structure to be targeted, which was indicated together with the Food, Agriculture, and Rural Area Basic Plan.
Figure - 25  Outlook of Agricultural Structure (2010)

1999
Total number of farming households  3.24 million
Business farm households (Including full time farm households under 65 years old)
- 480,000 households
  - Single farming: 300,000 households
  - Mixed farming: 190,000 households
Other farming households
- 2.76 million households
  - Commercial farming households: 2 million households
  - Non-commercial farming households: 760,000 households
(Non-farming households with land)
- 1.05 million households

2010
Total number of households 2.3 million to 2.7 million households
Effective and stable agricultural management [Family agricultural management]
- 330,000 to 370,000 households
  - Single farming: 180,000 households
  - Mixed farming: 150,000 to 190,000 households
[Corporation/production organization]
- 30,000 to 40,000 corporations/organizations
Other farming households
- 1.9 million to 2.3 million households
  - Commercial farming: 1.4 million to 1.5 million households
  - Non-commercial farming: 500,000 to 800,000 households
(Non-farming households with land)
- 1.4 million to 1.7 million households
Concentrating on engagement of other industry by subcontracting efficient and stable agricultural management to the originators of the farmland
(Non-farming households with land)
- 1.4 million to 1.7 million households

b. Various workforce who support regional agriculture

For development of efficient and stable agricultural management, efficient agricultural production in the entire region is essential.

Approved farm units
The number of farm units approved under the Agricultural Management Farmwork Reinforcement Law reached 1,509,000 as of December 2000. The details of the management improvements made by approved farm units cover a wide range including expansion of operation size, diversification of management, and rationalization of production methods and management, and subjective efforts have been made according to the agricultural management improvement plans that were prepared by themselves.

It is necessary to emphasize and focus on implementation of measures for smooth management improvements through subjective efforts such as achievement of target income.

Approved farm units refer to farm managers whose agricultural management improvement plans were approved by the local government. Low interest finance and work of land base adjustment improvement project are made selectively available to approved farmers.

Corporate management
Efficient and stable management must be achieved by fully utilizing the advantages of a corporate system. Practically, it is necessary to enhance the credibility and sales by further improving the capital, technical, and administrative know-how, diversifying management, and handling large-scale investments.

Agricultural service establishments
The importance of the agricultural service establishment is increasing such as supporting individual management and playing a role of providing services of excellent technical levels. For the unit to demonstrate the functions as the workforce of regional agriculture, it is important to build smooth complementary relationships with other workforce.

The agricultural service establishment refers to the unit that carries out farming on a subcontract basis.
Table - 8 Future Management Strategies of Agricultural Corporation by Industry Type (Multiple Answers)

<table>
<thead>
<tr>
<th>Industry Type</th>
<th>Expansion of scale by purchasing or leasing farmland</th>
<th>Reduction of production cost while maintaining the current management scale</th>
<th>Mixed management by introduction of wheat and soybeans</th>
<th>Sales expansion of processed food and management diversification</th>
<th>Production of organic/low chemical agricultural products such as organic rice</th>
<th>Interchange with consumers and expansion of direct distribution</th>
<th>Enhancement of risk management corresponding to market principle</th>
<th>Cooperation between administrators in terms of production and sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rice cropping</td>
<td>51.1</td>
<td>27.8</td>
<td>24.4</td>
<td>35.6</td>
<td>43.3</td>
<td>43.3</td>
<td>11.1</td>
<td>18.9</td>
</tr>
<tr>
<td>Livestock (including dairy farming)</td>
<td>29.2</td>
<td>43.3</td>
<td>3.9</td>
<td>29.2</td>
<td>10.1</td>
<td>33.1</td>
<td>18.5</td>
<td>19.7</td>
</tr>
<tr>
<td>Vegetables</td>
<td>50.8</td>
<td>20.0</td>
<td>4.6</td>
<td>38.5</td>
<td>21.5</td>
<td>41.5</td>
<td>15.4</td>
<td>20.0</td>
</tr>
<tr>
<td>Fruits</td>
<td>26.5</td>
<td>41.2</td>
<td>5.9</td>
<td>44.1</td>
<td>17.6</td>
<td>47.1</td>
<td>14.7</td>
<td>5.9</td>
</tr>
<tr>
<td>Ornamental plants</td>
<td>24.2</td>
<td>62.9</td>
<td>-</td>
<td>16.1</td>
<td>1.6</td>
<td>27.4</td>
<td>29.0</td>
<td>30.6</td>
</tr>
<tr>
<td>Processed agricultural products</td>
<td>28.6</td>
<td>17.9</td>
<td>10.7</td>
<td>53.6</td>
<td>10.7</td>
<td>71.4</td>
<td>7.1</td>
<td>39.3</td>
</tr>
</tbody>
</table>
**Community farming**

Enthusiastic support is necessary for the efforts for integrating agricultural land. It is also important to promote establishment of specific agricultural corporations that centrally manage agricultural land with a consent from the region.

Efforts in community management have spread nationwide where various farm households share agricultural land, machines, and facilities, and supplement production activities each other based on a community for improvement of efficiency of agricultural management and maintenance of agricultural land. (8,316 communities nationwide as of June 1999)

**Quasi-public entities (“Third sector”)**

Functions that foster operators as workforce of regional agriculture and business development that activates regional activities are expected. The operation may fall into deficit due to the characteristics where the government and local bodies jointly invest with the private sector. Therefore, it is important to take into account the conditions of the region in establishment and operation.

**Female farmers**

In 2000, female farmers account for 55% of the population mainly engaged in farming and, consequently, are important workforce of agricultural production in Japan. As a result of progress of involvement of females in the policy decision-making process in a rural society and individual agricultural management, about 60% states awareness of joint management regarding relationship with agricultural management. At the same time, housekeeping and child-mining require a significant demand so that the working environment needs to be improved.
Figure - 27  Conditions of Community Farming in Each Region (National average = 100)

- **Managing and operating collectively under one community with one farm method**
- **Sharing machineries with joint ownership among participating households**
- **Sharing machineries with joint ownership through operator organization**
- **Using land and farming in community units by integrating the farmland and workforce**
- **Joint work by providing labor from each household**
- **Adjusting land utilization within the community**
- **Arranging cultivation such as standardization of breed**
- **Managing irrigation and drainage canals in the community**

[Tohoku]

[Chugoku and Shikoku]

[Reference]

Research in 1995

Figure - 28  Engagement of Female Farmers in Farm Management

<table>
<thead>
<tr>
<th>Age Group</th>
<th>In charge of the entire farm management</th>
<th>In charge of a specific section of the management</th>
<th>Participates in the entire farm management together with her husband and his parents</th>
<th>Only engaged in the farming instructed</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>60 years old or more</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50 to 59 years old</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>40 to 49 years old</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30 to 39 years old</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than 30 years old</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
(3) Development of management stabilization measures that support agricultural management

- The agricultural gross revenue of business farm households has increased during the period from 1995 to 1999 through an increase of management scales. However, the agricultural income almost remains unchanged due to a drop of the income ratio. In the region where farm households depend for their income on rice, whose price fluctuates greatly, the agricultural income has dropped.

- Under the continuously stagnant farm economy, management stabilization measures for each item is recently progressing for alleviation of the influence from price drop and an increase of the fluctuation scale on management. However, with the decrease of agricultural workforce and the progress of aging, review of the management policies as a whole becomes necessary in terms of promotion of subjective management efforts of motivated farmers.

Regarding the Rice Framing Income Stabilization Program in 1999, the semi-controlled price of voluntarily marked rice dropped by 10% on average, however, the actual net amount received by farmers was almost the same as that in 1998 due to the supplementation fund provided as the measure. A fall of the rice price imposes a serious influence on large farm households that highly depend their income on rice cropping income. The rice cropping management stabilization measure brought a greater income supplementation effect to this level.
Table - 9  Trend of Commercial farm economy (per household (commercial farm household) nationwide)  
(Unit: 10,000 yen, %)

<table>
<thead>
<tr>
<th></th>
<th>Result in 1999</th>
<th>Year-by-year increase/reduction</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1998</td>
<td>1999</td>
</tr>
<tr>
<td>Average of commercial farm household</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Revenue from annuity, gift, etc.</td>
<td>219</td>
<td>3.1</td>
</tr>
<tr>
<td>Non-agricultural income</td>
<td>513</td>
<td>0.2</td>
</tr>
<tr>
<td>Agricultural income</td>
<td>114</td>
<td>▲ 3.8</td>
</tr>
<tr>
<td>Total agricultural income</td>
<td>846</td>
<td>0.2</td>
</tr>
<tr>
<td>Business farm household</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Revenue from annuity, gift, etc.</td>
<td>184</td>
<td>3.9</td>
</tr>
<tr>
<td>Non-agricultural income</td>
<td>98</td>
<td>1.5</td>
</tr>
<tr>
<td>Agricultural income</td>
<td>506</td>
<td>1.1</td>
</tr>
<tr>
<td>Total agricultural income</td>
<td>788</td>
<td>1.7</td>
</tr>
</tbody>
</table>

Figure - 29  Transition of Revenue in Rice Cropping by Paddy-Field Cropping Area an Influence of Supplementation Money through the Rice Farming Income Stabilization Program to the Income
Section 2  Securing and Making Effective Use of Agricultural Land

- The cultivated areas have shrunk by 20% from 6.09 million hectares in 1961 to 4.83 million hectares in 2000 and are still shrinking due to conversion to non-farming use and the abandonment of cultivated land. The cultivated land utilization ratio has been in continuous decline, however, in 1999, the ratio increased by 0.3 points reaching 94.4% due to an increase of the total cropping paddy field area.

- For securing and making effective use of appropriate agricultural land, it is important to secure planned land utilization, promote improvement of agricultural production infrastructure, promote integrated use of agricultural land for agricultural management to be fostered, and prevention of the abandonment of cultivation by correction of disadvantages of production conditions such as hilly and mountainous areas.

- The agricultural land right transfer area is increasing, mainly by leasing and the right transfer area combining lease and sale was 133,000 hectares in 2000. The transfer status of agricultural land by leasing between management scale levels in 1999 indicates progress of integration of use to large-scale levels. However, the development of integration to the large-scale levels is still insufficient. Deterioration of the motivation for the scale expansion due to a fall of demand and prices of agricultural products and an increase of imports is probable. It is important to increase the efforts such as promotion of each measure for integrated use of agricultural land and reduction of uncertainty of management with scale expansion motivation.

- Securing and making effective use of agricultural land with favorable agricultural management conditions and agricultural irrigation result in improvement of agricultural productivity and promotion of agricultural land to integrated use by large-scale management levels. Improvements and facility management have been implemented to achieve these objectives. In particular, the use of paddy fields for general purposes and field division enlargement enable full-scale production of upland cropping such as wheat, beans, and feed crops, contributing to establishment of stable paddy field agricultural management. Agricultural irrigation and water utilization facilities demonstrate multiple roles such as regional water supply functions as well as agricultural production.
Section 3  Promotion of Development and Dissemination of Information Utilization and Technology in the Agricultural Field

(1) Outlook and objectives of utilization of information communication technology in the agricultural field

By using information communication technology, various possibilities will be made available to producers in various aspects of production and sales.

Through the Internet, producers can quickly obtain useful information for production management and can receive diagnosis from specialists regarding disease/insect damage and growth by sending image information to specialists. Producers can also develop various sales routes by establishing personal homepages and participating in the electronic commercial transaction sites that are established by groups or companies.
Figure - 34  The Influences of the Use of Internet on Farming Activities and the Details of the Effects

- **Useful points of Internet in farming activities:**
  - Increase of interchange with consumers and regions and trust
  - Exchange of information with other farmers
  - Gaining higher understanding regarding agriculture and farmers
  - Expansion of sales channel
  - Increase of sales
  - Acquisition of technical information on cultivation
  - Acquisition of sales and market information

- **Sources of information:**
  - Very useful: 19%
  - Useful to some degree: 48%
  - Either: 17%
  - Not so useful: 14%
  - Not useful at all: 1%
  - No answer: 1%

**Figure - 35  Outlook of Utilization of Information Communication Technology in the Agricultural Field Based on Producers**

- **< Management>**
  - Production control
  - Work and labor control
  - Sales and customer management
  - Financial and fund management

- **< Personal computer>**
  - Management and sending/receiving various types of information

- **< Portable terminal>**
  - Sending/receiving various types of information and input of management data

- **< CATV, etc.>**
  - Sending/receiving various types of information

- **< Marketing>**
  - Checking consumer requirements
  - Implementation of processing and direct sales business
  - Expansion, linkage, and association of sales routes
  - Information distribution

- **Information and Communication Network**
  - Regional information centers
  - Various overseas organizations and establishments
  - Agricultural Cooperatives
  - Agricultural Test Centers, Research Institutions
  - Regional Agricultural Improvement Dissemination Centers
  - Prefectures and municipalities
  - Ministries and Agencies
  - Rural community markets
  - Market
  - Consumers
  - Agricultural Product Approval System Data Center
  - Farmers’ groups
  - Agribusiness related corporations
  - Supermarkets and food service industry
(2) Development and dissemination of technology contributing to development of agriculture in Japan

Based on the Food, Agriculture, and Rural Area Basic Plan, research and development of innovative technology are being implemented including research and development that support production sites such as promotion of development of agricultural management and agricultural production according to the demand, and rice genome analysis. In particular, in promotion of practical use of genetically modified agricultural products, it is important to evaluate and verify such products based on the latest scientific view and obtain better understanding from the nation.
Figure - 36 Transition Consumer Awareness for Genetically Modified Food

(1) Degree of recognition of genetically modified food

Outer circle: Research in 1999 (n= 484 persons)
Inner circle: Research in 1997 (n= 972 persons)

(2) Image of genetically modified food

Know the term and the meaning
Did not know
Know the term only

Know the term
38.0 %
41.7 %
48.0 %
57.9 %

Did not know
10.3 %

Know the term only
3.9 %

Bad image (impression)
59.5 %

Good image (impression)
52.1 %

Either
39.2 %

No answer
1999 1.0%
Don't know
1999 1.2%
1997 2.6%

Bad image (impression)
1999 1.0%

1997 1.2%
Section 4  Trends of Demand/Supply of Agricultural Products

(1) Recent Trend of Agricultural Products

The agricultural production (quantity) in 1999 showed an increase of 16% compared to that of the previous year due to the production increases of rice, fruits, and vegetables, although the production of livestock farming dropped. The agricultural producer prices dropped due to the influence of the increase of crop yields of vegetables and rice, resulting in a fall of 7.2% compared to that of the previous year although there was an increase in industrial crops.

(2) Development of Paddy Field-Land Extensive Farming

a. Trend in Rice Supply and Demand

Rice supply and demand has been easing dramatically. As a result, the domestic rice stock as at the end of October 2000 was 2.8 million tons, exceeding the upper limit of the reasonable stock level (2 million tons) and the prices of voluntarily marketed rice in 1999 and 2000 also remained low.

Under these circumstances, “Year 2000 Urgent Comprehensive Rice Measures” were established based on temporary special actions as the pillars, regarding early appropriation of the carried-forward stock level, expansion of production adjustment of rice in 2001, and rice cropping management stabilization measures, in terms of urgent stabilization of supply and demand of rice and rice cropping management.

An increase of consumption of rice, which is the staple food in Japan, is an important effort for improving and achieving a healthy diet, according to the “dietary guidelines” and improving the self-sufficiency of food. The decrease of family rice consumption shows a sign of reaching the bottom limit. To increase rice consumption further, it is necessary to promote efforts in providing information to children and young women who will be the major rice consumers of the next generation, increase of opportunities in school canteens to serve, rice that plays important roles such as inheritance of the traditional food culture (2.7 times/week as of May, 1999), and improvement of dietary education.
Table - 10  Trend of Agricultural Production Indexes (by Item)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total agriculture</td>
<td>100.0</td>
<td>98.0</td>
<td>98.4</td>
<td>92.5</td>
<td>94.0</td>
</tr>
<tr>
<td>Total cultivated breeds</td>
<td>100.0</td>
<td>97.8</td>
<td>98.4</td>
<td>90.9</td>
<td>93.1</td>
</tr>
<tr>
<td>Total livestock</td>
<td>100.0</td>
<td>99.0</td>
<td>98.8</td>
<td>97.8</td>
<td>96.9</td>
</tr>
</tbody>
</table>

Table - 11  Trend of Agricultural Producers' Prices

<table>
<thead>
<tr>
<th>Classification</th>
<th>Total agricultural products</th>
<th>Rice</th>
<th>Vegetables</th>
<th>Fruits</th>
<th>Agricultural craft products</th>
<th>Ornamental plants</th>
<th>Livestock</th>
<th>Raw milk</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Weight</td>
<td>10,000</td>
<td>2,970</td>
<td>2,400</td>
<td>1,044</td>
<td>539</td>
<td>598</td>
<td>2,056</td>
</tr>
<tr>
<td>Actual output</td>
<td>10-year average</td>
<td>100.1</td>
<td>92.1</td>
<td>116.7</td>
<td>89.5</td>
<td>86.7</td>
<td>104.2</td>
<td>86.7</td>
</tr>
<tr>
<td></td>
<td>11-year average</td>
<td>92.9</td>
<td>85.4</td>
<td>97.7</td>
<td>83.2</td>
<td>107.3</td>
<td>89.0</td>
<td>98.3</td>
</tr>
<tr>
<td></td>
<td>12-year average</td>
<td>87.5</td>
<td>78.8</td>
<td>85.9</td>
<td>81.5</td>
<td>101.3</td>
<td>88.4</td>
<td>99.3</td>
</tr>
</tbody>
</table>

Figure - 37  Trend of Rice Supply and Demand

< Trend of rice production>

Figure - 38  Trend of Rice Purchasing (Transition of Mean Values (Indexes) for Three Years)
b. **Expansion of production corresponding to the demand of wheat and soybeans**

To achieve an increase of production and improvement of food self-sufficiency by vitalizing land-utilization oriented agriculture based on paddy fields, it is necessary to establish paddy-field agricultural management of high profitability by properly combining rice, wheat, and soybeans. Important issues for realizing the objective are to enhance the market evaluation on locally produced wheat and soybeans by responding to the requirements of real demand and consumers and to increase the demand and consumption, leading to expansion of production resulting in improvement of productivity.

c. **Maintaining and increasing domestic production of vegetables and fruits**

- Recently, the amount of imported fresh vegetables has been increasing. To increase domestic production and compete with imported vegetables, it is necessary to tackle conservation of the load and reduction of the cost required for production and distribution, improvement of the year-round supply system by linking between growing centers, and introduction of contract transactions with the food industry.

- Since the production quantities of Unshu mandarins and apples particularly fluctuate largely among fruits, management stabilization measures are to be implemented from 2001 based on the enhancement of demand and supply adjustment measures.
d. Development of livestock farming through enhancement of the feed infrastructure

Recently, the demand and supply of livestock farming products have maintained a stable condition. Under this circumstance, a livestock infectious disease, “foot-and-mouth disease”, which was assumed to be sourced from imported feed, was detected in Japan in 2000. While import of rice straws is increasing, it is important to promote self-sufficient food production such as use of domestically produced rice straws (about 10% of the entire consumption in 1999) to enhance food self-sufficiency. To achieve affluent livestock farming management by reducing labor load of feed production, subcontracting of feed production to other organizations (contractors) is practiced increasingly, developing labor-conserving efficient feed production.

For the Bovine Spongiform Encephalopathy (BSE - Mad Cow disease) that is causing a problem in the EU countries, quarantine measures were enhanced and completed such as prohibition of import of beef from the problem regions.
Figure - 44 Transition of Import of Rice and Straws

- China
- North Korea
- South Korea
- Taiwan

Figure - 45 Utilization status of locally produced rice straw (1999)

- Feed 11.5%
- Material for mat 4.1%
- Processing 2.0%
- Compost 17.6%
- Plowing-in and others 64.8%
- Production 9,090 tons
Section 5  Preserving and Improving the Natural Cyclical Function of Agriculture

(1) Construction of a Recycling System of Waste Generated from Agricultural Production

About 20% of industrial waste was generated from the agricultural field and about a half of the agricultural waste is assumed to be livestock excreta, which amounts to about 9,000 tons annually. Livestock excreta is important as recyclable organic resources and improvement of the processing facilities is promoted nationwide for proper management. Power generation (biomass power generation) is also attempted using the methane gas generated during the fermentation process.

(2) Establishment and Dissemination of the Production Method Using the Natural Recycling Environment Functions

As of 2000, about 500,000 farm households are engaged in reduction of chemical fertilizers and agricultural chemicals and soil regeneration by using composts. Agricultural products that are produced by sustainable agriculture are effective in terms of price, while crop yields are unstable and more labor is required. Therefore, the Government is proceeding with support for promotion of environmentally balanced agricultural production through promotion of the Sustainable Agricultural Law that was enacted in 1999.
Figure - 46 Industrial Waste Generated by Industry (1997)

<table>
<thead>
<tr>
<th>Industry</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural industry</td>
<td>22.7%</td>
</tr>
<tr>
<td>Electric, gas, heat supply, and water supply</td>
<td>20.8%</td>
</tr>
<tr>
<td>Construction industry</td>
<td>18.6%</td>
</tr>
<tr>
<td>Pulp/paper/paper product manufacturing industry</td>
<td>6.5%</td>
</tr>
<tr>
<td>Iron and steel</td>
<td>5.7%</td>
</tr>
<tr>
<td>Chemical industry</td>
<td>5.2%</td>
</tr>
<tr>
<td>Ceramic/soil and rock manufacturing industry</td>
<td>2.6%</td>
</tr>
<tr>
<td>Food manufacturing industry</td>
<td>2.4%</td>
</tr>
<tr>
<td>Non-ferrous metal manufacturing industry</td>
<td>1.1%</td>
</tr>
<tr>
<td>Other industries</td>
<td>8.6%</td>
</tr>
<tr>
<td>Total</td>
<td>414,845,000 tons</td>
</tr>
</tbody>
</table>

<Casus: New efforts for proper management and utilization of livestock excrement>
- Promotion of distribution and utilization of manure by introducing a network at the Manure Center (Kumamoto Prefecture)
- Biomass generation using livestock excrement (Yagi-cho, Kyoto)

Figure - 47 Comparison of Management Revenue and Expenditure per 10a b
Environmental Friendly Farming and Conventional Cultivation
(Vegetables, conventional cultivation = 100)
Chapter III  Rural Area Promotion and Fulfillment of the Multi-Functionality of Agriculture

Section 1  Current Situation in Rural Areas

(1) Current Situation and Issues of the Rural Society

- The population of rural areas has been on a continual decline. In particular, in hilly and mountainous areas covering the range from the outskirts of plains to mountain areas, they have been experiencing a problem of depopulation due to the natural decline where the number of deaths exceeds the number of births as well as the social decline by population outflow. Rural areas are also experiencing progressive aging and family downsizing.

- In rural communities farming households bonding among regional residents based on agriculture, non-farming households are increasing (living side by side) and, in particular, the rural communities are expanding (total number of households) in suburban areas as a result of inflow of non-farming households.

- Under these circumstances, new handlings are necessary for appropriate maintenance management of agricultural facilities such as farm roads and agricultural irrigation canals.
Figure - 48 Transition of Population Increase/Decrease Rate in Municipals by Agricultural Regional Type


Figure - 49 Transition of Proportions of Aged People (65 years old and older) and Young People (14 years old and younger) to the Total Population and Farming Population

Figure - 50 Transition of the Number of Rural Communities by Farming Household Ratio
(2) Attractions of Rural Areas

- Rural areas, which are blessed with beautiful sceneries and rich nature and are the destinations of traditional cultures stemmed from agriculture, have many attractions based on these. Recently, many people expect “comfort” and “peace” in rural areas, while the intentions of many urban dwellers are focused on “spiritual richness.”

- In rural areas, farming is exercised and agricultural products such as foods are produced, while multi-functionality of Agriculture, which is described later, is demonstrated, as supporting the everyday life of the people.

Cities support rural areas by consuming agricultural products and providing work opportunities and provide rural residents with convenience of urban facilities. Thus, rural areas and cities are mutually dependent.

In addition, rural areas have inherited tangible and non-tangible cultural assets including traditional entertainments originated from highly individual food culture and agricultural production activities and agricultural water facilities, and these assets are the supports of development of the regions that the residents can be proud of and for which they are affectionate.
Figure - 51 Attractions of Rural Areas for Urban Residents, Which Cannot Be Gained (Experienced) in Urban Areas (Multiple Answers)

Rich nature and beautiful landscape surrounded by greenery and water
Healthy living environment such as clean air and water
“Comfortable” and “peaceful” life surrounded by nature
Contact with animals, plants, and soil in nature
Comfortable housing environment such as large premises (house)
Fresh and safe agricultural products and their special products
Comfortable education environment close to nature
Mutually supportive community spirit (neighboring support)
Traditional culture and entertainment inherited from the region
Free and creative job opportunities working with nature (agricultural and forestry industry, etc.)
Others
Section 2  Multi-functionality of Agriculture and Hilly and Mountainous Areas

(1) Demonstration of multi-functionality of agriculture

- Multi-functional roles demonstrated through agricultural production activities in rural areas include roles to preserve national land and the natural environment, foster water resources, create scenic landscapes, and pass on cultural values. Multi-functionality of agriculture, thus, plays an importable role for stability of the public life and national economy.

- At present, there is no technique that adequately evaluates multi-functionality of agriculture quantitatively and further efforts are necessary to obtain further public understanding. Consequently, the Ministry of Agriculture, Forestry, and Fisheries consulted the Japan Academic Conference regarding evaluation of multi-functionality of agriculture and forestry in December 2000.

- The result of the public opinion survey that was implemented indicates that more than 60% of the nation recognizes multi-functionality of agriculture. More than 90% of the nation thinks that multi-functionality of agriculture must be maintained in the future and most of them support some sort of measures in this regard.
Figure - 52  Awareness of the Nation Regarding Multi-functionality of Agriculture

( Roles of agriculture other than production and supply of food)

- Playing the roles
- More or less playing the roles
- Hardly playing the roles
- Not playing the roles

<table>
<thead>
<tr>
<th></th>
<th>Nationwide</th>
<th>Urban</th>
<th>Rural areas</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>38.0%</td>
<td>20.3%</td>
<td>21.3%</td>
</tr>
</tbody>
</table>

(F Methods for maintaining agriculture with multi-functionality)

- Foster excellent farmers who can compete with imported agricultural products in terms of price and quality
- Provide subsidies to domestically produced agricultural products to be able to compete with cheap agricultural products imported from overseas
-实施措施由适当结合关税、补贴及培养优秀农民
- No need to maintain if it requires some burden or protection
- Do not know very much or others

- 38.0%
- 21.3%
- 20.3%
- 9.8%
- 8.6%
- 2.1%
(2) Agricultural Production Conditions in Hilly and Mountainous Areas and Implementation of Direct Payment in Such Areas

- Agricultural production conditions in hilly and mountainous areas are not so attractive as those in plains such as many hilly lands and less cultivatable lands. However, since the hilly and mountainous areas account for about 40% of agricultural production of Japan and these areas are located in upper streams of rivers, agriculture in hilly and mountainous areas plays a role of so-called breakwaters that protect the living infrastructures of residents in downstream areas by demonstrating multi-functionality.

- The “System of Direct Payment in Hilly and Mountainous Areas” that supplements disadvantages in agricultural production conditions in hilly and mountainous areas has been implemented since 2000 in order to prevent the abandonment of cultivation in hilly and mountainous areas and secure multi-functionality. In the actual implementation in the first year, there were large differences in the implementation manners according to the region and further vitalization of regional activities are expected triggered by further enhancement of implementation by the local governments and this system.
### Table - 12  Major Indexes of Hilly and Mountainous Area

<table>
<thead>
<tr>
<th>Item</th>
<th>Nationwide</th>
<th>Hilly and mountainous area</th>
<th>Hilly agricultural area</th>
<th>Mountainous agricultural area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total area (1999)</td>
<td>37,179 (100.0)</td>
<td>25,277 (68.0)</td>
<td>11,904 (32.0)</td>
<td>13,373 (36.0)</td>
</tr>
<tr>
<td>Cultivated area (1999)</td>
<td>4,866 (100.0)</td>
<td>2,013 (41.4)</td>
<td>1,500 (30.8)</td>
<td>1,513 (30.8)</td>
</tr>
<tr>
<td>Total number of farming households (2000)</td>
<td>3,120 (100.0)</td>
<td>1,318 (42.2)</td>
<td>915 (29.3)</td>
<td>403 (12.9)</td>
</tr>
<tr>
<td>Farming household population (2000)</td>
<td>13,458 (100.0)</td>
<td>5,355 (39.8)</td>
<td>3,775 (28.1)</td>
<td>1,580 (11.7)</td>
</tr>
<tr>
<td>Farming engagement population (2000)</td>
<td>3,891 (100.0)</td>
<td>1,493 (38.4)</td>
<td>1,094 (28.1)</td>
<td>399 (10.2)</td>
</tr>
<tr>
<td>Agricultural gross production amount (1999)</td>
<td>94,718 (100.0)</td>
<td>34,661 (36.6)</td>
<td>27,026 (28.5)</td>
<td>7,635 (8.1)</td>
</tr>
</tbody>
</table>

* Numbers in ( ) in the lower row indicate ratio (%).

### Table - 13  Outline of "Direct Payment System for Hilly and Mountainous Regions"

1. **Target agricultural land and target persons**
   Farmers who are engaged in agricultural production activities for five yours or more continuously according to the community agreement, etc; The activities are implemented in a "unit of land for agricultural use" of 1 ha or more with disadvantageous agricultural production conditions such as hilly land among the districts for agricultural use for agricultural promotion including the area specified by the Regional Promotion Law 8 of Specific Agricultural and Mountain Community Law

2. **Unit price (per 10a)**

<table>
<thead>
<tr>
<th>Slope</th>
<th>Paddy field</th>
<th>Upland field</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steep slope</td>
<td>21,000 yen</td>
<td>11,500 yen</td>
</tr>
<tr>
<td>Mild slope</td>
<td>8,000 yen</td>
<td>3,500 yen</td>
</tr>
</tbody>
</table>

* Separate unit prices are set for grassland and grazing land.

3. **Roles of local public bodies**
   The national government and local public bodies jointly implement the system with close association.

4. **Implementation period**
   From 2000 to 2004 (5 years)
Section 3 Comprehensive Promotion of Rural Areas

(1) Appropriate Improvement in Accordance with Characteristics and Requirements of Rural Areas

Promotion of rural areas, where people live their daily life, is an important issue in addition to agricultural production. For resident-friendly rural areas, it is necessary to improve the living environment and production foundation. In this case, sufficient consideration is necessary to preserve the landscapes and natural environments.

To implement promotion of individual rural areas efficiently and effectively with these conditions in mind, it is important to set a promotion target that reflects the requirements of the region with active participation of regional residents.

(2) Efforts for Vitalization of Rural Areas

As interchange of people, materials, and information between urban areas and rural areas progresses with new opportunities of vitalization of rural areas, it becomes important to emphasize the relationship between the areas.

In addition, development of agribusiness including processing and distribution and interchange between urban areas and rural areas as well as agricultural production, which is the so-called industrialization of 6th industry, is becoming effective in creation of work opportunities in rural areas.

(3) Various Possibilities Brought to Rural Areas by Advanced Information Processing

Advanced information processing in rural areas improves conveniences, reduces the differences with urban areas in terms of medical care, welfare, and employment, and provides possibilities for achieving comfortable life in a rich natural environment.

Proper improvement of information communication foundations is necessary to prevent new differences from arising in terms of life and economy due to differences in information availability between regions.
Figure - 53 Status of Major Facilities Relating to Everyday Life (March, 1999)

(Basic life environment facilities)

<table>
<thead>
<tr>
<th>Facilities</th>
<th>Large urban area</th>
<th>Medium urban area</th>
<th>Municipalities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water supply propagation ratio</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sewer disposal facility propagation ratio</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(Welfare facilities)

<table>
<thead>
<tr>
<th>Facilities</th>
<th>Large urban area</th>
<th>Medium urban area</th>
<th>Municipalities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Road improvement ratio</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rail improvement ratio</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(Medical facilities)

<table>
<thead>
<tr>
<th>Facilities</th>
<th>Large urban area</th>
<th>Medium urban area</th>
<th>Municipalities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bed/1,000 residents</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(Cultural facilities)

<table>
<thead>
<tr>
<th>Facilities</th>
<th>Large urban area</th>
<th>Medium urban area</th>
<th>Municipalities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Book/resident</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure - 54 Occupations Desired by Residents Moved in From Urban Areas and Employment Measures that Are Required in Rural Areas in the Future

(Desired occupation of I-turn candidates who wish to live in a town or a village of a rural areas)

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Large urban area</th>
<th>Medium urban area</th>
<th>Municipalities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Forestry</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fishing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clerical</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Creative job</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-employment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Engineering</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(Measures required for employment creation in rural areas by municipalities)

<table>
<thead>
<tr>
<th>Measures</th>
<th>Mountainous agricultural region</th>
<th>Plain agricultural region</th>
</tr>
</thead>
<tbody>
<tr>
<td>Development of various agribusiness</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enhancement/high-value addition of agricultural production using IT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corporate service</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Development of new service industry</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Development of welfare business</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure - 55 Change of Rural Areas Expected by Actualization of Advanced Information Mechanism Introduced in Rural Areas (Residents of Urban and Rural Areas, Multiple Answers)

<table>
<thead>
<tr>
<th>Change of rural areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improvement of medical care and social welfare for the aged</td>
</tr>
<tr>
<td>Increase of settlers by interchange</td>
</tr>
<tr>
<td>Improvement of convenience such as shopping</td>
</tr>
<tr>
<td>Receiving public services at home</td>
</tr>
<tr>
<td>Securing employment opportunities</td>
</tr>
<tr>
<td>Improvement of agricultural productivity</td>
</tr>
<tr>
<td>Resident interchange by network</td>
</tr>
</tbody>
</table>

Urban residents

Rural residents

60
Section 4  Promotion of Interchanges Between Urban and Rural Areas

(1) Promotion of interchanges Between Urban and Rural Areas

With the progress of changes of awareness of the nation relating to agricultural experience and preferences towards rural areas, interchanges between urban and rural areas have become more active such as “green tourism”. To enthusiastically promote such interchanges and consequently vitalize rural areas, it is necessary to promote efforts keeping in mind the awareness and requirements of urban residents.

(2) Farming Experience and Education for Children Through Farming

Experience with nature for children is focused in terms of education as the effective way for psychological and personality development of children. (Table - ) Farming experience is an important effort in terms of promotion of understanding of farming by children in addition to precious farming experience and is implemented in many areas.

(3) Roles of Urban Farming

Farming in urban areas and their neighboring areas plays various roles including production and supply of fresh vegetables, formation of landscapes, and providing disaster-control place. (Table - ). Private farmland is also focused as a place that enables urban residents to experience farming and the number is increasing.
Figure - 56  Awareness of Urban Residents Regarding Agricultural Experience

Wish to experience farming on a paddy field or an upland field
Wish to visit rural communities more easily
Wish to help farmers more casually if possible
Wish to grow vegetables for private use in an allotment garden near the house
Wish to interchange with farmers more easily (*)
Wish to give farming experience to own children and grandchildren (*)
Wish to live in a rural community without being engaged in farming

Those marked with * are new items that were introduced in 1999.

1990
1999

Figure -57  Evaluation of Rural Areas by Urban Residents and Urban/rural Area Interchange

<Opinion of A>
Rural areas have many attractions that have been lost in urban areas such as life customs and cultures.

<Opinion of A>
If many urban people visit rural areas, interchange of people, materials (money), and information becomes active, thereby revitalizing rural areas.

<Opinion of B>
Rural areas with progressive depopulation and increased aging are boring places.

<Opinion of B>
Visitors from urban areas simply increase problems of natural environment and increase of rubbish and there are no advantages for rural areas.

Figure -58  Degree of Experience in Nature by Children

(Proportion of those answered, "hardly any experience")

Climbed a high hill without using a ropeway or a lift
Climbed a big tree
Experienced camping
Saw a sun rise or sun set
Saw or heard wild birds
Saw full of shining stars in the night sky

Female
Male

%