FY2014 Annual Report on Food, Agriculture and Rural Areas in Japan

Summary

Ministry of Agriculture, Forestry and Fisheries

Japan, 2015

The FY2014 Annual Report on food, agriculture and rural areas in Japan is based on Items 1 and 2 of Article 14 of the Food, Agriculture and Rural Areas Basic Act (Law No. 106 of 1999).

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○ Numbers in figures and tables are rounded in principle and may not add up to the total.

○ Maps in this report may not necessarily indicate Japan's territories comprehensively.

Acronyms and abbreviations

AJCEP	**ASEAN-Japan Comprehensive Economic Partnership Agreement**
CAA	**Consumer Affairs Agency**
EU	**European Union**
GCC	**Gulf Cooperation Council**
JAS	**Japan Agricultural Standards**
MAFF	**Ministry of Agriculture, Forestry and Fisheries**
MHLW	**Ministry of Health, Labour and Welfare**
MIC	**Ministry of Internal Affairs and Communications**
MOF	**Ministry of Finance**
US	**The United States**

Symbols

ha	**Hectare**
a	**Are**
kg	**Kilogram**
t	**tons**

Foreword

The Annual Report on Food, Agriculture and Rural Areas in Japan (hereinafter referred to as “this report”) is a report on food, agriculture and rural area trends that is annually submitted to the Diet based on the Food, Agriculture and Rural Areas Basic Act.

This report describes the trends of food, agriculture and rural areas in four chapters -- (1) efforts for securing stable food supply, (2) efforts for creating strong, aggressive agriculture, (3) utilizing local resources to promote rural areas, and (4) restoration/reconstruction from the Great East Japan Earthquake -- and provides feature stories on current agricultural policy topics.

Japan is now plagued with a decline in population. Particularly, the population decline and aging in rural areas are serious. On the other hand, Japan's agriculture and rural areas have the potential to contribute to growth. Under this situation, rural areas are trying to utilize abundant local resources for their invigoration and a movement for coming back to rural areas is steadily emerging.

In March 2015, the Cabinet decided the new Basic Plan for Food, Agriculture and Rural Areas based on the Food, Agriculture and Rural Areas Basic Act. The new plan indicates the direction of measures representing a medium to long-term vision of agriculture policy, food self-sufficiency ratio targets and food self-sufficiency potential indicator, agriculture structure outlook and pictures of specific agriculture development.

Given the above, this report takes up two special topics -- "invigorating rural areas in population-declining society" and "new Basic Plan for Food, Agriculture and Rural Areas."

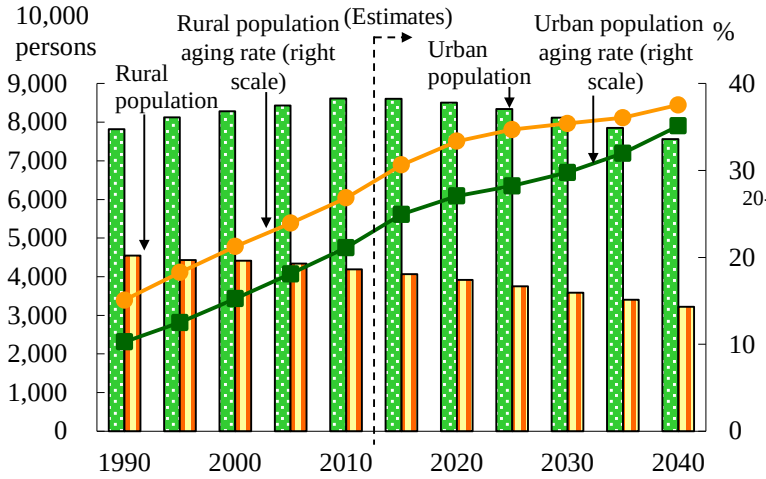
While this report covers a wide range of topics, we have tried to introduce not only statistical data analyses and comments but also specific efforts taken throughout Japan for developing agriculture into a growth industry as much as possible in a bid to make this report easy to understand.

We hope that this report will help citizens deepen their interest in and understanding of Japan’s food, agriculture and rural areas.

(1) Population decline in rural areas and movement for coming back to rural areas

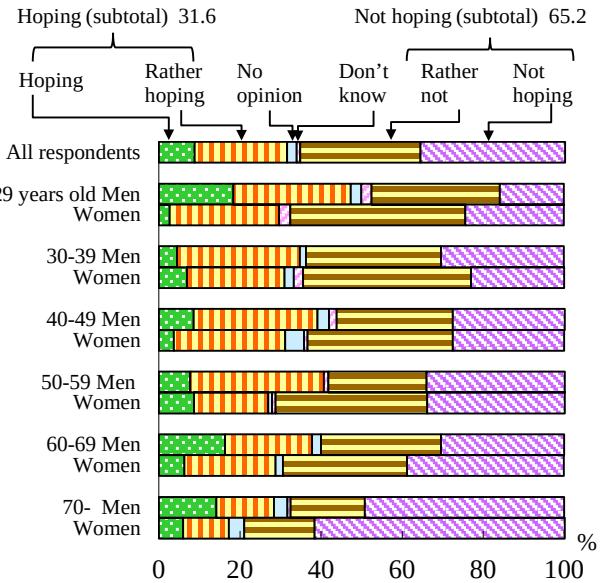
- As population is aging and declining with the elderly population beginning to fall after shouldering local activities in rural areas, Japan must draw pictures of rural areas' futures meeting their characteristics and promote initiatives to maintain and invigorate communities and realign livelihood facilities in these areas.
- As mainly young residents in urban areas are increasing their interest in rural areas and pursuing affluent environments and new lifestyles in a movement of "coming back to rural areas," with older people pursuing settlement in rural areas after their compulsory retirement, initiatives to maintain and invigorate communities are growing in rural areas.

Population and aging trend and outlook in rural and urban areas



Sources: Estimated by MAFF based on MIC, "Population Census;" National Institute of Population and Social Security Research, "Estimates of Japan's Future Population by Region (estimated in March 2013)"
Note: Urban areas are densely inhabited districts as specified in the "Population Census" and rural areas are other districts.

Are urban residents hoping to settle in rural areas?



Source: Cabinet Office, "Poll on Rural Areas" (released in August 2014)

(2) Taking advantage of local resources to invigorate rural communities and enhance local unity

- For the purpose of their invigoration and sustainable development, rural areas must effectively utilize abundant local resources to fully demonstrate local potential, nurture industries, secure employment, expand income and maintain and enhance community functions.
- In rural areas, there are many activities to make rural areas more attractive, such as utilizing local resources by using the capabilities of women and outsiders, social business to solve local challenges, private sector groups' support for local livelihood and other initiatives.

An initiative to utilize local resources to invigorate rural areas

Mr. Risho Azechi, president of Shimanto Drama, a company based in Shimanto town, Kochi Prefecture, has developed a social business based on the roadside station Shimanto Towa to cycle the environment, industries and networks by conserving and utilizing Shimanto River as a local resource to help increase visitors through sales of goods produced from the river.

In cooperation with local designers, his company has developed local tea and chestnut products, bags made of old newspaper and other unique goods and communicated these goods with local attractions to consumers throughout Japan. Attracted by the company's operations and the rich local natural environment, young people have increasingly migrated into the town.

The company has promoted initiatives to enhance primary industry production arrangements and local cooperation to create stable jobs and secure local industry supporters.

Mr. Risho Azechi

An initiative to use agricultural production and elderly support services to maintain and invigorate a rural community

Sadacho in Izumo city, Shimane Prefecture, is a mountainous rice-farming town. Local business farmers' aging and their growing orders for farming operations led the town to launch the limited liability company Green Work in 2003.

The company directly runs rice paddies totaling 20 hectares, undertakes harvesting and other farming operations under contracts and grazes sheep to help remove causeway slope grass. It also provides outing support services for vehicle-less elderly people, transporting them between their homes, and hospitals and retail shops. The company also delivers meal boxes to elderly people certified for nursing care twice a day throughout the year. These services are indispensable for local elderly people. The company has taken advantage of the business diversification efforts to employ six workers on a full-time basis.

Green Work plans to maintain locally required services under the motto of "For and along with the local community."

Outing support services for elderly people

(3) Promoting migration and settlement in rural areas and nurturing new farmers

- At a time rural business farmers are aging while lacking their successors, initiatives have been implemented for rural areas to accept ambitious young people from throughout Japan for their training as new farmers and promote their migration and settlement to prevent agriculture and relevant local industries from declining. Efforts have also been made for rural areas to revitalize local communities by accepting urban residents willing to live in countryside.
- The government has been united to promote measures for overcoming population decline and vitalizing local economy (in Japan) and work out a vision for building attractive rural communities in line with the new Basic Plan for Food, Agriculture and Rural Areas.

An initiative to invigorate local communities by promoting settlement and food

With a sense of crisis about depopulation, Onan town in Shimane Prefecture has implemented unique childcare support services under the slogan of "Japan's No. 1 child-rearing village" and promoted "thorough care for settlers" and the "Class A gourmet initiative," accepting 150 settlers and achieving a natural population increase of 20 persons in FY2013.

Number of town-supported settlers

(Units: inquiries, households, persons)

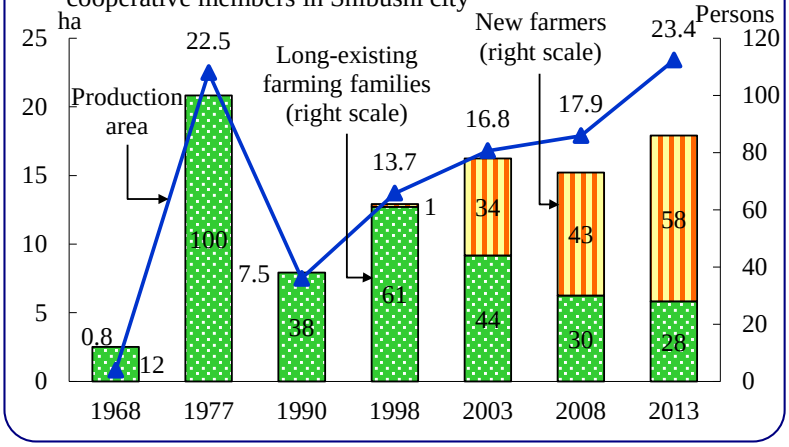
	Number of inquiries	Settling households	Settlers
September 2010-March 2011	72	13	22
FY2011	153	24	30
FY2012	160	24	42
FY2013	138	35	56
Total	523	96	150

Source: Prepared by MAFF based on data from Onan town

An initiative to recover production area through support for new farmers

Kagoshima Prefecture's Shibushi city, designated for green pepper production, has promoted support for new farmers in view of a production area decline due to farmers' aging and recovered a production area. New farmers account for 70% of agricultural cooperative members, indicating the city's successful rejuvenation of business farmers.

Green pepper production area and number of agricultural cooperative members in Shibushi city



Special Topic 2 New Basic Plan for Food, Agriculture and Rural Areas

(1) New Basic Plan for Food, Agriculture and Rural Areas

- The government considered food self-sufficiency ratio targets and prospects, and necessary measures for a medium to long-term agriculture policy vision and developed the new Basic Plan for Food, Agriculture and Rural Areas in March 2015 based on the Food, Agriculture and Rural Areas Basic Act.

New Basic Plan for Food, Agriculture and Rural Areas

Basic viewpoints for promoting measures

- "Industrial policy" for developing agriculture and food industries into a growth sector and "regional policy" for promoting the maintenance and implementation of agriculture's multifunctional roles will be employed to steadily step up the reform of measures for food, agriculture and rural areas.

- Securing of the stability of measures to realize the basic principles of the Basic Act
- Deepening of national discussions on how to secure stable food supply
- Implementation of measures from the viewpoints of demand and consumers
- Development of an environment where farmers can perform well
- Implementation of measures to realize sustainable agriculture and rural areas
- Promotion of technological innovation to explore new possibilities
- Improvement of farmers' income and creation of festivity in rural areas

Evaluation and challenges

Prospects of medium- to long-term changes in circumstances

Circumstances surrounding food, agriculture and rural areas

- Progress in population aging and decline
- Changes in the environment surrounding the world's food supply and demand balance, progress in globalization
- Changes in the social structure, etc. and diversification of consumer needs
- Changes in the structures of agriculture and rural areas including farmland consolidation
- Diverse possibilities (new markets in Japan and other countries, robot technology, etc.)
- Restoration/reconstruction from the Great East Japan Earthquake

Past Basic Plans for Food, Agriculture and Rural Areas

Formulated under the Food, Agriculture and Rural Areas Basic Act (enacted in July 1999).
A medium- to long-term agriculture policy vision indicating the direction of measures over the next decade

- Basic plan developed in March 2000
- Basic plan developed in March 2005
- Basic plan developed in March 2010

Revised about every five years

Food self-sufficiency ratio targets

- Setting of food self-sufficiency ratio targets with consideration given to their feasibility
  [Calorie supply basis] 39% (2013) → 45% (2025)
  [Production value basis] 65% (2013) → 73% (2025)

Food self-sufficiency ratio targets

- Prospects of food consumption
- Production effort targets
- Total food self-sufficiency ratio (on calorie supply and production value bases)
- Feed self-sufficiency ratio

- Release of "food self-sufficiency potential indicator" for the first time

Food self-sufficiency potential (potential food production capacity)

- Food self-sufficiency potential indicator
  By presenting "food self-sufficiency potential indicator" which evaluates potential food production capacity, the government intends to deepen national discussions on food security and promote initiatives for securing stable food supply.

[Documents drafted along with the Basic Plan]

- Farmland outlook and how to secure farmlands
- Basic plan for agriculture, forestry and fisheries research
- Agriculture structure outlook
- Toward development of attractive rural areas
- Farm management outlook

Measures to be taken

Securing stable food supply

- Promotion of initiatives to secure food safety and consumer confidence in food
- Promotion of food education, expansion of consumption of domestic agricultural products and the preservation /succession of WASHOKU (traditional dietary cultures of the Japanese)
- Promotion of AFFrinnovation (adding value to agriculture, forestry and fisheries products in an innovative way), export of agriculture, forestry and fisheries products and foods, and overseas expansion of the food industry to lead agriculture and food industries to soundly develop by making accurate responses to consumer needs and fulfilling new demand
- Establishment of comprehensive food security to address various risks involving a stable food supply

Promotion of rural areas

- Steady promotion of the multifunctional payment system and direct payment to farmers in the hilly and mountainous areas and enhancement of responses to damage due to wild animals
- Enhancement of "integration and networking" and other initiatives for Regional Empowerment for Japan's Growth in consideration of progress in population aging and decline
- Promotion of exchanges between urban and rural areas, migration/settlement of various human resources from urban areas to rural areas

Sustainable development of agriculture

- Development/securing of business farmers for realizing a strong and sustainable agriculture structure and steady promotion of the Farming Income Stabilization Measures
- Development of an environment wherein women farmers can fully exert their potential capacity
- Consolidation of farmland to business farmers and securing of farmland through full-capacity operation of the Public Corporations for Farmland Consolidation to Core Farmers through Renting and Subleasing (Farmland Banks)
- Development of an agricultural production base that contributes to acceleration of structural reform and building national resilience
- Steady promotion of rice policy reform, expansion of production of rice for feed and other strategic crops, and realization of technological innovation, etc. at agricultural production/distribution sites
- Promotion of responses to climate change, etc.

Restoration/reconstruction from the Great East Japan Earthquake

- Promotion of steady restoration of farmlands and agricultural facilities
- Promotion of initiatives to secure food safety and eliminate harmful rumors

Reorganization/restructuring of relevant bodies

- Implementation of reform of agricultural cooperatives and committees
- Studying of desirable agricultural mutual relief organizations and land improvement districts in considering desirable relevant systems

Development of "strong, aggressive agriculture" and "beautiful, vigorous rural areas"

(2) Food self-sufficiency ratio targets

- Since the preparation of the previous Basic Plan, the total food self-sufficiency ratio has remained around 40% on a calorie supply basis and around 70% on a production value basis.
- Food self-sufficiency ratio targets are set based on verification of the previous Basic Plan, with consideration given to their feasibility over a period for the plan.
- The total food self-sufficiency ratio targets for FY2025 have been set at 45% on a calorie supply basis and 73% on a production value basis.
- Given that the self-sufficiency ratio for livestock products is greatly influenced by the feed self-sufficiency ratio, the feed self-sufficiency ratio target is set at 40% in line with the total food self-sufficiency ratio targets.

Food self-sufficiency ratio targets

(Unit: %)

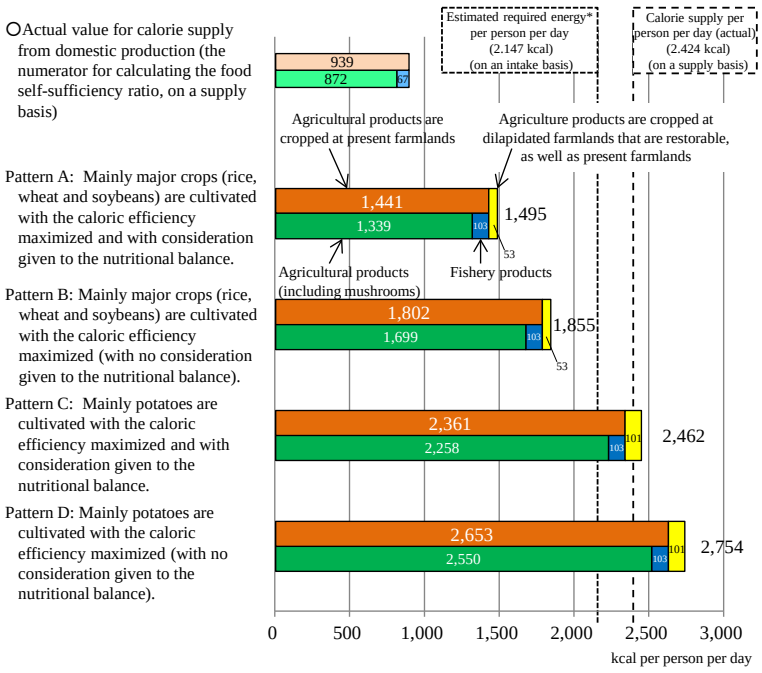
	Present (FY2013)	FY2025
Food self-sufficiency ratio on a calorie supply basis	39	45
Food self-sufficiency ratio on a production value basis	65	73
Feed self-sufficiency ratio	26	40

Source: MAFF

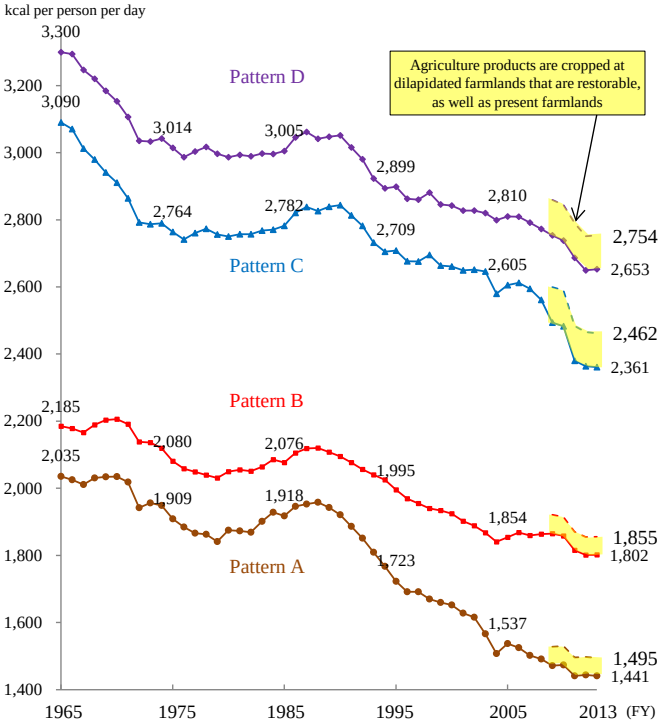
(3) Food self-sufficiency potential indicator

- At a time when there are factors that can destabilize international food supply and demand, many people are concerned about a decline in food supply capacity of domestic production.
- Since the food self-sufficiency ratio does not count the food production potential of farmlands in which flowers and other non-food crops are currently cultivated, it does not fully reflect the food production potential of Japan's agriculture, forestry and fisheries sector.
- Therefore, we have newly released "food self-sufficiency potential indicator" which evaluates Japan's food production potential. By sharing the trend of Japanese food self-sufficiency potential, we intend to deepen national discussions on food security.

Food self-sufficiency potential indicator in FY2013



Food self-sufficiency potential indicator trends



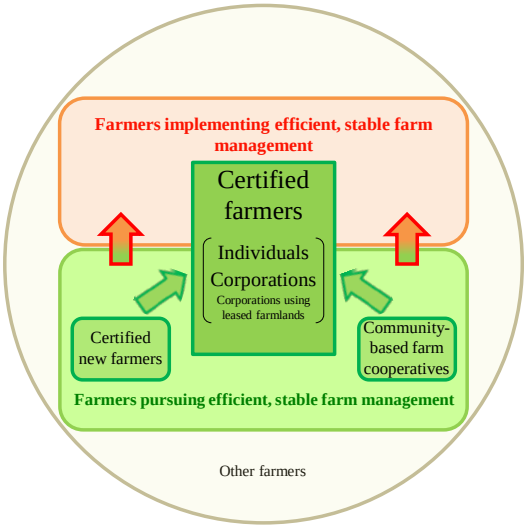
Source: MAFF

Note: *An estimate of energy appropriate for maintaining a temporary body weight (without an increase or decrease) in the case of a relatively short term.

(4) Farmland outlook and how to secure farmlands, agriculture structure outlook

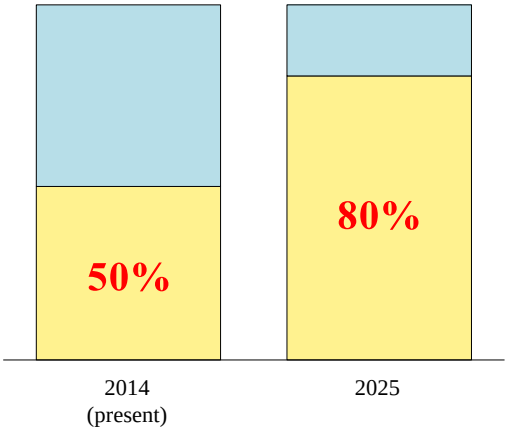
- The total farmland area in 2025 is projected at 4.4 million ha with consideration given to the past trend and effects of efforts to reduce farmland abandonment and restore abandoned farmlands.
- Under the agriculture structure outlook, farmers that implement efficient, stable management and those that pursue such management are combined into "business farmers." The latter group of business farmers is eligible for the Farming Income Stabilization Measures, lending and investment measures to help make their farm management efficient and stable.
- With business farmers' share of the total farmland area having risen from 30% to 50% over the past decade, we pursue an agriculture structure in which the share will rise to 80% over the next decade.

Image of business farmers



Source: MAFF

Desired Agricultural Structure (2025)
Business farmers' share of total farmland area



Source: MAFF

(5) Farm management outlook

- As well as macro paths for expanding agricultural income and relevant income in rural areas, we propose micro paths indicating that farmers would implement in line with regional conditions and crops.
- The micro business management paths indicate (1) farm management models providing pictures of efficient and stable management as well as management development and income expansion measures for major farm management types and regions, and (2) regional strategy examples by which regional agricultural and related income increases through agricultural development and AFFrinnovation (adding value to agriculture, forestry and fisheries products in an innovative way).

Farm management model types

Farm management type	Farming system (number of models)
Rice cultivation	Land-extensive crops (3)
	Land-extensive crops/vegetables (4)
Dry field farming	Hokkaido dry field crop rotation system (1)
	Sweet potato/composite vegetable cultivation (1)
	Sugar cane cultivation (1)
	Tea cultivation (2)
Vegetable farming	Outdoor vegetable farming (4)
	Indoor vegetable farming (2)
Fruit farming	Citrus fruits (1)
	Apple (1)
	Pear (1)
	Composite fruit production/grape (1)
Flower farming	Cut flowers (2)
	Potted plants (1)
Dairy farming (3)	
Beef cattle farming	Breeding (2)
	Integrated breeding and fattening
Hog farming (1)	
Organic farming (1)	

Source: MAFF

Regional strategy examples

Demonstrating/creating regional agriculture strengths
(1) Improving profitability through stockbreeding cluster
(2) Developing next-generation greenhouse horticulture areas
(3) Utilizing strengths of new varieties and technologies for cooperation with user industries
(4) Utilizing strengths of production areas for attracting food companies
(5) Launching businesses for AFFrinnovation (adding value to agriculture, forestry and fisheries products in an innovative way)
(6) Utilizing local agriculture, forestry and fisheries products for cooperation with food companies
(7) Providing vegetables for processing and other food industries
(8) Developing production areas for exports
(9) Exporting high-quality agricultural products under an intellectual property right strategy
(10) Developing medicinal plant production areas
(11) Developing organic farming areas
(12) Developing processing at community-based farm cooperatives
(13) Utilizing special local products for unique processed goods with higher value added
(14) Developing farm products utilizing regional characteristics
(15) Establishing local distribution systems including farm stands for local consumption of local produce
Utilizing buried rural resources
(16) Developing farm stands with farming experiences and rural restaurants
(17) Utilizing tourist farms and other facilities for exchanges between urban and rural residents
(18) Implementing farming experience farms and other projects meeting urban resident needs
(19) Utilizing exchanges for promoting regional agriculture
(20) Taking advantage of renewable energy for promoting agriculture

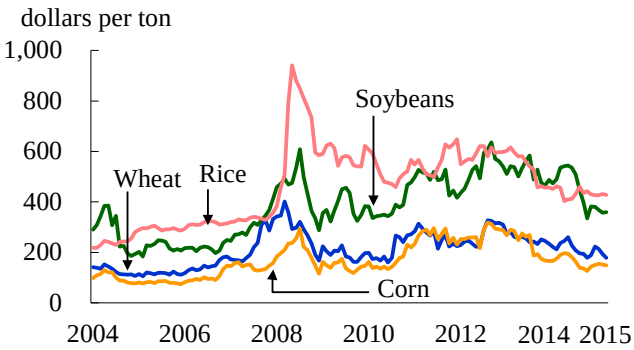
Source: MAFF

1 Global food supply and demand, and efforts for establishing food security

(1) Global food supply/demand trends

- International grain prices plunged from the peaks in 2008 and 2012. Major factors behind the plunge included abundant wheat stocks in the world, estimations of bountiful corn and soybean harvests in the U.S., and the aggressive export of the Thai government stocks of rice.
- Global food demand is expected to increase 1.6-fold from 4.47 billion t. in 2000 to 6.93 billion t. in 2050 mainly due to population and GDP growth.
- Global grain output has increased thanks to the yield improvement through technology innovations while the harvested area has leveled off. In the future, the yield growth is expected to slow down from a remarkable increase through the introduction of high-yield varieties under the green revolution in the 1960s. Over the medium to long term, the global food supply-demand balance is feared to tighten due to global population growth and economic growth in developing countries.

Changes in International prices of grains and soybeans

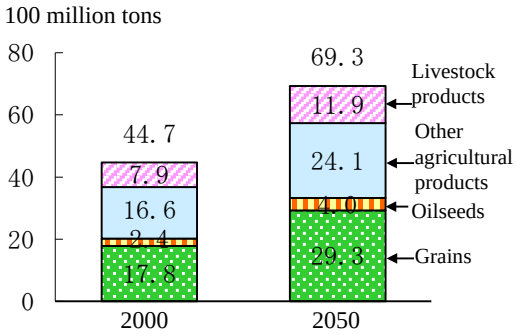


Source: Prepared by MAFF based on data from The Chicago Board of Trade, and the Rice Committee, Board of Trade of Thailand

Record high prices

- Wheat: 470.3 dollars per ton, February 27, 2008
- Corn: 327.2 dollars per ton, August 21, 2012
- Rice: 1,038 dollars per ton, May 21,2008
- Soybeans: 650.7 dollars per ton, September 4, 2012

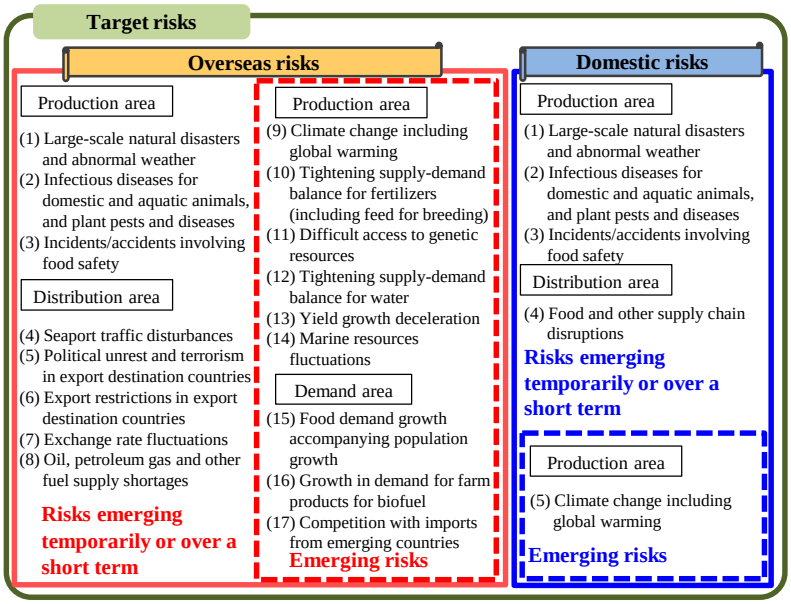
Global food demand outlook



Source: MAFF, "Japan Long-term World Food Supply and Demand Projection for 2050"

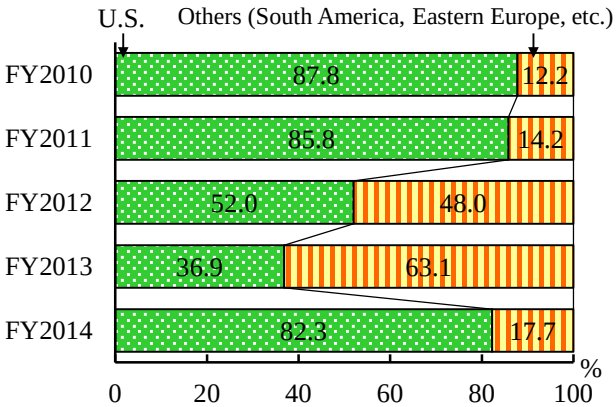
(2) Efforts for establishing comprehensive food security

- Given various risks expected to affect stable food supply, the government in preparation for unforeseeable events is selecting risks expected to affect supply of major agriculture, forestry and fisheries products and establishing a mechanism to regularly verify the impact and frequency of each risk and responses thereto. It is also sorting out specific procedures to address unforeseeable events.
- High temperatures and drought in the United States in FY 2012 led feed grain (corn and others) supply sources to be diversified in FY 2012 and 2013. In FY 2014, the U.S. supply share increased on record U.S. output.



Source: MAFF

Feed corn procurement breakdown trends



Source: Prepared by MAFF based on MOF, "Trade Statistics"
Note: FY 2014 data include preliminary data for March 2015.

(3) Trends in agriculture trade negotiations

- Japan has concluded or signed economic partnership agreements with 14 countries and one region (as of the end of March 2015). Japan's EPA negotiations are ongoing with Canada, Colombia, Turkey and the European Union, Japan-China-Republic of Korea, and RCEP (the Regional Comprehensive Economic Partnership). The Japan-Australia EPA has entered into force in January 2015 and the Japan-Mongolia EPA was signed in February 2015.
- Japan has participated in the TPP (Trans-Pacific Partnership) negotiations since July 2013.
- On the Doha Round negotiations under the World Trade Organization, Minsters concluded the Ninth WTO Ministerial Conference in December 2013 with agreement on a package of: some parts of Agriculture, Agreement on Trade Facilitation, and Development and LDC issues.

Status Quo of EPAs/FTAs

Partners for concluded/signed EPAs/FTAs (14 countries and one area)	Singapore, Mexico, Malaysia, Chile, Thailand, Indonesia, Brunei, ASEAN, Philippines, Switzerland, Vietnam, India, Peru, Australia, Mongolia

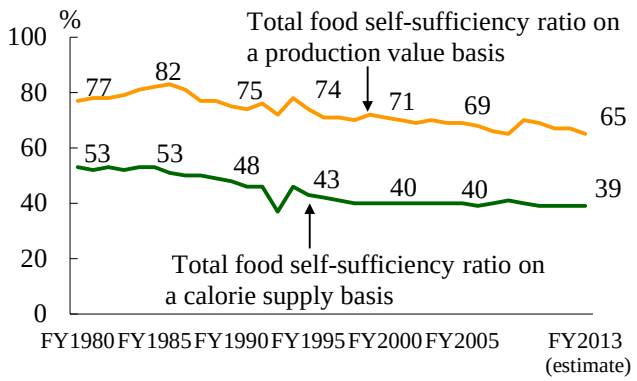
Partners, etc.		Negotiations	Partners, etc.		Negotiations
Under negotiations	Canada	- 7 rounds have been held since November 2012	Under negotiations	AJCEP	- A field of trade in goods was signed in April 2008 and has entered into force in December 2008. - Negotiations are ongoing in a field of trade in services and investment
	Colombia	- 10 rounds have been held since December 2012			
	Japan-China-South Korea FTA	- 6 rounds have been held since March 2013			
	EU	- 9 rounds have been held since April 2013	Negotiations postponed/suspended	GCC	- 2 rounds have been held since September 2006
	RCEP	- 7 rounds have been held since May 2013			
	Turkey	- 1 round has been held since December 2014		South Korea	- Negotiations have suspended since November 2004 - Working-level talks have continued since June 2008. The latest round held in May 2011.
	TPP	- Japan has participated in TPP negotiations since the 18th session in July 2013			

Source: MAFF (as of the end of March 2015)

2 Japan's food self-sufficiency ratio trends

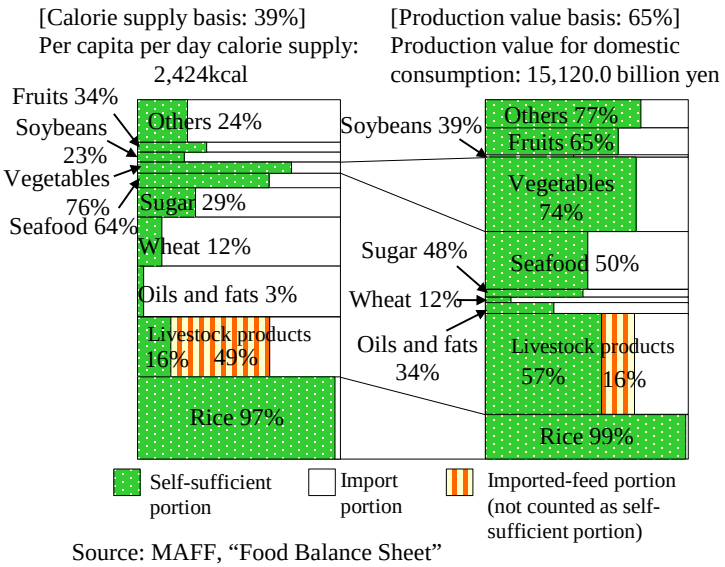
- The total food self-sufficiency ratio on a calorie supply basis has stayed around 40% since FY 1997. In FY 2013, demand for domestically produced table rice slightly increased due to a last-minute demand rise before a consumption tax hike in April 2014, while domestic wheat and soybean production declined. As a result, the total food self-sufficiency ratio remained unchanged from the previous year at 39%.
- The total food self-sufficiency ratio on a production value basis has remained between 65% and 75% since FY 1995. In FY 2013, the ratio dropped by 2 percentage points from the previous year to 65% as import prices rose for all products due to the yen's depreciation, with domestic fruit production declining.

Japan's total food self-sufficiency ratio trends



Source: MAFF, "Food Balance Sheet"

Total food self-sufficiency ratio on calorie supply and production value basis (FY 2013)



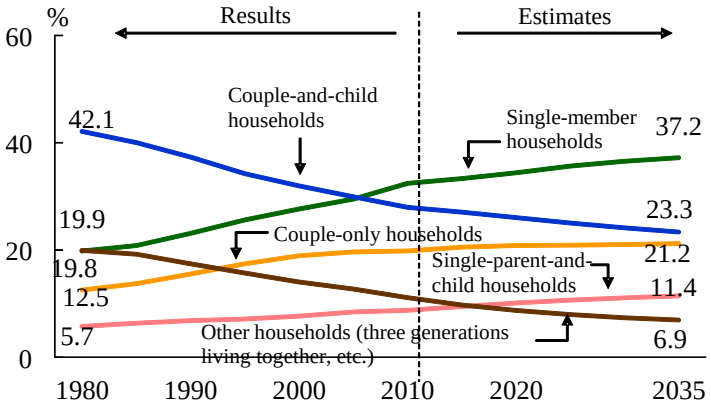
Source: MAFF, "Food Balance Sheet"

3 Food consumption trends and promotion of Shokuiku (food education)

(1) Food consumption trends

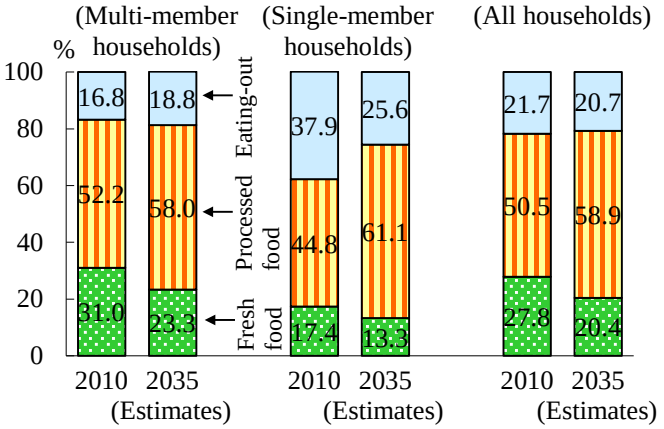
- ○ In the future, couple-and-child households' share of total households is expected to decline sharply, while single-member households' share is projected to greatly increase. Then, fresh foods' share of food consumption in all households may decline, with the share rising for processed foods. People may thus growingly depend on cooking and meals outside households. Externalization of our diet is projected to grow.
- ○ Among single-member households that are expected to increase in the future, particularly, eating-out and fresh food consumption may decrease, with processed food consumption expanding remarkably.

Breakdown of ordinary households by type



Sources: MIC, "Population Census;" the National Institute of Population and Social Security Research, "Household Projections for Japan (nationwide estimates) (January 2013)"

Food spending breakdown trends by household type



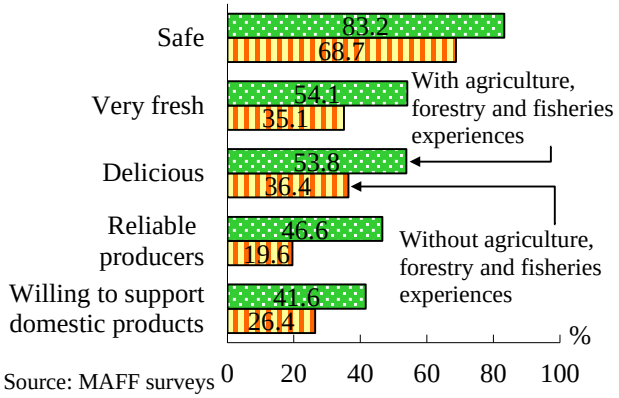
Source: MAFF Policy Research Institute, "Estimated future food consumption amid population decline"

Note: Eating-out combines ordinary eating-out and school lunches. Fresh foods cover rice, fresh seafood, fresh meat, milk, eggs, fresh vegetables and fresh fruits. Processed food covers the others.

(2) Promotion of Shokuiku (food education), conservation and succession of WASHOKU

- ○ In promoting the Japanese dietary pattern, MAFF publicizes scientific grounds, advantages of rice meals, effective uses of home-meal replacements and eating-out, and other details of Japanese dietary pattern, while addressing consumers' diverse characteristics and needs.
- ○ Given that agriculture, forestry and fisheries experiences contribute to promoting consumers' understanding about eating and the agriculture, forestry and fisheries sector, and that these experiences contribute to their confidential relationship with agriculture, forestry and fisheries producers, these experiences for a wide range of generations are promoted, along with the diffusion of the Japanese dietary pattern.
- ○ It is important to take advantage of the registration of "WASHOKU" (traditional dietary culture of the Japanese) as a UNESCO (United Nations Education, Scientific and Cultural Organization) Intangible Cultural Heritage for generating national momentum for transmitting "WASHOKU" to following generations and maintaining and increasing favor for "WASHOKU."

Comparison of rate of reasons for selecting domestically produced vegetables
(Presence or absence of agriculture, forestry and fisheries experiences) (Multiple answers)



Source: MAFF surveys

Notes: 1) Survey covering males and females aged 20 or more throughout Japan (released in March 2015)
2) Respondents with agriculture, forestry and fisheries experiences were covered by a questionnaire survey (666 respondents). Those without these experiences were covered by an Internet survey (1,983 respondents).

Washoku school lunch promotion project's initiatives

Twenty WASHOKU cooks have formed a Washoku school lunch promotion project to transmit WASHOKU to young people. The project has implemented initiatives for transmitting WASHOKU cultures in school lunches at 25 elementary and junior high schools in Japan, including their cooperation with nutrition teachers and other school nutrition officials to develop WASHOKU menus and communicate WASHOKU to young people.

At Tanesashi Elementary School in Aomori Prefecture's Hachinohe city, the project conducted a Shokuiku (food education) cooking class for its 30 pupils under the theme "How Wonderful WASHOKU Is" Cooks explained about cooking processes and techniques while practicing cooking in front of the pupils.

Cooks also cooked a menu they developed in cooperation with municipal officials in charge of school lunches and ate it along with pupils. These pupils observed the cooking practice with interest and ate the entire meal, deepening their understanding and awareness of foods.

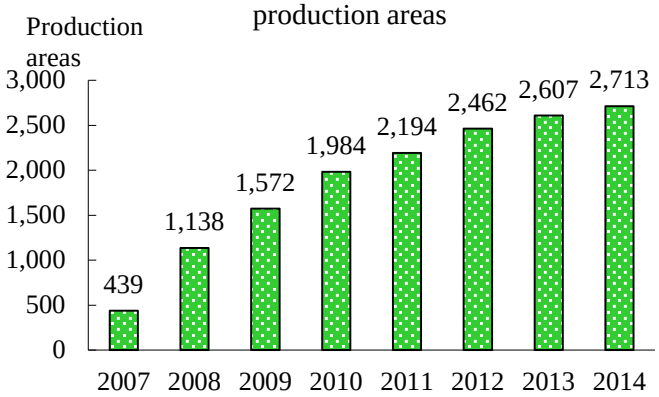
Shokuiku class

4 Ensuring food safety and consumer confidence

(1) Efforts for improving food safety

- ○ Risk management based on scientific evidence targeting throughout the food chain, from production to consumption, is essential to improve food safety.
- ○ The GAP (Good Agricultural Practices) scheme has been promoted in the production phase. The number of GAP-introducing production areas has steadily increased. In the manufacturing stage, the gradual introduction of the HACCP (Hazard Analysis and Critical Control Point) system is promoted.
- ○ With respect to Livestock products, the farm HACCP concept is promoted, which applies the HACCP system to Livestock farms to enable advanced sanitary control.
- ○ In December 2013, a highly concentrated agricultural chemical (Malathion) was mixed into a frozen food product during the manufacturing process at a plant in Japan. In a bid to promote business operators' food defense, MAFF in June 2014 released a report by a panel on how to prevent poisonous substances from being put into foods intentionally.

Trends of GAP-introducing agricultural production areas



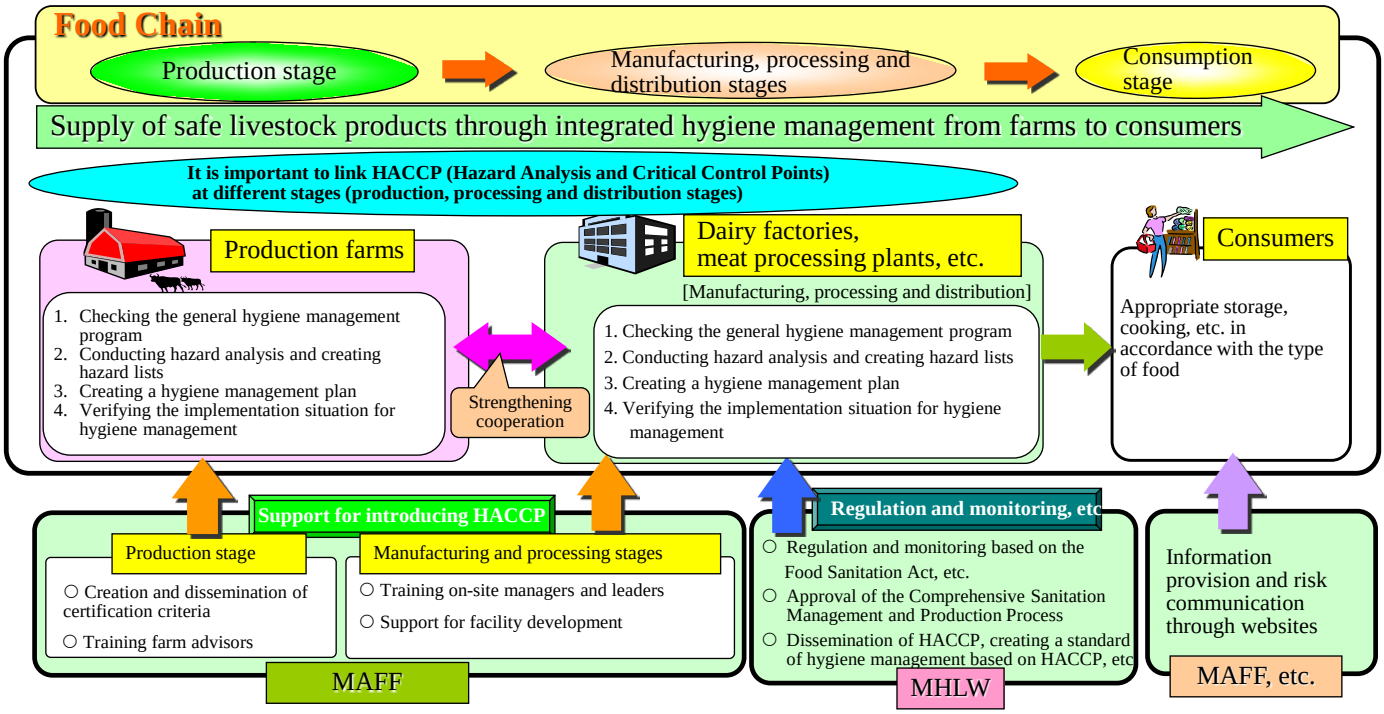
Source: MAFF surveys
Notes: 1) Numbers for 2007 and 2008 are those at the end of July. Numbers for the years from 2009 are those at the end of fiscal year (March).
2) The number for 2011 excludes areas in Fukushima Prefecture.

Overview of a report by a panel on how to prevent poisonous substances from being put into foods intentionally (released in June 2014)

Messages from the case where Malathion was intentionally mixed into foods
○ Documenting crisis response procedures including responses to complaints and recall of products, and implementing training ○ Rechecking responsibility arrangements for crisis management including business management and quality assurance ○ Understanding concepts of food defense
Useful information for food business operators' food defense
○ Improving awareness of food defense under the assumption that poisonous substances could be intentionally mixed into food products ○ Creating an environment where it is difficult to mix poisonous substances into food products ○ Besides efforts for improving food safety, crisis management training are important.
Diffusing the report among food business operators
Diffusing the report among food business operators through seminars and information services in cooperation with relevant organizations and local governments

Source: MAFF

How to secure safety of Japan's livestock products

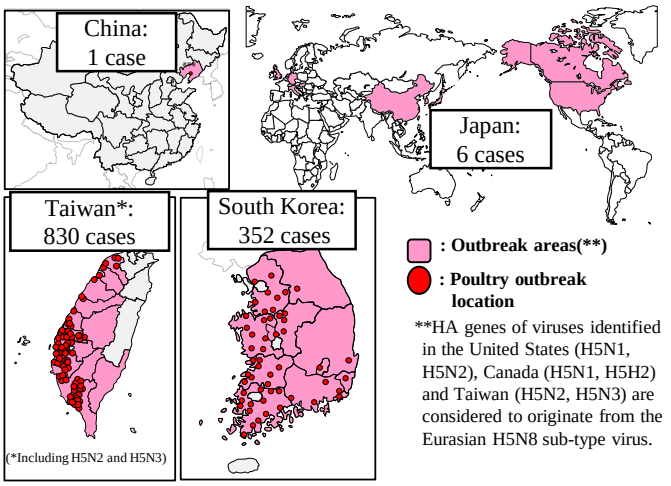


Source: MAFF

(2) Animal epidemic prevention and phytosanitary measures

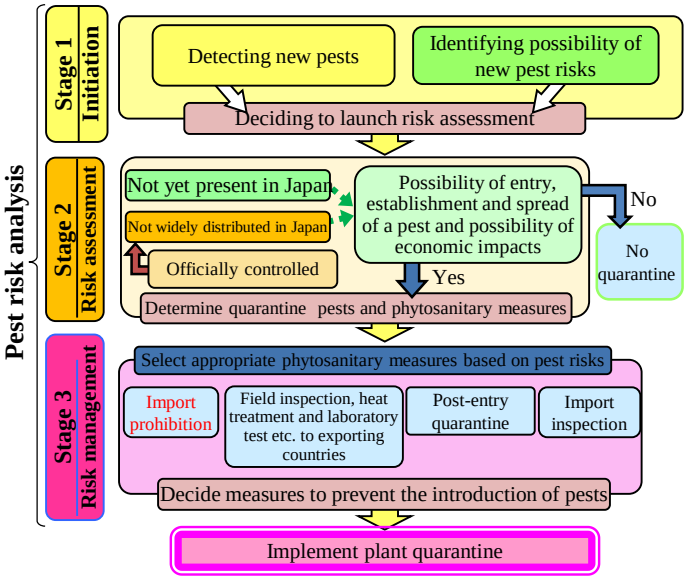
- Over recent years, neighboring countries have seen outbreaks of domestic animal infectious diseases such as foot-and-mouth disease and avian influenza. Shoe sole disinfection and baggage checks with quarantine detector dogs are implemented for travelers to prevent domestic animal infectious diseases from entering Japan. In addressing outbreaks of avian influenza and other diseases in Japan, the MAFF cooperates with prefectural and other authorities in implementing appropriate measures.
- In order to effectively and efficiently prevent pests from entering Japan, MAFF identifies quarantine pests based on scientific grounds, and decides to implement appropriate phytosanitary measures against the quarantine pests according to the their pest risks.

Outbreaks of Highly pathogenic avian influenza (Subtype H5N8) (from 2014)



Sources: Prepared by MAFF based on data from the World Organisation for Animal Health (OIE), etc.
Note: The figure covers outbreaks between January 2014 and April 7, 2015

Import plant quarantine

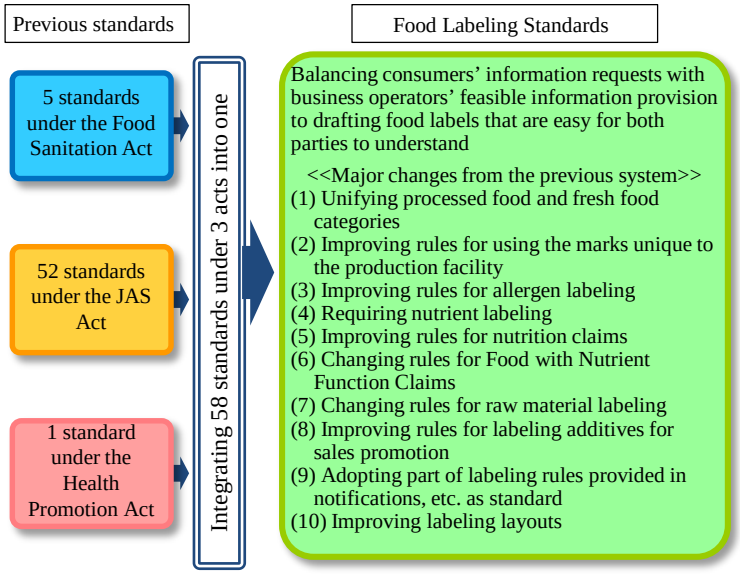


Source: MAFF

(3) Efforts to secure consumers' confidence

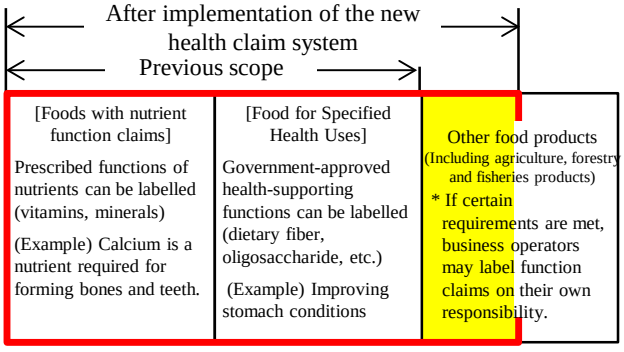
- Based on the Food Labeling Act (put into force in April 2015), the "Food Labeling Standards" have been established, integrating 58 standards under the Food Sanitation Act, the Act on Standardization and Proper Quality Labeling of Agricultural and Forestry Products (JAS Act) and the Health Promotion Act.
- In response to the Implementation Plan for Regulatory Reform and the Japan Revitalization Strategy, a new system has been created for food business operators to indicate the functionality of so-called health foods and other processed food products and agriculture, forestry and fisheries goods based on scientific evidence under their own responsibility.

Overview of Food Labeling Standards



Source: Prepared by MAFF based on data from CAA

Scope of products of which functionality can be labelled

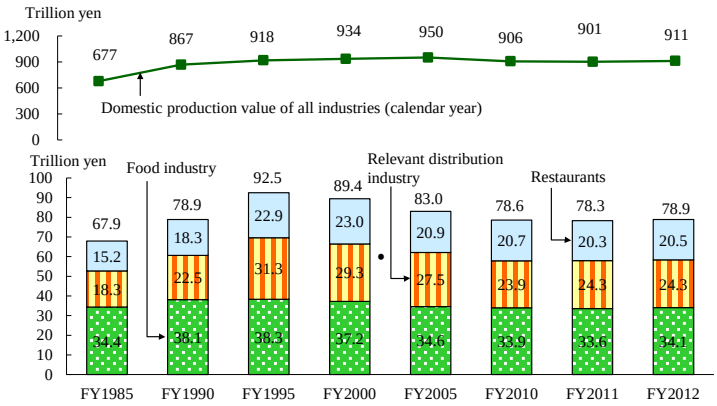


Source: Prepared by MAFF based on data from CAA

5 Food industry trends

- The domestic production value of the food industry has remained in decline since the late 1990s against the background of food price drops, the falling birthrate and other changes. The value came to 79 trillion yen, accounting for 9% of total industrial production (911 trillion yen) in FY 2012, indicating the food industry's key role in supporting local economies.
- The contents of Home Care Foods were clarified as foods not only for people with weakened functions of chewing or swallowing but also for preventing undernourishment and for making daily life more comfortable. The nickname for such foods, "Smile Care Foods", was chosen from suggestions by the public. The flowchart "How to choose "Smile Care Foods (foods for elderly or patients)"" was elaborated for consumer's appropriate choice of Smile Care Foods according to the functions and nutrition condition.
- In June 2014, MAFF formulated "The Global Food Value Chain Strategy" indicating basic and regional strategies to promote overseas business and investments of Japanese food industry and to enhance export and create favorable environment for Japanese food export and overseas business. Based on the strategy, MAFF will promote establishing food value chains from production, manufacturing, processing, distribution to consumption through Public-Private Partnership mainly in developing countries.

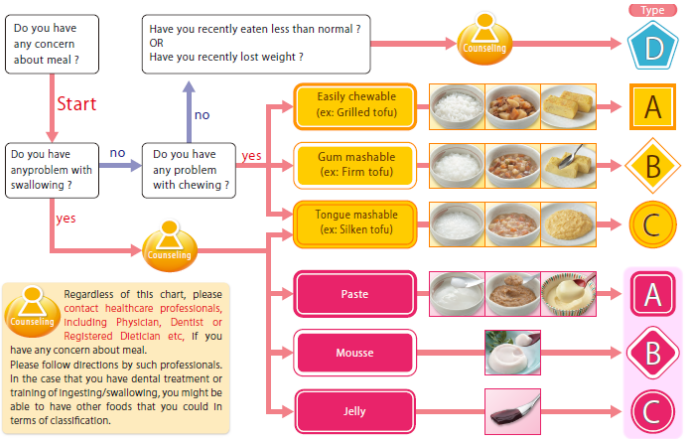
Trends of domestic food industry production value



Sources: Cabinet Office, "National Accounts" MAFF, "Economic Accounts for Agriculture and Food Related Industries"

Note: The domestic production value of all industries represents a total of output from various economic operations. The domestic production value of the food industry covers production values for the food industry, relevant distribution industry and restaurants in the "Economic Accounts for Agriculture and Food Related Industries."

How to choose "Smile Care foods (food for elderly or patients)"



Source: MAFF

Notes: 1) Photos indicating foods in each category are omitted.
2) The MAFF website shows sample goods for each category.

- In order to reduce food losses estimated to total 5 million to 8 million tons annually, the working team composed of food-related businesses has made progress in taking measures including the revising of deadlines for delivering processed food products.
- Over recent years, a decline in food and drink shops and other changes have led a growing number of elderly and other consumers to feel inconvenience and difficulties in purchasing food products, eating and drinking. It is important to continuously tackle the food access problem through horizontal cooperation between central and local governments and their collaboration with private sector companies, nonprofit organizations and local residents.

Major achievements of the working team on commercial practices to reduce food losses in FY 2014

Revising delivery deadlines for processed foods	As recommended by the working team on commercial practices, five companies revised delivery deadlines for beverages or confectionary products for a best-before period of more than 180 days.
Revising best-before date and labeling methods	Best-before date extended for 199 products between December 2013 and October 2014, with 159 products subjected to specified months at the end of the best-before periods
Reducing losses of foods for daily deliveries	Losses of foods for daily deliveries were estimated on a nation-wide basis*: Manufacturers: some 2.5 billion yen or 6,500 tons Retailers: about 7.6 billion or 18,600 tons

Source: Prepared by MAFF based on reports by the working team on commercial practices to reduce food losses in FY 2014

Note: *Major target products included bread, tofu, milk products, natto, etc. A distribution survey covered mainly supermarkets and cooperatives.

Cooperating with local supermarkets for nationwide mobile retail services

Tokushimaru Inc. in Tokushima Prefecture's Tokushima city has cooperated with local supermarkets as suppliers of goods and sales partners conducting mobile retail sales to implement minitruck-based mobile retail services for houses of elderly people on a nation-wide basis.

Sales partners, while receiving accounting know-how from the company, conduct mobile retail services twice a week with vehicles carrying 300 to 400 food and other daily life products provided by local supermarkets.

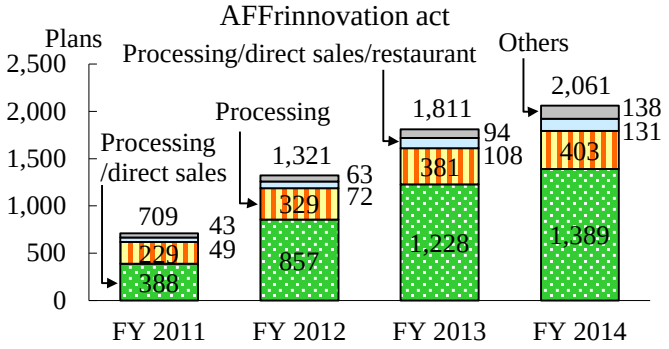
Mobile salespersons notify any abnormal changes involving elderly persons living alone to local support centers, contributing to local safety and security.

Mobile retailing

6 Promoting AFFrinnovation, etc.

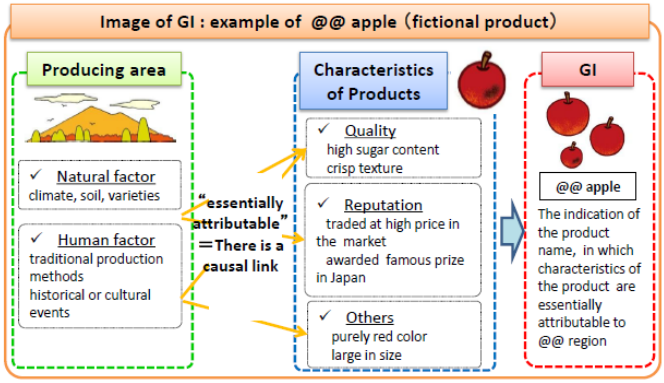
- The number of certificates of business plan approved under the AFFrinnovation act for agriculture, forestry and fisheries workers to undertake processing and direct sales of their products has exceeded 2,000 since the certification started in FY 2011, indicating a steady increase. Of the total, vegetables account for the largest share of 32%, followed by 19% for fruits, 12% for rice and 12% for livestock products.
- Collaboration between the medical care, welfare, food and agricultural sectors is promoted to explore new domestic markets.
- In June 2014, the "Act for Protection of Names of Designated Agricultural, Forestry and Fishery Products and Foodstuffs" (Act No.84 of 2014)" was enacted (entered into force in June 2015) to establish the system to protect geographical indications as intellectual property, which are the names of agricultural, forestry, and fishery products and foodstuffs whose tradition and characteristics are essentially attributable to their geographical origins, thereby contributing to ensure the interests of both consumers and producers.

Certification of business plan approved under the AFFrinnovation act



Source: MAFF surveys
Notes: 1) Accumulation since FY 2011
2) "Others" include direct sales, processing/direct sales/export, export, restaurant and fund-approved plans (newly approved).

Image of geographical indication

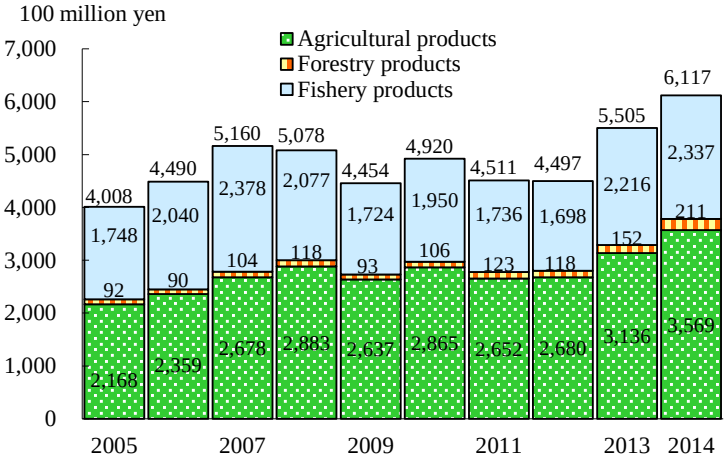


Source: MAFF

7 Communicating Japanese foods and dietary cultures and promoting exports

- In 2014, exports of Japan's agriculture, forestry and fishery products and foods increased 11.1% from the previous year to 611.7 billion yen, the highest record since 1955 when export statistics began to be compiled.
- Under the Executive Committee for Export Promotion Strategy established in June 2014, the nation wide export promotion institutions of seven major products are playing a central role in accelerating initiatives to expand exports to Europe and North America as well as Asia.
- As interests are growing in Japanese foods through the registration of "WASHOKU" as a UNESCO Intangible Cultural Heritage, the government and private sectors are cooperating in building the Japanese pavilion and implementing public relations activities for the 2015 Milan Expo to take place between May and October 2015 in Italy's Milan under the theme of foods.

Trends of agriculture, forestry and fishery products and foods exports



Source: Prepared by MAFF, based on MOF, "Trade Statistics"

Overview of Japanese pavilion at 2015 Milan Expo

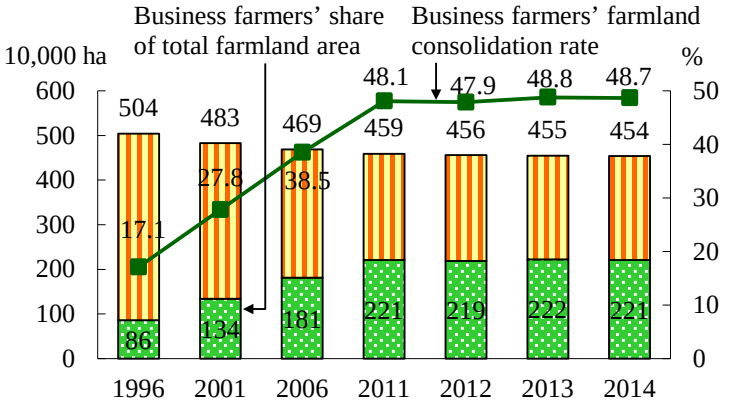
Source: MAFF

1 Promoting the structural reform of agriculture

(1) Launching Public Corporations for Farmland Consolidation to Core Farmers through Renting and Subleasing (Farmland Banks)

- "Business farmers' share of the total farmland area" had steadily increased since the creation of the certified farmer system in 1993 thanks to effects of measures for certified farmers, before leveling off over recent years due to a measure that targeted all farmers implemented from 2010.
- In order to increase business farmers' share of the total farmland area to 80% in the next decade, Farmland Banks have been created as public intermediate receivers of farmlands for consolidating farmland to business farmers. By November 2014, Farmland Banks were designated had been established in all 47 Japanese prefectures. Each prefecture is promoting the development of the organization.

Changes in business farmers' share of Japan's total farmland area



Sources: MAFF, "Statistics on Cultivated Land and Planted Area," "Survey on Community-based Farm Cooperatives" (aggregate calculation after reclassification), MAFF surveys

Notes: 1) Data are at the end of March for each year.
2) "Business farmers' share of total farmland area" represents farmlands managed by certified farmers (including specified agricultural corporations), farmers who reach the level as specified in basic plans made by municipal governments, and community-based farm cooperatives (from FY 2003) based on ownership, land-utilization rights or contracts (only farming operations under contracts for community-based farm cooperatives).

Initiatives of Kumamoto Prefecture's Public Corporation for Farmland Consolidation to Core Farmers through Renting and Subleasing (Farmland Bank)

Kumamoto Prefecture under its governor's strong leadership has proactively promoted farmland consolidation through its Farmland Bank. It has deployed 40 officials for coordination of local talks and designated 64 priority districts for promoting farmland consolidation. The prefecture is using the Farmland Bank for (i) consolidation farmlands totaling 400 to 500 ha into a new corporation, (ii) for consolidating farmland to business farmers in a region where infrastructure development is undergoing, and (iii) for introducing corporation for orchards where business farmers have aged so much.

Image of leased farmlands after infrastructure development

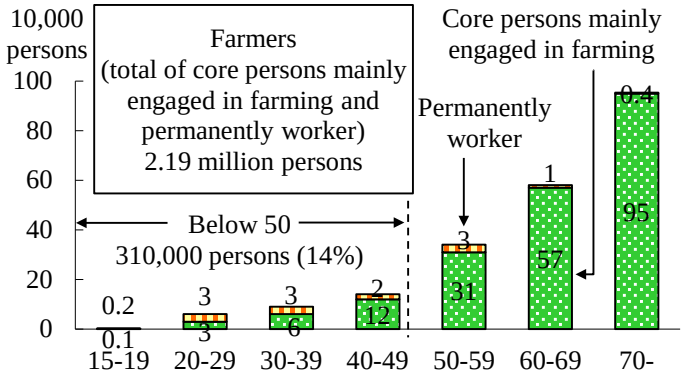
Before infrastructure development

After infrastructure development

(2) Trends of business farmers

- As farmers (core persons mainly engaged in farming and permanently hired worker on farm (hereinafter referred to as "permanently worker")) are aging, their age distribution is remarkably unbalanced.
- The number of corporation farms has continued an upward trend, increasing three times from 2000.
- The entry of corporation into the agriculture sector is in progress at the quintuple pace after the revision of Agricultural Land Act in 2009 (1,712 corporation farms entered into the sector after the revision).

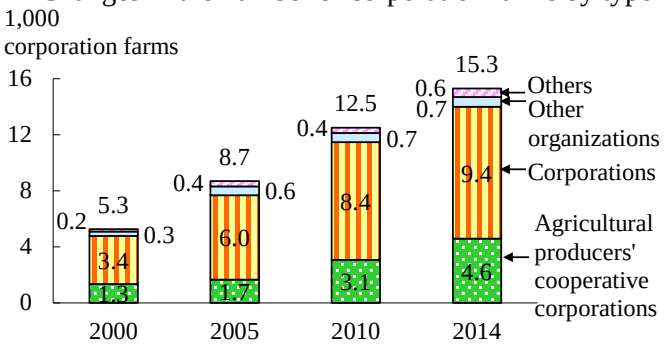
Farmers by age group (2010)



Sources: Prepared based on MAFF, "Census of Agriculture and Forestry," and MIC, "Population Census" (data were aggregated by MAFF based on survey slips)

Notes: 1) "Core persons mainly engaged in farming" are those whose mainstay jobs are farming among a population mainly engaged in farming (household members mainly engaged in self-employed farming).
2) "Permanently worker" are those employed mainly for farming for a period of seven or more months under employment agreements.

Changes in the number of corporation farms by type



Sources: MAFF, "Census of Agriculture and Forestry," "Survey on Movement of Agricultural Structure"

Notes: 1) Corporation farms are agricultural holdings other than farm households for sales purposes, excluding household corporations.
2) Corporation grass farms are covered for 2014.
3) Corporations are stock corporations, ordinary and limited partnerships, and limited liability companies under the Companies Act, and mutual companies under the Insurance Business Act. Corporations in and before 2005 include limited private companies.
4) "Other organizations" include agricultural cooperatives, agricultural mutual relief associations, agriculture-related organizations and forest owners' cooperative associations.

○ New farmers aged below 40 have numbered 13,000 to 15,000 in recent years. But only some 10,000 of them are expected to remain as farmers.

○ In order to promote new entries into agriculture, local governments have implemented their respective measures for supporting new entries, in addition to Young Farmers Payments.

Changes in new farmers

Source: MAFF, "Survey on Newcomers in Agriculture"
Note: New entries in 2010 and survey results from 2011 do not cover regions where surveys were impossible due to the Great East Japan Earthquake.

An initiative for supporting new entries into horticulture

Fukui Prefecture opened Fukui Horticulture College in FY 2014 in Awara city as a training organization to nurture new farmers engaged in horticulture.
In a course for trainees willing to make a living in horticulture, each trainee manages an exclusive garden, undergoing management simulation training in which each trainee integrally selects, produces and sells horticulture products in a financially independent manner for a period of up to two years. The course is designed to develop practical management capabilities. In FY 2014, 23 trainees entered the college.
A trainee says, "I feel that I am steadily growing toward my future entry into agriculture."

Trainees for new entries into agriculture

(3) Promoting operations of women farmers

○ In 2014, women farmers accounted for 42% of core persons mainly engaged in farming, playing a key role in supporting agriculture and local activities. Women farmers are demonstrating their capabilities and implementing farm management for high goals or aims throughout Japan.

○ Under the ongoing "Nougyou-Joshi Project" (a campaign for women farmers to be more active in agricultural business through cooperation with various industries to tap women farmers' knowledge and experiences), women farmers and companies cooperate in new product development and other operations.

"Nougyou-Joshi Project"

○ The "Nougyou-Joshi Project" has been implemented to enhance women farmers' presence and increase women choosing to engage in farming by linking women farmers' wisdom to various companies and communicating their operations to the entire society.

○ Under the project, women farmers and companies cooperate in new product development and other operations.

Women farmers cooperate with Daihatsu Motor Co. in developing mini-trucks.

Women farmers and Iseki & Co. cooperate in a project regarding agricultural machines.

A young woman farmer seeking to invigorate local communities through agriculture

Ms. Ai Sato in Yokote city, Akita Prefecture, found the attractiveness of farming interacting with nature and chose to work at her family's farm in 2012 after graduating from a university. At present, she and her family use farmlands totaling 16 ha to cultivate rice, cucumbers, melons, komatsuna (Japanese mustard spinach) and other crops and process fruits produced in Akita Prefecture into jam. She has participated in the Nougyou-Joshi Project. She was selected as a student of a school for nurturing next-generation leaders for women's farming in FY 2014 and has positively participated in training to improve business management capabilities.
She intends to brush up her farming skills, implement farming taking advantage of women's sensibilities and positively conduct operations to invigorate local communities through agriculture in the future.

Ms. Ai Sato

(4) Promoting the Farming Income Stabilization Measures and rice policy reform measures

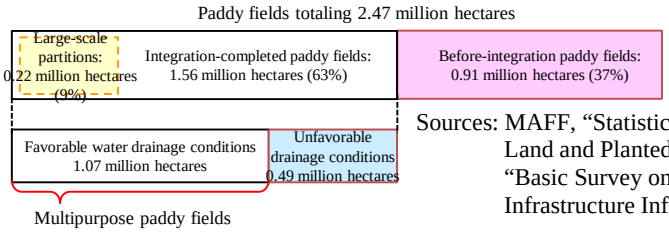
○ From production in 2015, the government is implementing the direct payment for upland field crops and the payment to mitigate impact of reduced income for rice and upland field crops targeting business farmers such as certified farmers, certified new farmers and community-based farm cooperatives. No scale requirement will be imposed so that a wider range of business farmers will be eligible for these measures.

○ In order to promote production of the crops on demand, the government improved direct payment for the use of paddy fields, and provided detailed information on supply-demand situation and price. In addition to a conventional production target, the government also set a reference production target for farmers to produce other crops than table rice by their own decisions.

2 Developing and conserving agricultural production infrastructure

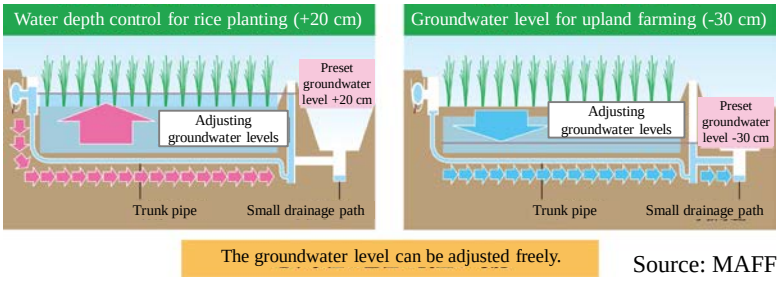
- Of paddy fields totaling 2.47 million hectares in Japan, about 60% have been integrated into 30-are or larger partitions. Only one-tenth have been integrated into large (1-hectare or larger) partitions. About one-third of integrated paddy fields have unfavorable drainage conditions.
- It is important to promote infrastructure development including the expansion of farmland partitions and the creation of multi-purpose paddy fields in cooperation with Public Corporations for Farmland Consolidation to Core Farmers through Renting and Subleasing (Farmland Banks) to enhance the competitiveness of Japan's agriculture.
- Given that the number of facilities exceeding their service lives has risen with natural disasters increasing, the government is promoting measures to lengthen service lives and strengthen anti-earthquake resistance of farm irrigation facilities, preparing hazard maps and enhancing surveillance and management arrangements from the viewpoint of making national land more resilient.

State of paddy fields improvement (2013)



Sources: MAFF, "Statistics on Cultivated Land and Planted Area" and "Basic Survey on Agriculture Infrastructure Information"

Overview of a groundwater level control system



Source: MAFF

Irrigation pond improvement flow

Eroded levee

Levee improvement

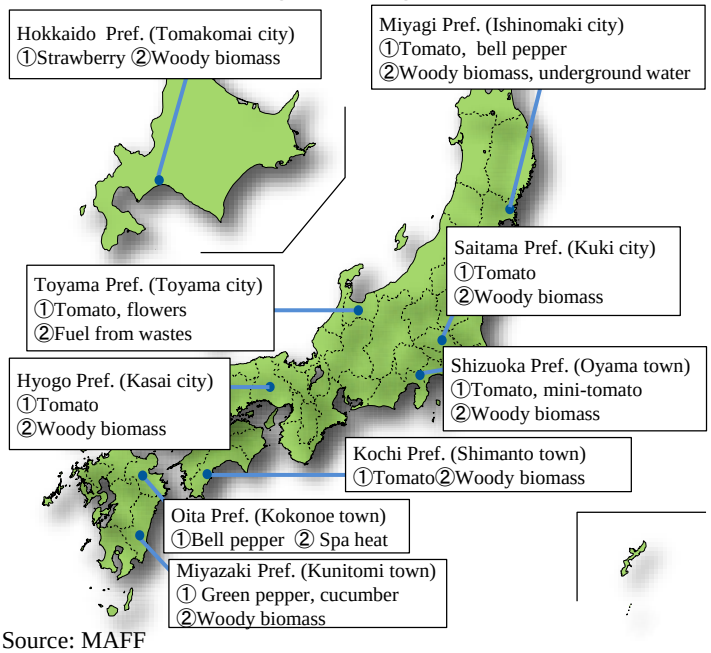
Completed

Source: MAFF

3 Innovating production and distribution systems

- Promoting next-generation greenhouse horticulture to utilize woody biomass and other local energy resources and advanced technologies for reducing dependence on fossil fuels, increasing income and creating local jobs at locations where such energy resources are massively accumulated.
- In order to develop agriculture into a growth industry despite population aging, a shortage of new farmers and other difficult problems facing agriculture, Japan should promote new smart agriculture in which robot and information/communications technologies would be introduced for labor-saving, high-quality production.

Districts for implementation of support projects to accelerate introduction of next-generation greenhouse horticulture



Source: MAFF

Note: ① Crops for cultivation ② Local energy sources

New agricultural initiatives using robot and information/communications technologies

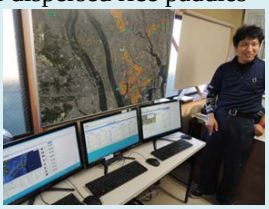
1. Developing autonomous-driving systems for tractors, etc.

Promoting the development of autonomous-driving systems for tractors and other agricultural machines to save farming labor and realize large-scale production. Promoting a study for demonstrating systems for cooperation between manned and unmanned machines and securing their safety to accelerate the development.

A system for cooperation between unmanned (left) and manned (right) machines

2. ICT used for efficient control of dispersed rice paddies

Nabehachi Nosan, a limited liability company in Yatomi city, Aichi Prefecture, has introduced ICT to efficiently manage dispersed rice paddies with a small number of workers, cutting seedling production costs by 25% and labor costs by 5%.



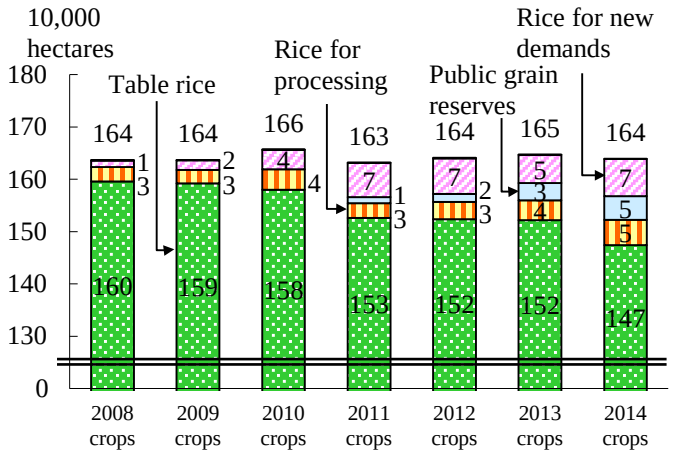
Computer terminals used in an office to integrally control operations

4 Production trends for major farm and livestock products

(1) Rice

- Japan's total area for planting table rice in 2014 totaled 1.474 million hectares, down 48,000 hectares from the previous year. Meanwhile, the area for planting non-table rice including rice for feed and other new demands, processing and reserves increased substantially. As a result, the total rice-planted area leveled from 2008 at 1.639 million hectares.
- The area for planting rice for feed totaled 34,000 hectares in FY 2014, up 12,000 hectares from the previous year. Given that rice for feeding is assessed as having the same nutrition value as imported corn, substantial demand is expected for rice for feed. Therefore, it is important to improve production efficiency by introducing high-yielding varieties and low-cost production technologies.

Changes in total rice-planted area including paddies subject to early harvests



Sources: MAFF, "Statistics on Cultivated Land and Planted Area," MAFF surveys

Initiatives to reduce production costs and increase value added for rice for feed

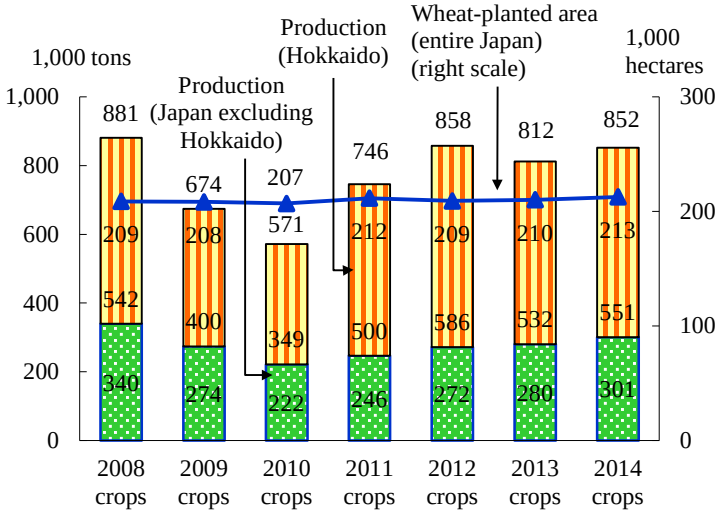
Sowing iron-coated rice seeds directly at a rice paddy

In Kamewada and Kitaakazuka, Kanuma city, Tochigi Prefecture, a 20-member community-based farm cooperative was established in 2008 to produce rice for feed. Since 2010, the cooperative has directly sowed iron-coated rice seeds on flooded paddy fields to reduce labor and costs with seeding and other costs saved. Rice produced for feed there is used at local chicken farms. Eggs produced at these farms are used by a local confectionery store for developing and selling western confectioneries. The cooperative has thus promoted initiatives to increase valued added to rice for feed through cooperation within a local community.

(2) Wheat, soybeans

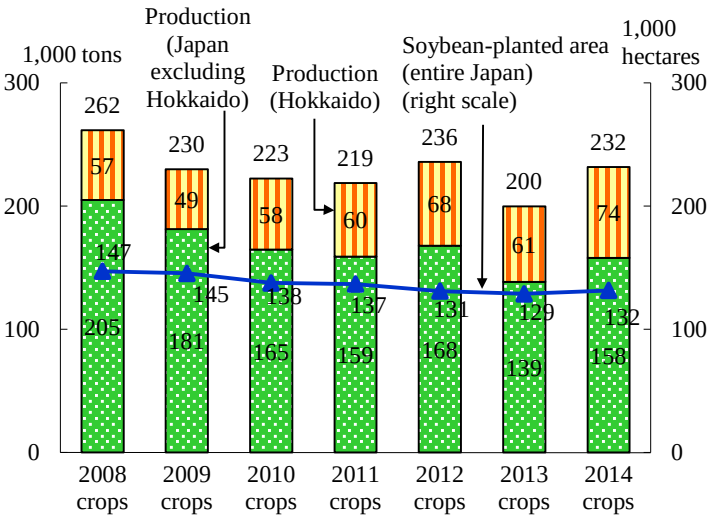
- Japan's wheat-planted area in 2014 came to about 210,000 hectares, remaining almost unchanged since 2002.
- In Japan, wheat is usually harvested in the rainy season and cultivated on rice paddies so that yields and quality are unstable due to moisture damage. Therefore, wheat producers must thoroughly implement drainage measures and fertilizer management based on soil diagnostics.
- Japan's soybean-planted area increased by 2,800 hectares to 132,000 hectares due to some farmers' switching to soybean from other crops.
- Soybeans are used for edible oil as well as tofu soybean curd, natto (fermented soybeans), soy sauce and other food products. Soybeans for oil accounted for 63% of 3.01 million tons for domestic consumption including imports in FY 2013. Those for food products accounted for 31%.

Changes in wheat-planted area and wheat production



Sources: MAFF, "Crop Statistics"

Changes in soybean-planted area and soybean production

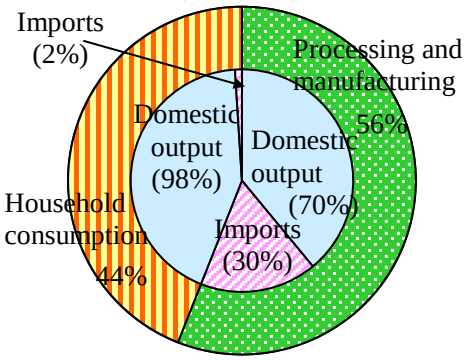


Sources: MAFF, "Crop Statistics"

(3) Vegetables, fruits

- Imports account for 30% of vegetables for processing and manufacturing uses covering 60% of total domestic vegetable demand. Japan must promote production of vegetables for processing and manufacturing uses to raise domestic production's share of total domestic demand.
- Domestic fruit output covers 40% of total domestic fruit demand, with the remaining 60% met by imports. Of domestic output, 90% is used as fresh food. Fruits for processing into juice and other products account for 60% of fruit imports. To explore fruit demand, domestic fruit producers must promote their switching to better varieties meeting users' and consumers' needs and their development of new processed fruit products.

Main vegetables by use and procurement source (FY 2010)



Source: Surveys by MAFF Policy Research Institute
Note: Percentages in parentheses are domestic output's and imports' shares of vegetables for each use.

Unique technology used for cut apples sold throughout Japan

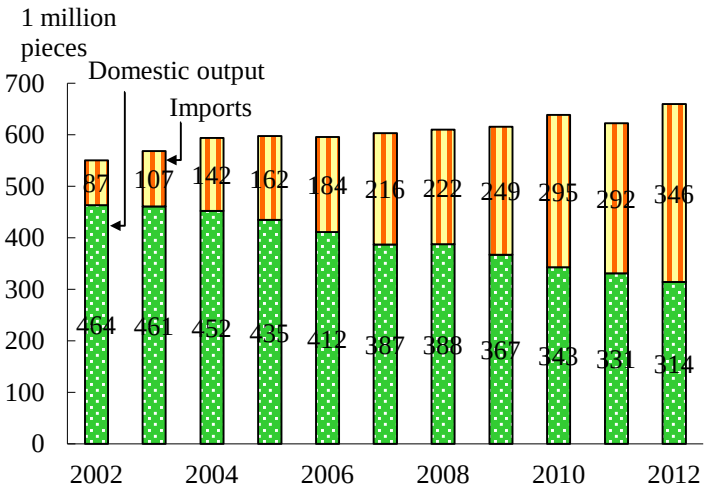
Cut apples for retailing

Mr. Tomomi Oyu, president of Apple Factory Japan, Inc. in Hirakawa city, Aomori Prefecture, has handled cut apples since around 1999, establishing a unique technology to keep cut apples fresh with their color remaining unchanged. In 2008, he founded Apple Factory Japan as a joint venture with a trading company with a nationwide sales network to sell cut apples throughout Japan. At present, Apple Factory Japan provides cut apples for not only school lunches and hospital meals within Aomori Prefecture but also for school lunches outside the prefecture, hotels, convenience stores and supermarkets. It has developed cut apple vending machines for the first time, installing them at 16 locations in Japan, including subway stations, office buildings and expressway service areas. The company plans to develop new products for overseas expansion.

(4) Flowers, tea

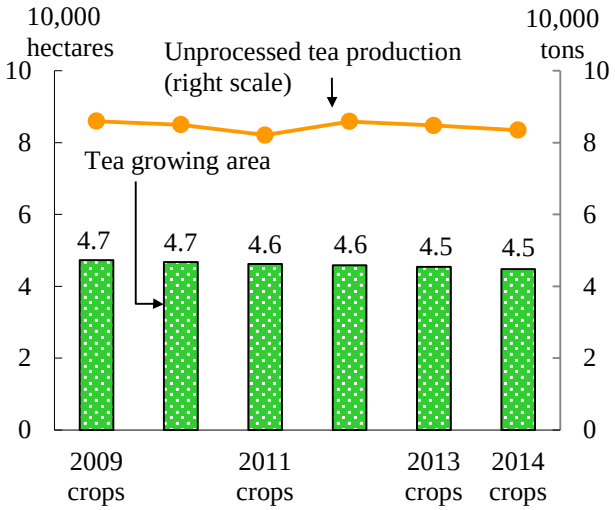
- Domestic flower output covers 90% of total domestic flower demand on a financial value basis, with the remaining 10% met by imports. Meanwhile, particularly cheap cut flower imports have increased. Therefore, Japanese flower producers are required to increase domestic output's share by improving freshness and durability to which consumers give priority among quality aspects. Under such circumstances, Japan implemented the Ornamental Plants Promotion Act in December 2014 to promote initiatives for the flower industry and cultures.
- Japan's tea growing area has leveled off, with annual output remaining between 80,000 and 90,000 tons over recent years.
- Under the Tea Promotion Act, the government has promoted initiatives to improve tea quality and productivity through variety replacements, level tea growing operations and expand tea exports to help stabilize tea producers' business.

Trends of cut carnation shipment and import volumes



Sources: MAFF, "Statistics on Production and Shipment of Flowers" and "Plant Quarantine Statistics"

Changes in tea growing area and tea production



Source: MAFF, "Crop Statistics"
Notes: Unprocessed tea production in 2011 and 2012 covers major tea-producing prefectures.

(5) Livestock products

- ○ The number of livestock farms has decreased in Japan over recent years. On the other hand, the scale of the farms continues to expand and the number of animals per farm has increased.
- ○ Capital investment burdens and appropriate management of animals with limited labor have become challenges for further expansion. Given these challenges, farms and related parties promote "livestock farming clusters" where they cooperate and get together to improve profitability in order to preserve and consolidate the production base.
- ○ "The Basic Policy For Modernizing Dairy and Beef Cattle Production" calls for efforts of entire locality rather than each farm to improve livestock farming profitability and enhance production base. "The Plan Concerning Improvement and Increased Production of Livestock" seeks to improve livestock for stable supply of livestock and dairy products that can accurately respond to various needs of consumers.
- ○ While milk product consumption has remained stable over recent years, raw milk output had followed a downward trend. Given the situation, the government has steadily taken measures to increase raw milk production base. Given a butter shortage expected for 2014, the government conducted additional imports and requested the milk industry to expand home-use butter supply as much as possible.
- ○ Beef calf prices rose as calf births declined due to a drop in cows for breeding, with dressed carcass prices recovering.
- ○ Based on the Swine Industry Promotion Act, the government drafted "The policy for promoting hog farming".
- ○ Livestock farming is structurally vulnerable to feed price fluctuations as feed costs account for as much as 40-50% of total production costs for cows and 60-70% for pigs and hens. Therefore, MAFF will promote the domestic production and utilization of feed.

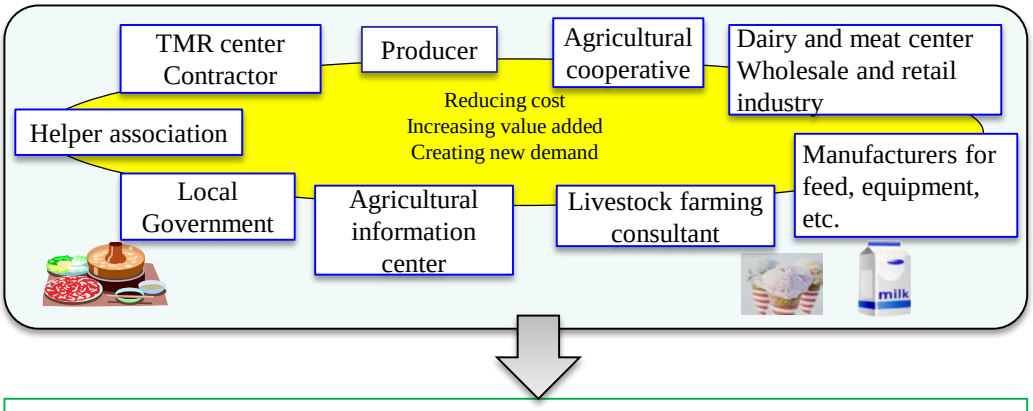
Changes in the numbers of livestock farms and animals per farm

		Number of livestock farms					Number of animals per farm				
		2010	2011	2012	2013	2014	2010	2011	2012	2013	2014
Dairy cattle	Hokkaido	7,690	7,500	7,270	7,130	6,900	107.5	110.4	113.1	113.2	115.3
	Excluding Hokkaido	14,300	13,500	12,800	12,200	11,700	46.0	47.4	49.0	50.5	51.2
Beef cattle		74,400	69,600	65,200	61,300	57,500	38.9	39.7	41.8	43.1	44.6
	Cows for breeding	63,900	59,100	56,100	53,000	50,000	10.7	11.3	11.4	11.7	11.9
	Fattening cattle	11,700	11,200	10,400	10,000	9,660	72.1	73.5	77.9	79.0	79.9
	Dairy cattle for beef	6,370	6,110	5,920	5,810	5,750	152.0	146.4	150.6	150.3	148.1
Pigs		…	6,010	5,840	5,570	5,270	nc	1,625.3	1,667.0	1,738.8	1,809.7
Layers (×1000)		…	2,930	2,810	2,650	2,560	nc	46.9	48.2	50.2	52.2
Broilers (×1000)		…	…	…	2,420	2,380	nc	nc	nc	54.4	57.0

Sources: MAFF, "Statistics on Livestock"

Note: 1) Layers are those raised by households having 1,000 or more layers.
2) Broilers are those raised by households with annual shipments totaling 3,000 or more broilers.
3) Data for cows for breeding, fattening cattle and dairy cattle for beef raised per household were computed based on MAFF, "Statistics on Livestock."

Image of a livestock farming cluster



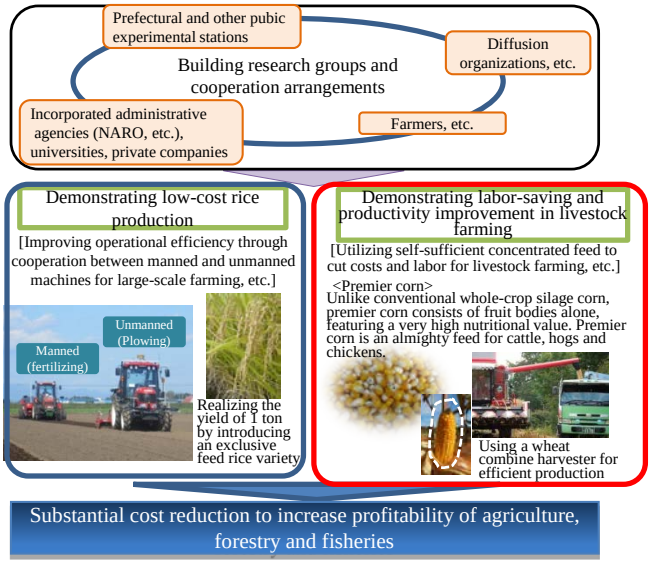
Local stakeholders strengthen coordination and cooperation to improve the profitability of local livestock farming and consolidate the production base by:
(1) Reducing production costs and increasing value added
(2) Reorganizing and developing local farms into core livestock farms

Source: MAFF

5 Promoting research and technology development

- ○ Research and development should be advanced to support growth of the agriculture, forestry and fisheries. Excellent research achievements should be transferred to and extended to producers. In March 2015, MAFF decided the new "Basic Plan for Agriculture, Forestry and Fisheries Research" that provides key R&D targets for the next 10 years and specific policies.
- ○ Empirical research to establish an innovative technology system based on advanced technologies is promoted to realize an aggressive agriculture, forestry and fisheries.

Image of research promotion for establishing an innovative technology system for realizing an aggressive agriculture, forestry and fisheries



Source: MAFF

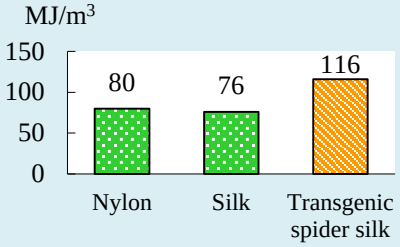
Remarkable research achievement
Generating the line of transgenic silkworm spinning a "hybrid-silk" with spider dragline

The National Institute of Agrobiological Sciences (NIAS) has introduced spider genes into silkworms for silk production. The generated line of silkworm successfully produced new transgenic spider silk that combines the characteristics of gloss and tenderness of native silk with strength and toughness of spider dragline.

The new transgenic spider silk is 1.5 times stronger than conventional silk. Development of clothing products using the new silk and stronger medical materials including suture thread for surgery are expected.

Vest and scarf knitted from transgenic spider silks

Comparison of toughness



Source: Simplified by MAFF from the original data of NIAS

6 Promoting agricultural production giving priority to environmental conservation

- ○ The number of certified eco-farmers who try to integrally improve soil and reduce chemical fertilizer and agrichemical consumption in a bid to harmonize agricultural production with the environment stood at 186,000 as of March 2014 (including 7,600 certified in FY 2013).
- ○ New farmers and consumer demand are expected to increase for organic agriculture. In a basic policy on promotion of organic agriculture decided in April 2014 to further expand organic agriculture, MAFF set a target of increasing organic agriculture's share of Japan's total cultivated land area from 0.4% at present to 1%.

Overview of the new basic policy on promoting organic agriculture

Present status of Japan's organic agriculture

Organic farming area ⇒ 16,000 hectares (0.4%)

- **Germany: 6%**
- **U.K.: 4%**
- **France: 4%**
- **South Korea: 1%**

Shipments ⇒ 100,000 tons (0.4%)
Number of organic farming households⇒ 12,000 (0.5%)

In parentheses are percentage shares of totals for the whole of agriculture.

Farmers' great interests in organic agriculture	Of those aspiring to become farmers, 30% hope to undertake organic agriculture.
	Of conventional farmers, 50% hope to undertake organic agriculture depending on conditions.
Firm demand	Of consumers, 40% buy organic farm products and 60% hope to do so depending on conditions.
	Of distributors and processors, 30% already handle organic farm products and 60% hope to do so depending on conditions.

Responses (basic policy)

(1) [Support for organic agriculture farmers]
- Consulting and other support services for expansion into organic agriculture
- Supporting conventional farmers' switch to organic agriculture to expand production lots
- Supporting development of joint-use facilities and machines and providing direct support for environment-friendly farming

(2) [Support for distribution and marketing]
- Using e-commerce and other means to secure diverse sales channels
- Maintaining and expanding organic JAS certification, simplifying certificate acquisition procedures
- Supporting local distribution expansion initiatives

(3) [Promoting technology development, etc.]
- Developing a system of technologies to adapt products to climate and soil characteristics and secure stable quality and yield, demonstrating new technologies

(4) [Promoting consumers' understanding and interests, etc.]
- Promoting public awareness of organic agriculture's various functions and labeling rules of the organic JAS system
- Promoting mutual understanding between urban residents and organic agriculture farmers through Shokuiku (food education), producer-consumer cooperation, etc.

Target

Increasing organic agriculture's share of the total farming area to 1.0%
by around FY 2018

Source: MAFF

7 Agriculture-related organizations supporting agriculture

- Major agriculture-related organizations to support farmers include agricultural cooperatives, agricultural committees, agricultural mutual relief organizations and land improvement districts that conduct operations contributing to the stability and development of farming and to stable food supply.
- The agricultural cooperative system will be revised for allowing local agricultural cooperatives to freely conduct economic operations and focus on the improvement of farmers' income through profit-boosting sales of agricultural products and other measures and for leading their regional federations and central union to appropriately support local cooperatives' free economic operations.
- The agriculture committee system will be revised to achieve the optimization of farmland uses by business farmers' (for example, farmland consolidation to business farmers) in areas.

Overview of major agriculture-related organizations

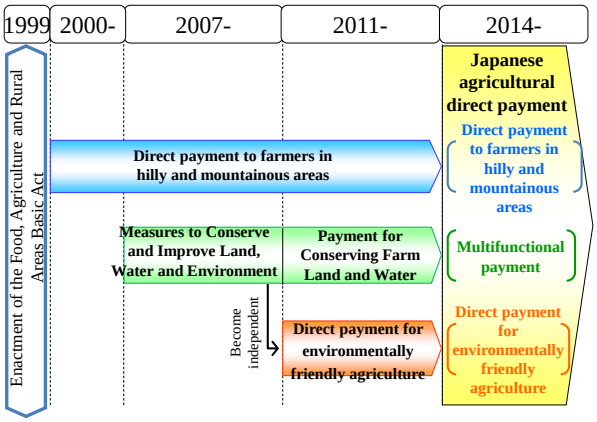
Organization name	Major duties	Number of organizations
Agricultural cooperatives	Agricultural cooperatives are mutual aid organizations that farmers and others voluntarily found for the purpose of increasing agricultural production capacity and improving farmers' economic and social positions. They implement such operations as the distribution of farm products and the provision of production materials.	712 cooperatives (FY 2013)
Agricultural committees	Agricultural committees are municipal administrative committees to permit farmland buying/selling and leasing deals, concentrate farmland uses, and prevent and eliminate idled farmlands.	1,710 committees (as of October 1, 2013)
Agricultural mutual relief organizations	Agricultural mutual relief organizations include agricultural mutual relief associations for regional mutual relief operations and their prefectural federations for insurance operations, implementing the agricultural disaster compensation system.	211 agricultural mutual relief associations 30 federations of agricultural mutual relief associations (as of April 1, 2014)
Land improvement districts	Land improvement districts are organizations founded by regional farmers to develop regional irrigation and drainage facilities, implement land improvement projects such as farmland partition adjustment, and maintain and manage land improvement facilities.	4,795 districta (as of March 31, 2014)

Source: MAFF, "Comprehensive Agricultural Cooperative Statistics" and MAFF survey
Note: The number of agricultural cooperatives is as compiled in the Comprehensive Agricultural Cooperative Statistics.

1 Maintaining and demonstrating multifunctional roles of agriculture and rural areas

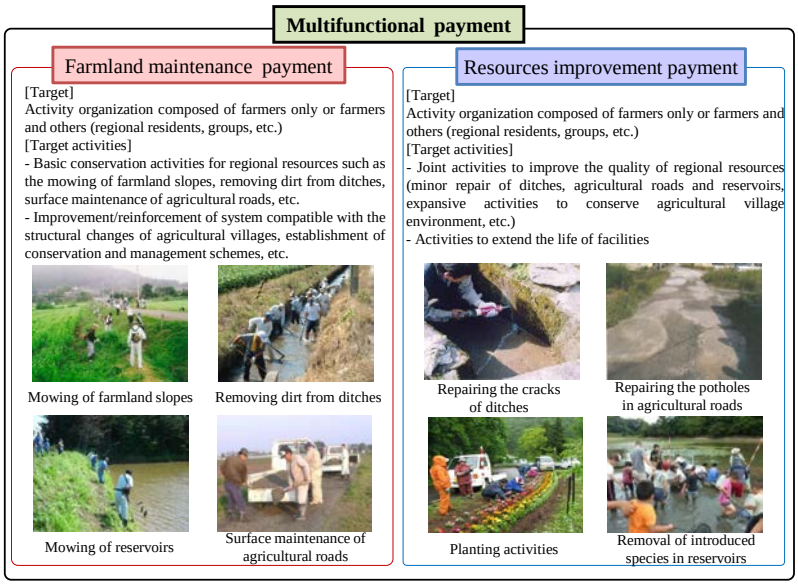
- Agriculture and rural areas have various roles including not only food supply but also national land conservation, water recharge, biodiversity conservation, good landscape formation and cultural succession. The entire people have benefitted from these roles.
- In order to maintain and demonstrate multifunctional roles, Japanese agricultural direct payment (multifunctional payment, direct payment to farmers in hilly and mountainous areas, direct payment for environmentally friendly agriculture) is established to assist farming that is highly effective in terms of the continuation of regional activities and agricultural production activities, and conservation of the environment.

Brief history up to the introduction of Japanese agricultural direct payment



Source: MAFF

Outline of multifunctional payment

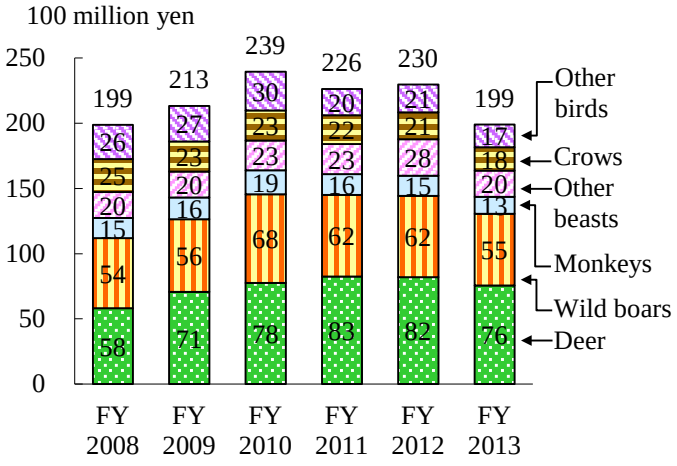


Source: MAFF

2. Promotion of measures to prevent damage due to wild animals

- Damage due to wild animals is becoming more serious and expansive. The amount of field crop damages has recently stayed at around 20 billion yen, with damages by deer and boar remaining as major causes.
- The number of municipalities having prepared damage prevention plans under the "Act on special measures for the prevention of damage due to wildlife" has increased to 1,409. The number of those having established teams for implementing measures to prevent damage by wild animals has risen to 939. But damage prevention efforts should be enhanced further.
- Based on the damage prevention plans, in addition to community-wide measures such as capturing wild animals, installing invasion-preventing fences and the maintenance of buffer zones, utilization of animal meat and the introduction of new technologies are also promoted comprehensively.
- In collaboration with relevant ministries and agencies, specific capture goals are set to implement fundamental wild animal capturing measures.

Changes in crop damage by wild animals



Source: MAFF surveys

Preparation of damage prevention plans and establishment of damage prevention measure implementation teams

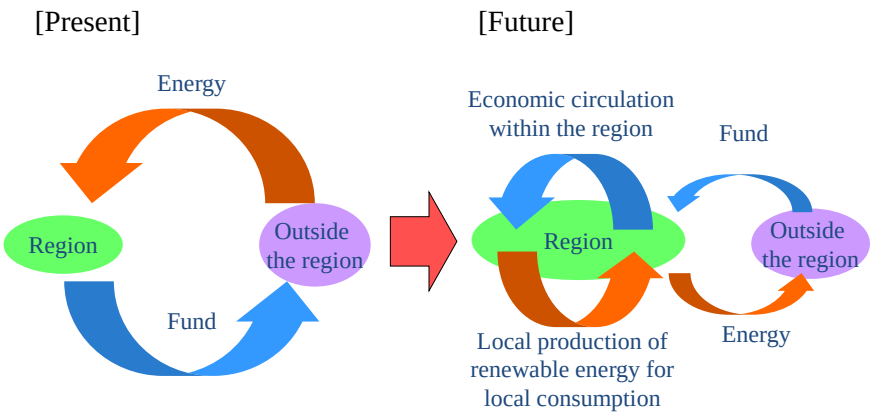
	Total number of municipalities	Number of municipalities having prepared damage prevention plans*	Number of municipalities having established damage prevention measure implementation teams
April 2008	1,741 (As of April 1, 2014)	40	0
April 2009		724	33
March 2010		933	58
April 2011		1,128	87
April 2012		1,195	418
October 2012		—	521
April 2013		1,331	674
October 2013		1,369	745
April 2014		1,401	864
October 2014		1,409	939

Source: MAFF surveys
Note: *Including those consulting with prefectural governments on damage prevention plans

3 Promotion of renewable energy

- To promote economic circulation within a region is important by utilizing renewable energy derived from abundant resources in rural areas such as land, water and biomass. At the same time, it is also important to activate rural areas by utilizing the profit therefrom in the development of agriculture, forestry and fisheries.
- Construction of a biomass industrialized area, which aims to reinforce regionally cyclical renewable energy and to create an environmentally friendly community resilient to disasters, is promoted through the encouragement of industrialization utilizing regional biomass.

Picture of ideal rural communities activation utilizing renewable energy



Source: MAFF

Efforts in biomass industrialized area

An environment conservation center with resource-recycling biogas plant and composting facilities was developed in Shikaoi Town (Tokachi Region), Hokkaido.
Livestock manure collected from farms is fermented to produce biogas, which is used to generate electricity. Digested slurry produced after fermentation is applied to farmland as a good quality organic fertilizer. In addition, surplus heat from power generation is utilized for greenhouses (for mango cultivation, etc.) and aquaculture of sturgeon. Efforts for creating new industry are being promoted.

Full view of the Environment Conservation Center of Shikaoi Town

4 Harmonious coexistence and interactions between urban and rural regions

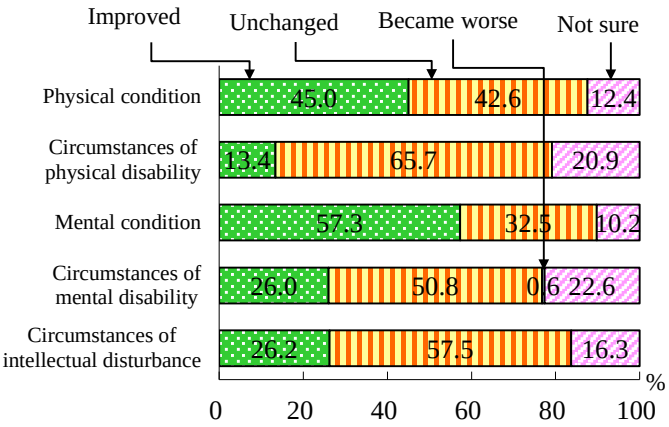
- Measures such as the exploration of new tourism demand through a combination of green tourism and other types of tourism, reinforcement of information transmission, and efforts to attract tourists from abroad to rural areas are promoted in order to realize the vitalization of rural community and a Tourism-Oriented Country.
- Children's activities in rural areas are useful for them to learn the importance of food, deepen understanding of rural communities and agriculture and develop their rich humanity and sociality through experiences with agriculture. These activities not only bring about such educational effects but also contribute to invigorating rural communities.
- Focusing on the effect of farm work on maintaining/improving health, efforts aiming to improve the physical functions of those with disabilities and to secure income, and efforts such as recruiting workers with disabilities by the company establishing a special subsidiary company are increasing.

Attracting tourists from abroad to rural communities through the collaboration of agriculture and tourism

Ajimu Region, Usa City, Oita Prefecture, a region of advanced green tourism, was included as a destination for the Kyushu Route of the observation trip by overseas travel companies, held as a part of VISIT JAPAN Travel Mart 2014 (hosted by Japan Tourism Agency, etc.). The attractiveness of the region was demonstrated by also utilizing the exchange program between urban areas and rural areas by MAFF.
24 participants from 10 countries including Canada, Russia, Thailand, China and South Korea were divided into small groups and enjoyed traditional dishes using chicken, dumplings, etc. at agricultural guest houses, and experienced potato harvesting and traditional crafts. Although the communication was mainly made through gestures, there were voices such as "we were glad that the guests seemed to enjoy the food" from the accepting farms, and "it was a valuable experience and I enjoyed it to my heart's content " or "I definitely want to incorporate this in travel packages" from participants.

Travel company employees who participated in the observation trip

Physical/mental changes through farming work

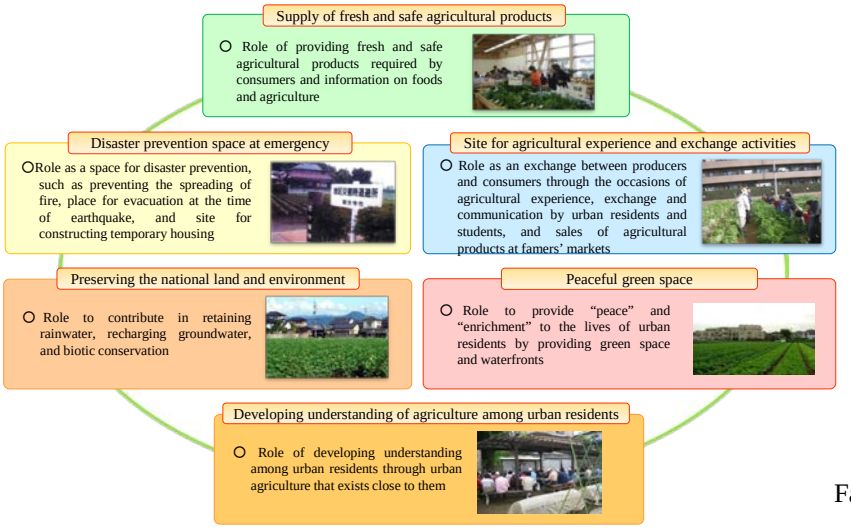


Source: "Investigative Research Report on Collaboration Between Agriculture and Welfare" by Japan SELP Center, a specified non-profit corporation (Published in March 2014)

5 Promotion of urban agriculture

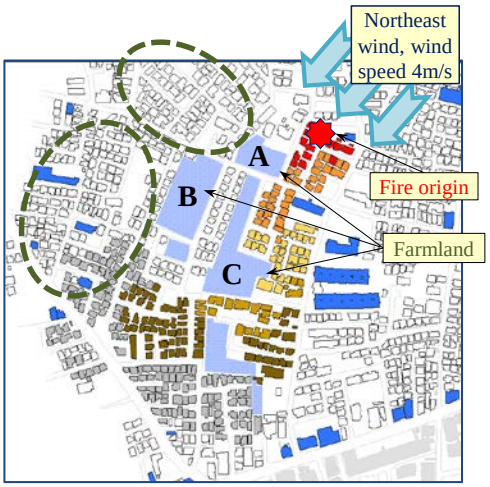
- Urban agriculture plays various roles including the provision of fresh farm products and green and farming experiences and has growingly been expected over recent years to help prevent disasters.
- Urban residents seek health improvement and development of motivation for life through agricultural experience, and allotment gardens and welfare farms are being developed in various regions.
- It is important to cope with changes in development demand for urban areas in accordance with population decline and aging, and, at the same time, to promote building a community where agriculture plays multifunctional roles and residences and farmlands coexist.

Multifunctional roles of urban agriculture



Source: MAFF

Function of farmland to prevent fire spreading



Farmland A and B prevent fire spreading westward

Source: "Report on the Promotion of Urban Agriculture" by the Rural Development Planning Commission (Published in March 2013)

Note: Spread of fire 6 hours after the onset, based on fire spreading simulation

1 Earthquake and tsunami damage and restoration/reconstruction efforts

- ○ The Great East Japan Earthquake inflicted damage worth 2,384.1 billion yen on the agriculture-forestry-fisheries sector (including 904.9 billion yen for the agriculture sector).
- ○ Under the Basic Guideline for Reconstruction of Agriculture and Rural Communities after the Great East Japan Earthquake, among farmland affected by the tsunami covering 21,480ha, it became possible to restart farming in 15,060ha (70%) by the end of FY2014. Restoration projects will continuously be implemented according to schedule in FY2015 and after, while also promoting expansion of the segmentation of farmland.
- ○ Among 10,100 farming organizations affected by the tsunami, 5,610 (55%) restarted the operation of business.

Agriculture restoration conditions after the Great East Japan Earthquake

Item	Damage details	Progress in restoration (%) 0 20 40 60 80 100
Farmlands	Tsunami-damaged farmlands in six prefectures →21,480 hectares	15,060 hectares Available for resuming farming 70%
Farms	Tsunami-damaged farms in six prefectures →10,100 farms	5,610 farms Resumed farming 55%

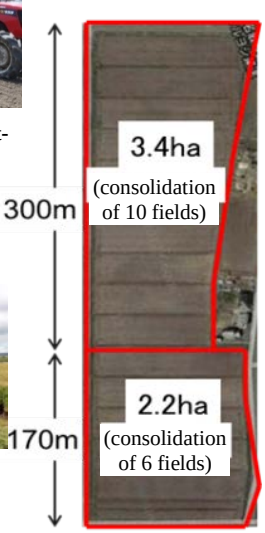
Source: MAFF
Notes: 1) The six prefectures are Aomori, Iwate, Miyagi, Fukushima, Ibaraki and Chiba
2) Farmland data as of December 31, 2014, farms data as of February 2014
3) Farms that have resumed farming include those that have resumed part or all of plowing, sowing and other operations, or of preparations for them.

- ○ MAFF will combine many advanced technologies in agriculture, forestry and fisheries that have been developed in industry, academia and government, to implement demonstration studies in Iwate, Miyagi and Fukushima prefectures. At the same time, it will promote the extension /practical utilization of such technologies.
- ○ In FY2014, 48 research projects were implemented in order to accelerate the reconstruction of agriculture in affected areas based on needs there, and to regenerate a new type of food production area.
- ○ Assistance grants for restarting business are delivered to support the regeneration of regional agriculture, targeted to efforts by affected farming organizations in establishing regional agriculture restoration associations and making joint restoration efforts.

Example of large-sized field demonstration study

Plowing style direct-seeding at dry rice field using large-sized machine for dry-field crop

Understanding the yield per field using yield combine



Field leveling system

Automatic environment measurement using field server

Source: MAFF

Efforts toward the restart of wetland rice cropping started immediately after incurring catastrophic damage caused by the tsunami

Members of Hirota Peninsula Farming Association and production center "Megumi"

Hirota Peninsula Farming Association in Rikuzentakata City, Iwate Prefecture, was established in 2009 as a community-based farm cooperative organization for resolving the problem of abandoned cultivated land. The Great East Japan Earthquake occurred in March 11, 2011, caused significant damages, with the office building and new rice paddies all washed away with the tsunami. However, from directly after the disaster, the association implemented salt removal and cropping in 1ha of rice paddy in the Iwakura Area, which suffered relatively small damage, as a symbol of reconstruction.
In 2014, the cropping acreage was expanded to 15ha, and the association is currently implementing activities with the primary goal of supplying food to local residents of Hirota Peninsula. From now on, it aims to expand the scale of activities while developing successors for the vitalization of the region.
In addition, the production center "Megumi," which was manufacturing traditional dumplings using local foodstuff since its foundation in 2008, also incurred serious damage. However, with the enthusiasm for reconstruction among the members, it restarted operation in May 2012.

2 Impacts of the accident at the Fukushima Daiichi Nuclear Power Plant of the Tokyo Electric Power Company and restoration/reconstruction efforts

- MAFF has supported efforts toward the resumption of farming in the evacuation areas such as the conservation and management of decontaminated farmland and pilot farming.
- To secure distribution of safe agricultural and livestock products, radiocesium reduction measures at the field level, inspections of products for radiocesium, shipment restrictions and other measures have been combined to allow only products with radiocesium below standard limits for food to be distributed. As a result of efforts such as measures to reduce radiocesium, the number of samples exceeding the limits of radiocesium has been decreasing significantly.
- As for countermeasures against radioactive substances in reservoirs, the MAFF and Fukushima Prefecture jointly studied the actual situation, developed and demonstrated technologies to avoid diffusion, and summarized a technical manual.

Shipment of eustoma restarted after four years

Eustoma cultivated by Abukuma Cut Flower Group in Kawamata Town, Fukushima Prefecture, had been highly evaluated before the earthquake, but the group gave up cultivation after the nuclear power plant accident.

Eustoma being cultivated

The group, however, continued to study trends welcomed by consumers through investigating the flower market, even during evacuation. In 2013, with the initiation of full-scale decontamination in the region, the group started pilot cultivation. Its products achieved a high reputation and the eight households of the group resumed farming in 2014, although their planted areas remained half of the amount before the earthquake.

Results of inspections for radiocesium in agricultural and livestock products (17 prefectures)

Category	FY2014			Percentage of samples above the standard limit in FY2013 (%)	Percentage of samples above the standard limit in FY2012 (%)	Percentage of samples above the standard limit until the end of FY2011*1 (%)
	Total number of samples	Number of samples above the standard limit	Percentage of samples above the standard limit (%)			
Rice*2	10.98 million	0	0	0.0003	0.0008	2.2
Wheat and barley	383	0	0	0	0	4.8
Pulse*2	2,579	2	0.1	0.4	1.1	2.3
Vegetables	16,712	0	0	0	0.03	3.0
Fruits	3,302	0	0	0	0.3	7.7
Tea*3	206	0	0	0	1.5	8.6
Other cultivated plants (including buckwheat)	1,049	0	0	0	0.5	3.2
Raw milk	1,846	0	0	0	0	0.4
Meat and eggs (excluding wildlife meat)	188,304	0	0	0	0.003	1.3

Source: Prepared by MAFF from data provided by MHLW and local governments

Notes: *1 Percentages of samples above the standard limits enforced in April 2012.
*2 As for grains (rice, pulse), samples are recorded according to their production years whenever they are inspected.
*3 As for the category of "tea", only green tea, to which the standards of drinking water is applied, has been recorded since FY2012.

- Considering the current situation of strongly-rooted reputational damage, in June 2014, the "Countermeasures Task Force Against the Effect of the Nuclear Disaster Including the Reputational Damage" streamlined measures to be taken and compiled "Principles for strengthening countermeasures against harmful rumors" stipulating three new reinforcement guidelines.
- Many foreign countries and regions tightened their import controls measures on Japanese agricultural, forestry and fishery products including food due to the Fukushima Daiichi nuclear power plant accident. As a result of the negotiations with those countries and regions, some of them have relaxed these control measures.

Outline of "Principles for strengthening countermeasures against harmful rumors"

Basic idea

Principle 1. Remove the source of harmful rumors

(1) Implementation of radioactive substances inspection for the products of affected areas
(2) Understanding and announcing the radiation dosage within the environment

Principle 2. Provide accurate and plain information to prevent rumors

Providing information on radioactivity and reinforcing communication with the public (full check of existing efforts)

Principle 3. Support industries suffered from harmful rumors

(1) Expansion of the sales channel of products of affected areas, development of new products, etc.
(2) Promotion of inviting visitors to affected areas from other parts of Japan and from abroad

Avoidance of health risk among the people ← **Securing the safety of food and confidence of consumers** → Overcoming the impact on industries in the affected areas ← **Creation of new demand among industries in the affected areas**

Source: Prepared by MAFF based on materials from the Reconstruction Agency

Example of countries which have relaxed their import control measures

[EU] April 2014
The scope of area and items covered by inspection certificate decreased
[Singapore] July 2014
Import suspension (Fukushima Prefecture) → Importable if production area certificate is attached (excluding some parts of Fukushima Prefecture), scope of area and items covered by inspection certificate decreased (8 prefectures → 3 prefectures)
[Thailand] November 2014
Scope of prefectures covered by inspection report decreased (8 prefectures → 3 prefectures)
[US] March 2015
Import suspension (Fukushima and 3 other prefectures) → removal (no need to attach certificate for some items), items covered by inspection report (for 3 prefectures) decreased
* As of March 2015, 12 countries/regions including Hong Kong, Taiwan, China and South Korea maintain suspension of import from certain regions including Fukushima Prefecture.

Source: MAFF

Summary of FY2015 Measures for Food, Agriculture and Rural Areas

Summary
Policy background, policy priorities, fiscal measures, legislative actions, tax measures, monetary measures, policy assessment

I Measures to maintain and improve Japan's food self-sufficiency ratio and potential

- Initiatives to maintain and improve Japan's food self-sufficiency ratio and potential
- Measures to realize the production effort target for each major item

II Measures for securing a stable supply of food

- Securing of food safety compatible with international trends and securing of consumer confidence
- Promotion of food education by various people concerned, expansion of consumption of domestic agricultural products, and the preservation/succession of WASHOKU (traditional dietary cultures of the Japanese)
- Exploration of demand through the creation of new values through production, processing and distribution stages
- Strategic exploration of global market
- Establishment of comprehensive food security compatible with various risks
- Strategic reactions to international negotiations

III Measures for sustainable development of agriculture

- Development/securing of business farmers for realizing a strong and sustainable agricultural structure
- Development of an environment wherein women farmers can fully exert their potential capacity
- Consolidation of farmland to business farmers and securing of farmland through full-capacity operation of the Public Corporations for Farmland Consolidation to Core Farmers through Renting and Subleasing (Farmland Banks)
- Promotion of the Farming Income Stabilization Measures for business farmers and consideration of the income insurance, etc.
- Development of an agricultural production base that contributes to the acceleration of structural reform and building national resilience
- Reform of production/supply systems compatible with changes in the demand structure, etc.
- Technological innovation, etc. at production/distribution sites for realizing cost reduction and high added value
- Promotion of environmental policy such as responses to climate change

IV Measures for promotion of rural areas

- Maintenance/succession of local resources through steady promotion of the multifunctional payment system and performance of local community functions
- Creation of employment and income through active utilization of various local resources
- Exchanges between urban and rural areas and migration/settlement to rural areas through collaboration with various sectors

V Measures for restoration/reconstruction from the Great East Japan Earthquake

VI Measures for reorganization/restructuring of relevant bodies

VII Matters necessary for comprehensively and systematically promoting measures for food, agriculture and rural areas

[Definitions]

1. Basic statistical terminology

(1) Classification of agriculture management entities (definitions used since the 2005 Census of Agriculture and Forestry)

Terminology	Definition
Agriculture management entities*	An establishment that either performs agricultural production directly or on contract and fulfills one of the following conditions: (1) manages 30 ares or more cultivated land, (2) possesses a planted area or cultivated area or a number of livestock being raised or delivered that is equal to or greater than a predetermined standard (e.g. 15 ares for outdoor grown vegetables, 350 square meters for vegetables grown in facilities, one cow), (3) accepts farm work on contract. (Censuses from 1990 to 2000 regard agriculture management entities as the combination of commercial farm households, agricultural holdings other than a farm household, and agricultural service enterprises.)
Family management entities	Individual management entities (farm household) or a single-household corporation (a farm household that is incorporated).
Organized management entities	Agriculture management entities that do not fall under family management entities.
Individual management entities	Agriculture management entities that operates as a household. This category excludes single-household corporations.
Corporation management entities	Agriculture management entities that has been incorporated. This category includes single-household corporations.

*"Agriculture management entities" is described as "Farms" in this annual report.

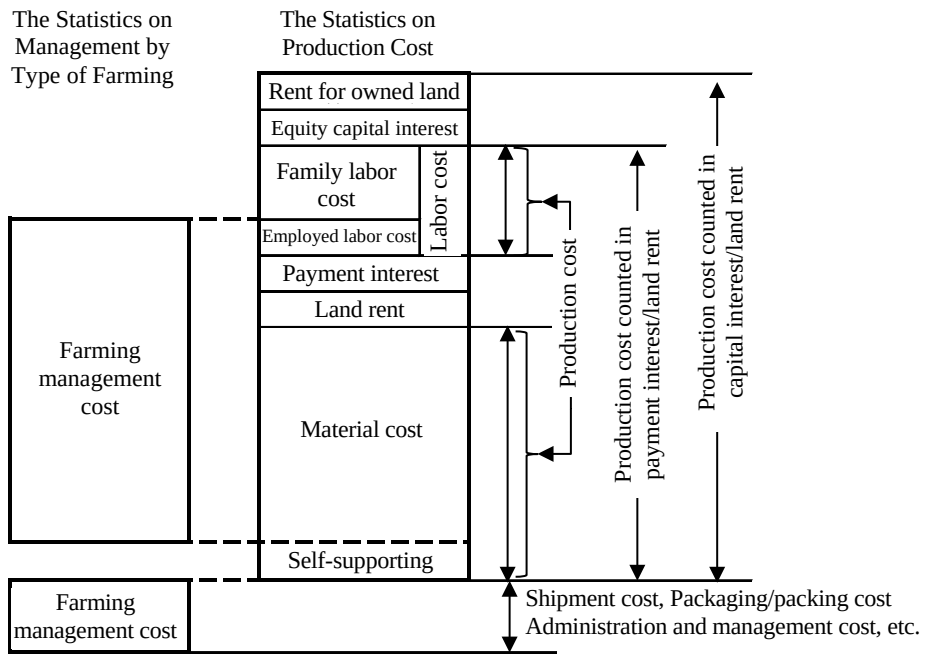
(2) Classification of farm households (definitions used since the 1990 World Census of Agriculture and Forestry)

Terminology	Definition
Farm household	Household engaged in farming and managing cultivated land of 10 ares or more, or earning more than 150,000 yen per year from sales of agricultural products.
Commercial farm household	Farm household managing cultivated land of 30 ares or more, or earning more than 500,000 yen per year from sales of agricultural products.
Business farm household	Farm household whose main source of income (50% or more) is farming, and which possess at least one family member under the age of 65 who is engaged in self-employed farming for more than 60 days a year.
Semi-business farm household	Farm household whose main income (50% or more) is from sources other than agriculture and which possess at least one family member under the age of 65 who is engaged in self-employed farming for more than 60 days a year
Side-business farm household	Farm household without any members under the age of 65 engaged in self-employed farming for more than 60 days a year (farm households other than business and semi-business farm households).
Full-time farm household	A farm household without family members who are part-time farmers.
Part-time farm household	A farm household with one or more members who are part-time farmers.
Farm household earned main income from farming	A part-time farm household gaining more income from farming than other work.
Farm household earned main income from other jobs	A part-time farm household gaining more income from work other than farming.
Non-commercial farm household	A farm household managing cultivated land of less than 30 ares, and earning less than 500,000 yen per year from sales of agricultural products
Agricultural holding other than farm household	A holding other than farm household managing cultivated land of 10 ares or more, or earning 150,000 yen or more per year from sales of agricultural products.
Agricultural service enterprise	An enterprise conducting farm work on contract (including enterprise other than agricultural holding, specializing in production and sale of seedlings).
Land tenure non-farm households	A household other than a farm household possessing 5 ares or more in cultivated land and abandoned cultivated land

(3) Farm household economics

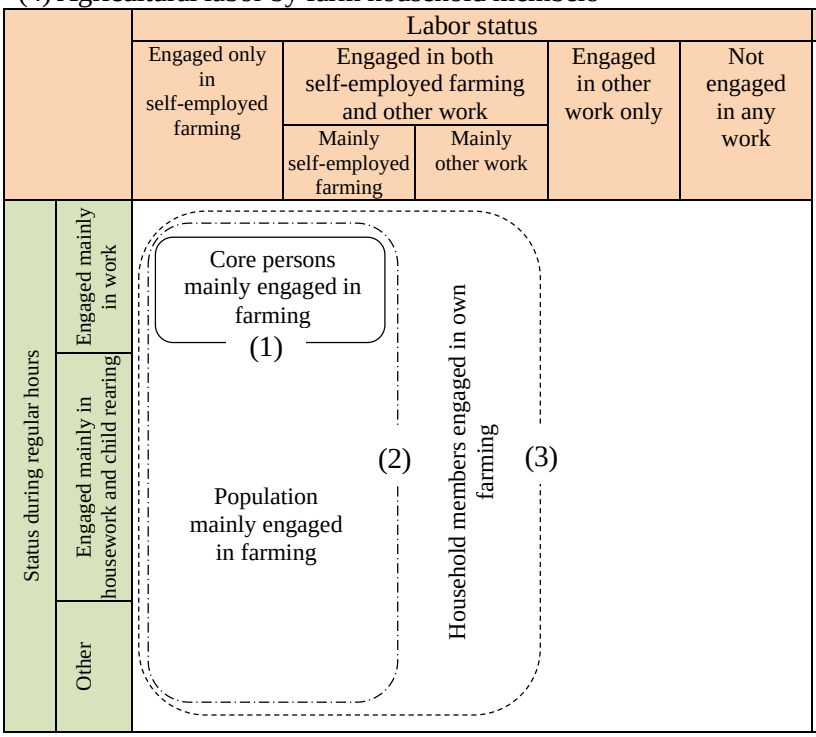
Terminology	Definition
Total income	Agricultural income + Income from agriculture-related production + Nonagricultural income + Income from pensions, etc.
Agriculture income	Gross agricultural income (total income from farming) – Agricultural expenditures (all expenses necessary for farming)
Income from agriculture-related production	Earnings from agriculture-related production (earnings from businesses such as agricultural processing, country inns, restaurants and tourist farms, which are related to agriculture and managed by individuals engaged in farming) - Expenditures from agriculture-related production (expenditures such as labor and material costs required for the aforementioned businesses)
Non-agriculture income	Non-agriculture earnings (e.g. earnings from independent part-time nonagricultural businesses, salaries and wages) - Non-agriculture expenses (e.g. expenses for independent part-time non-agricultural businesses, transportation expenses for commuting)
Production cost	The production cost is the total cost (combining property and labor costs) for production of farm products minus by-product values
Material cost	The material cost combines liquid goods costs (seeding, fertilizers, agricultural chemicals, heating, lighting, power and other materials costs) and depreciation costs for fixed goods (depreciable assets including buildings, automobiles, agricultural machines and production management equipment).
Land rent	The land rent for a crop subject to the survey is calculated by multiplying the actually paid farm rent by the contribution rate for the relevant crop.
Interest payment	Interest payments are classified by use of underlying loans and multiplied by a contribution rate for a crop subject to the survey to calculate the borrowed capital interest to be shouldered by the crop.
Family labor cost	The family labor cost is calculated by multiplying family working hours by an average hourly wage as computed based on wage data for business establishments with five to 29 workers in the construction, manufacturing and transportation/postal industries in the Monthly Labor Survey Report (by the Ministry of Health, Labor and Welfare).
Employed labor cost	The employed labor cost represents wages paid to workers employed on an annual, seasonal or daily basis for producing farm products. Boarding and material compensations are assessed based on market prices. The cost includes rewards paid separately from wages.
Equity capital interest	The equity capital interest is calculated by multiplying equity capital – gross capital minus debt capital – by an annual interest rate of 4%.
Rent for owned land	The rent for owned land is based on a rent for similar farmlands (having capabilities similar to the farmland for a crop subject to the survey) within the same region.

Relationship between agricultural expenditures and production cost



Note: Actually, by-product values are deducted from "production cost," "production cost counted in payment interest /land rent" and "production cost counted in capital interest/land rent."

(4) Agricultural labor by farm household members



Household member

As a rule, people who live and earn a living together

(1) Core persons mainly engaged in farming

Among household members involved in self-employed farming (population engaged mainly in farming), those who are working mainly in agriculture during regular hours.

(2) Population mainly engaged in farming

Persons engaged only in self-employed farming, or persons who are also engaged in work other than farming but spend more time engaged in farming on a yearly basis.

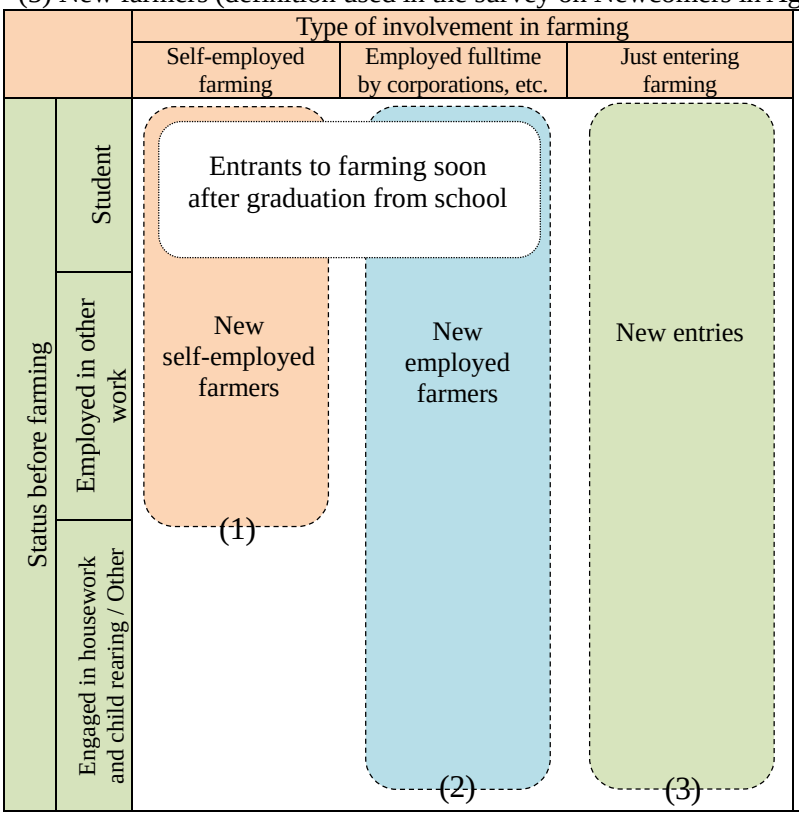
(3) Household members engaged in own farming

Household members 15 years old and over who are engaged in self-employed farming for more than one day per year.

- Full-time farmers

Among persons engaged mainly in farming, those who are engaged in self-employed farming for more than 150 days per year

(5) New farmers (definition used in the survey on Newcomers in Agriculture)



New farmers

Defined as individuals who fulfill one of the following conditions:

(1) New self-employed farmers

Members of farm households whose living status has changed anytime within a year of the survey date from “student” or “employed in other work” to “new graduate who has become a farmer” or “a new farmer who changed occupations”.

(2) New employed farmers

Persons engaged in farming who have been hired by corporations anytime within a year of the survey date and work for their employers for 7 months a year or more.

(3) New entries

Persons who have started farming anytime within a year of the survey date by securing land and funds on their own.

- Entrants to farming soon after graduation from school

Self-employed farmers who have changed their status from “student” to “engaged mainly in farming”, as well as employed farmers who were recently students.

(6) Classification of agriculture area

Terminology		Definition
Classification of agriculture area		Classification of former cities, wards, towns, and villages (hereinafter referred to as "municipalities") based on fundamental conditions (e.g. the rate of cultivated land or forest land and grazing land area, gradient of farmland) that define the structure of agriculture area.
	Category	Standard index (fulfills one of the following conditions)
	Urban area	- Former municipalities where the rate of DID is 5% or more of habitable land, and which have either a population density of 500 or more or have a DID population of 20,000 or more. - Former municipalities where the rate of residential area is 60% or more of habitable land, and which have a population density of 500 or more. Regions where the rate of forest land and grazing land are 80% or more of the total area are excluded.
	Flat farming area	- Former municipalities where the rate of cultivated land accounts for 20% or more of the total area and the rate of forest land and grazing land account for less than 50% of the total area. However, areas where the total area of all paddy fields with gradients of 1/20 or more and upland fields with gradients of 8° or more account for 90% or more of the total area are excluded. - Former municipalities where the rate of cultivated land accounts for 20% or more of the total area and the rate of forest land and grazing land account for 50% or more of the total area, and where the total area of all paddy fields with gradients of 1/20 or more and upland fields with gradients of 8° or more account for less than 10% of the total area.
	Hilly farming area	- Former municipalities other than urban and flat farming area where the rate of cultivated land is less than 20% of the total area. - Former municipalities other than urban and flat farming area where the rate of cultivated land is 20% or more of the total area
	Mountainous farming area	- Former municipalities where the rate of forest land and grazing land is 80% or more and the rate of cultivated land is less than 10% of the total area.

Notes: 1) Order of priority: Urban area → Mountainous farming area →Flat and hilly farming area
2) As a rule, DID (Densely Inhabited Districts) are defined as areas where basic district units, as defined by the national census, with populations densities of 4,000 per km^2 or more are adjacent to each other and the total population of these conjoined districts is 5,000 or more.
3) Gradient refers not to the gradient of cultivated land per parcel, but to the main topographical gradient as grouped land.
4) The combination of the hilly and mountainous farming area categories is referred to as hilly and mountainous area.
5) Former municipalities are those that were classified as of February 1, 1950.

(7) Agricultural regions nationwide

Agricultural region	Prefecture	Agricultural region	Prefecture
Hokkaido	Hokkaido	Kinki	Shiga, Kyoto, Osaka, Hyogo, Nara, Wakayama
Tohoku	Aomori, Iwate, Miyagi, Akita, Yamagata, Fukushima	Chugoku Sanin Sanyo	 Tottori, Shimane Okayama, Hiroshima, Yamaguchi
Hokuriku	Niigata, Toyama, Ishikawa, Fukui	Shikoku	Tokushima, Kagawa, Ehime, Kochi
Kanto/Tosan Northern Kanto Southern Kanto Tosan	 Ibaraki, Tochigi, Gunma Saitama, Chiba, Tokyo, Kanagawa Yamanashi, Nagano	Kyushu Northern Kyushu Southern Kyushu	 Fukuoka, Saga, Nagasaki, Kumamoto, Oita Miyazaki, Kagoshima
Tokai	Gifu, Shizuoka, Aichi, Mie	Okinawa	Okinawa

(8) Food self-sufficiency ratio and food self-sufficiency potential

Terminology	Definition
Food self-sufficiency ratio	This index indicates how much food for domestic consumption is being supplied by domestic sources. - Self-sufficiency ratio for individual items: The following equation is used to calculate the self-sufficiency ratio on a weight basis for individual items. Food self-sufficiency ratio calculation equation $\text{Self-sufficiency ratio} = \frac{\text{Domestic production volume}}{\text{Supply for domestic consumption}}$ $= \frac{\text{Domestic production volume}}{\text{Domestic production volume} + \text{Import volume} - \text{Export volume} \pm \text{Fluctuations in inventory}}$ - Total food self-sufficiency ratio: This ratio is an index for the total volume of food, and is expressed in both calorie basis and production value basis. Products made from domestic livestock raised with imported feed are not included in calculations. - Total food self-sufficiency ratio on calorie supply basis: Weight values for each item are converted to calories using the *Standard Tables of Food Composition in Japan* (2010), after which the calories of all items are totaled. This is equivalent to the ratio calculated by dividing the value for the sum of the domestic calorie supply per person per day by the value for the calorie supply per person per day. - Total food self-sufficiency ratio on production value basis: Weight values are converted to production values using farm gate prices and import prices from domestic agricultural price and trade statistics, after which all production values are totaled. This is equivalent to the ratio calculated by dividing the sum of the domestic production value of food by the total food supply value for domestic consumption. - Feed self-sufficiency ratio: This index indicates how much feed is being supplied by domestic sources, calculated in terms of total digestible nutrients (TDN) using the *Standard Tables of Food Composition.*
Food self-sufficiency potential	This concept expresses the potential capacity of food production in the Japanese agriculture, forestry and fisheries sector. The components of food self-sufficiency potential for agricultural production include agricultural resources such as farmland and irrigation systems, agricultural technology, and farmers. The components of the food self-sufficiency potential for fishery production include potential production amount and fishermen. ○ “Food self-sufficiency potential indicator” Based on the premise that farmlands are fully utilized and calorie efficiency is maximized, this indicator shows the amount of calories which could be supplied per person per day in the Japanese agriculture, forestry and fisheries sector. The indicator is comprised of the following four patterns. (Pattern A) When major grains such as rice, wheat and soybeans are mainly cultivated by maximizing the calorie efficiency with certain consideration to nutritional balance (Patten B) When major grains such as rice, wheat and soybeans are mainly cultivated by maximizing the calorie efficiency (Pattern C) When potatoes are mainly cultivated by maximizing the calorie efficiency with certain consideration to nutritional balance (Pattern D) When potatoes are mainly cultivated by maximizing the calorie efficiency

2. Basic Terminology

Abandoned cultivated land	Abandoned cultivated land represents a section in the statistical survey conducted by the Ministry of Agriculture, Forestry and Fisheries. In the Census of Agriculture and Forestry, it is defined as land that was cultivated in the past but has not been farmed for more than a year and will not be farmed for the next several years. Land that has not been farmed for more than a year but may be farmed in the next several years is called unplanted land and also includes cultivated land under management.
AFFrinnovation	AFFrinnovation means adding value to agricultural products, forest products and fishery products in an innovative way, making new combinations, or creating a value chain.
Agricultural irrigation facilities	These facilities are roughly divided into two types -- irrigation facilities for providing irrigation water for farmlands and sewerage facilities for discharging surplus surface and soil water at farmlands. Irrigation facilities include dams and other water storage facilities, water intake facilities such as weirs, drains, pumping facilities, circular tank diversion works, farm ponds and other water supply and distribution facilities. Sewerage facilities include drainage canals and drainage pump stations. In addition, there are water control facilities to monitor, control and operate irrigation and sewerage facilities.
Agricultural producers' cooperative corporation	According to the Agricultural Cooperative Act, more than three farmers are necessary to establish such as corporation. These corporations are meant to facilitate cooperation in agricultural production between cooperative members and increase common profit. There are two types of these corporations. One aims to establish communal facilities for equipment and resources or promote communalization of agricultural operations, and the other aims to manage a corporation agricultural business such as farming. Both are called agricultural producers' cooperative corporations.
Biomass	Biomass means organic resources of flora and fauna origin, excluding fossil resources. Biomass is made by organisms that create organic matter from inorganic water and CO2 through photosynthesis using solar energy falling on the earth. This type of resources is renewable throughout its life cycle as long as there are organisms and solar energy.
Calorie supply/Calorie intake	Calorie supply refers to the total amount of calories from food that is supplied to the public, and calorie intake refers to the total amount of calories actually consumed by the public. As a rule, the value for calorie supply is taken from the Food Balance Sheet issued by the Ministry of Agriculture, Forestry and Fisheries, while the value for calorie intake is taken from the National Health and Nutrition Examination Survey issued by the Ministry of Health, Labor and Welfare. Although it is necessary to keep in mind that calculations for both values are entirely different, since the calorie supply value includes leftovers and food destroyed in the distribution stage, the difference between this value and calorie intake can be used as an approximate measure of food wastes including food residue emerging inevitably in food industry processes, home food leftovers, etc.
Certified farmer (system)	The certified farmer system certifies plans for improving agricultural management drafted by farmers to attain targets for efficient and stable farm management in basic plans prepared by municipal governments to meet their respective conditions under the Agricultural Management Framework Reinforcement Act. For certified farmers, or those whose plans have been certified, various measures are primarily implemented, including low interest financing from the Super L loan system and other programs, measures to prevent mobilization of farmlands and infrastructure improvement efforts to support business farmers.
Cold chain system	A system where fresh foods are kept at a predetermined low temperature in the entire distribution chain from production to consumption.
Collaboration between cultivation and livestock farming	Collaborative efforts between crop farms and livestock farms, including efforts such as livestock farms supplying compost to crop farms producing rice and vegetables, or vice versa, and crop farms supplying livestock farms the feed and forage crops they have produced.

Community based farm cooperatives	These farm cooperatives consist of farming households in certain regions that have developed a relationship through the local community or other geographical bases. In these cooperatives, farming households conduct agricultural production as a collaborative enterprise. Adopting the three basic tenets of (1) aggregation of diverted paddy fields, (2) communal use of communally purchased equipment and (3) communalization of the entire farming process from production to marketing with farming leaders playing a central role. These cooperatives take different forms and approaches depending on their geographical location
Dilapidated farmland	A dilapidated farmland is a farmland that has been left uncultivated and dilapidated due to the abandonment of cultivation and is viewed objectively as unable to be used for growing crops with conventional farming methods.
Direct seeding (rice)	Direct seeding, where rice seeds are directly scattered into paddies, can skip seedling-raising and transplanting steps required for the conventional practices including transplanting. There are various direct seeding methods, which are roughly divided into two groups – flooded direct seeding where seeds are scattered into flooded paddies after plowing and soil pudding, and dry direct seeding where seeds are scattered into non-flooded paddies.
EPA/FTA	EPA stands for Economic Partnership Agreement and FTA for Free Trade Agreement. An FTA is a treaty between particular countries or regions created for the purpose of reducing and repealing tariffs on goods and services trade barriers. An EPA is a treaty that adds rules on investment and protection of intellectual property to the basic contents of an FTA in order to enhance a wider range of economic relations. Under the General Agreement on Tariffs and Trade (GATT), member countries are allowed to liberalize trade with EPA or FTA partners as an exception to most-favored nation status on the following conditions: (1) “abolishment of tariffs and other restrictive trade regulations” for “essentially all trade”, (2) abolishing such practices within a reasonable time frame (as a rule, within 10 years), and (3) refraining from enhancing tariffs and other trade barriers for nations other than EPA or FTA partners (under Article 24 and other sections of the General Agreement on Tariffs and Trade).
Externalization of our diet	An increase in double-income and single-member households, the rapid aging of population, the diversification of lifestyles and other factors have resulted in a trend where households depend more on outside sources for cooking and meal preparation that have traditionally been done at home. At the same time, the food service industry is exploring new markets by providing more processed foods and home meal replacements such as ready-to-eat dishes and lunch boxes in response to these changes in food consumption patterns. This trend is comprehensively referred to as externalization of our diet. (Refer to home meal replacement.)
Foot-and-mouth disease	An animal disease caused by FMD-virus which affects cloven-hoofed animals including cattle and pigs. FMD causes clinical signs such as vesicles/blisters on and within the mouth and feet which results in loss of productivity of infected animals. The fatality rate is several percent for adult stock but can exceed 50% for infant stock. Due to the disease’s rapid spread, high infectivity and the lack of effective treatments, the World Organization for Animal Health, OIE: Office International des Epizooties regards it as one of the most alarming infectious diseases. Meat of infected animals will not be placed on the market. Even if humans consume meat or milk of infected animals, the disease will not affect humans.
GDP	GDP stands for gross domestic product. GDP refers to the total of value added for all goods and services produced in a country within a designated time frame, which is usually one year. It is used as an index to measure domestic economic activity levels.
Genetic resources	Genetic resources are materials from all living things including plants, animals and micro-organisms that have actual or potential value. For example, they include plants used as materials for breeding in agriculture (including not only the latest varieties but also old varieties, and those that are considered to be potentially useful).

Good Agricultural Practice (GAP)	Good Agricultural Practices are continuous activities of improving agricultural production operations through the accurate implementation, recording, inspection and assessment of each process in agricultural production in line with checklists worked out according to relevant laws and regulations.
HACCP	HACCP (Hazard Analysis and Critical Control Point) is a management system in which food safety is addressed through the analysis and control of biological, chemical and physical hazards from raw material production, procurement and handling, to manufacturing, distribution and consumption of the finished product.
Highly pathogenic avian influenza	Avian influenza with high mortality in poultry is called highly pathogenic avian influenza (HPAI). Infection with HPAI virus causes systemic symptoms including neural, respiratory and/or digestive symptoms, and kills many poultry. There have been no reports on cases of human infection caused by poultry eggs or meat consumption in Japan to date.
Home meal replacement	Home meal replacements are between eating out at restaurants and preparing meals at home. They include commercially sold lunch boxes, ready-to-eat dishes and foods cooked and processed outside of the home that are consumed without being cooked or heated at school or at the workplace. These meals are perishable, and "home meal replacement" is also used as general term for them.
Idle farmland	An idled farmland meets either of two provisions in Item 1 Article 32 Agricultural Land Act. The first provision cites a farmland that is unused for cultivation and is expected to remain unused for the purpose. The second cites a farmland that is used far less than other farmlands in the vicinity.
Intensive use of farmland	This term means intensive use of farmland through ownership, lease, or consignment of agricultural operations.
Japanese dietary pattern	A nutritionally well-balanced dietary pattern, mainly eating rice, combined with various types of side dishes using fish, meat, milk/dairy foods, vegetables, seaweed, pulse, fruits and tea.
Local consumption of local products	The program for local consumption of local products is designed to expand the consumption of home-grown agricultural, forestry and fisheries products by promoting the utilization of local agricultural, forestry and fisheries products.
Multiple farming (entity)	Entity with less than 60% of the sales value of agricultural products is from the sales of the top sector.
NPO	NPO stands for non-profit organization. These organizations perform various activities to contribute to society and do not distribute profits to their members. NPOs are expected to play an important role in responding to diversified needs of society in various areas (including welfare, education, culture, community building, ecology and international cooperation). Organizations that have been incorporated through the Act to Promote Specified Nonprofit Activities are called non-profit corporations and are allowed to open bank accounts and lease office spaces under their respective organization titles.
Single farming (entity)	Entity with 80% or more of the sales value of agricultural products is from the sales of the top sector.
Soil diagnosis	Soil diagnosis examines the condition of the soil (e.g. measurements of phosphates, potassium and other soil components as well as pH and drainage capability), and based on the results makes specific recommendations such as the preferable type and amount of fertilizer. Soil diagnosis is meant to be a basic part of overall efforts to inform farms about their land and increase crop quality and quantity.
Value chain	A value chain is a process of adding value at each step of production, processing, distribution and sales that are organically connected to each other.

“WASHOKU; traditional dietary cultures of the Japanese”	In December 2013, the United Nations Education, Scientific and Cultural Organization registered “WASHOKU; traditional dietary cultures of the Japanese” as a UNESCO Intangible Cultural Heritage. “WASHOKU” is a social practice associated with food, embodying the Japanese people’s spirit of “respect for nature” with characteristics such as (1) various fresh ingredients and respect for their natural flavors, (2) nutritional balance that supports healthy diets, (3) emphasis on the beauty of nature and changing of seasons in the presentation and (4) deep ties to New Year's and other regular annual events. It is considered that Japanese people as a whole promote its protection and succession.

3. Multifunctional roles of agriculture, forestry and the fisheries

(1) Agriculture

Flood prevention by retention and storage of rainwater	Function to prevent/alleviate flood by temporarily collecting rainwater in paddy fields surrounded by ridges and cultivated field soil.
Landslide prevention	Function to prevent slope failure by detecting and repairing the failure of farmlands at an early stage through agricultural production activities in sloping farmlands, or to prevent landslides by holding down sudden rises in the groundwater level by allowing rainwater to permeate slowly underground through the cultivation of fields.
Soil erosion prevention	Function to prevent the erosion of soil caused by rainwater and wind, with the surface of water covering paddy fields or with the foliage and stems of crops in fields.
Water recharge	Rainwater and agricultural water for paddy fields seep underground and over time returns to the river, and water that seeps further below cultivates underground watersheds.
Water purification	Water purification is achieved the decomposition of organic material in paddy and dry fields, the absorption of nitrogen by crops, and the removal of nitrogen by microorganisms.
Processing of organic waste	Microorganisms within paddy and dry fields such as bacteria decompose livestock waste and compost made from household waste. The decomposed material is eventually reabsorbed by crops.
Climate mitigation	Crops growing on farmland absorb heat through transpiration and paddy fields absorb heat through water evaporation, resulting in lower climate temperatures.
Conservation of biodiversity	Rice paddies and upland fields are properly and sustainably managed to form and maintain a secondary natural environment with ecosystems rich in plants, insects and animals, etc. to secure biodiversity.
Formation of a good landscape	Agricultural activities combined with farmland, old farmhouses, surrounding water sources and mountains create attractive natural landscapes.
Maintenance of cultural tradition	Japan features many annual events and festivals which trace their origins to prayers for rich harvests. Agriculture plays a role in passing on these traditions to future generations.

(2) Forestry

Conservation of biodiversity	Forests inhabited by a wide variety of plants and animals contribute to conserving the diversity of genes, species and ecosystems.
Conservation of the global environment	Forests can adjust the natural environment on a global scale through transpiration and absorption of CO2 which causes global warming.
Prevention of landslide disasters and conservation of soil	Brush, fallen leaves and branches suppress soil erosion, and the network of roots from forest trees prevents landslides.
Watershed capabilities	Forest soil mitigates floods and stabilizes river flow by storing rainwater and moderating the volume of water running into rivers.
Formation of comfortable environments	Forests help form comfortable environments by moderating climate through transpiration, reducing wind shear and noise, adsorbing dust through tree crowns and alleviating the heat island phenomenon.

Benefits for health and recreation	Trees release volatile substances such as phytoncides that are known to directly improve health, and forests provide areas for sports and leisure.
Culture	As a foundation for the succession of culture and traditions, forest scenery plays a vital role in the shaping of the traditional Japanese outlook on nature, and they also provide a place for forest environment education and practical learning.
Material production	The ability of forests to produce a wide variety of materials including wood, extracts and various types of fungi

(3) Fisheries

Supplementary contributions of fishery to the nitrogen and phosphorus cycle	An appropriate level of fishery can help recycle nitrogen and phosphorus absorbed by marine wildlife through the food chain to land.
Conservation of coastal environments	Bivalve shellfish such as oysters and clams filter and purify seawater by feeding on organic suspension such as plankton.
Water purification	Mudflats and seaweed beds, and plants and animals that inhabit them purify seawater by decomposing organic matters, absorbing nutrient salts and carbon dioxide gas, and supplying oxygen.
Preservation of ecosystems	Appropriate fishery operations can contribute to preserving mudflats, seaweed beds and other ecosystems that provide inhabitation environments for a wide variety of water creatures.
Transfer of cultural assets such as traditional fishing practices	Cultural assets such as traditional fishing practices are passed down to future generations through the activities of people living in fishing villages.
Rescue operations in the event of marine emergencies	Fishery workers help emergency rescue operations when ships sink, capsize, become stranded, go adrift, collide or catch fire.
Rescue operations in the event of disasters	Fishery workers conduct emergency operations such as supply transportation and oil recovery during natural catastrophes, oil tanker accidents and other disasters.
Monitoring of coastal environments	The fisheries monitors abnormalities in coastal environments. For example, fishery workers assist in early detection of red tides, blue tides and jellyfish outbreaks.
Border monitoring	Activities to monitor illegal poaching of precious marine resources also protects the national interest by preventing smuggling and illegal immigration.
Functions related to providing places for exchange	The mariner industry can provide places for leisure such as marine recreation facilities and places to learn the importance of nature.