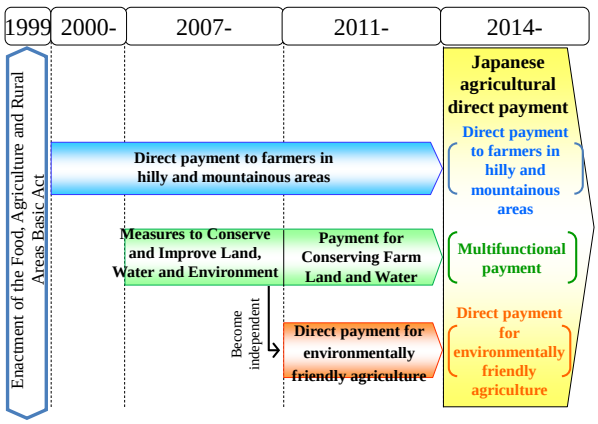
1 Maintaining and demonstrating multifunctional roles of agriculture and rural areas

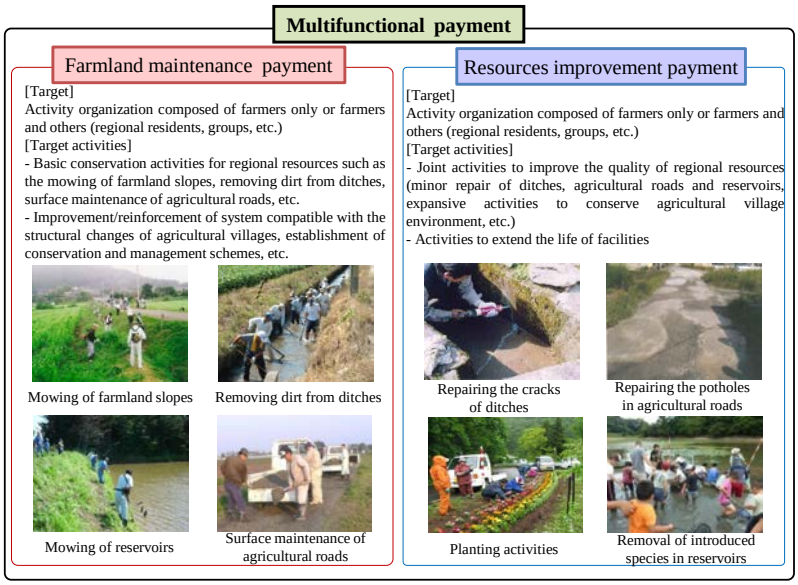
- Agriculture and rural areas have various roles including not only food supply but also national land conservation, water recharge, biodiversity conservation, good landscape formation and cultural succession. The entire people have benefitted from these roles.
- In order to maintain and demonstrate 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

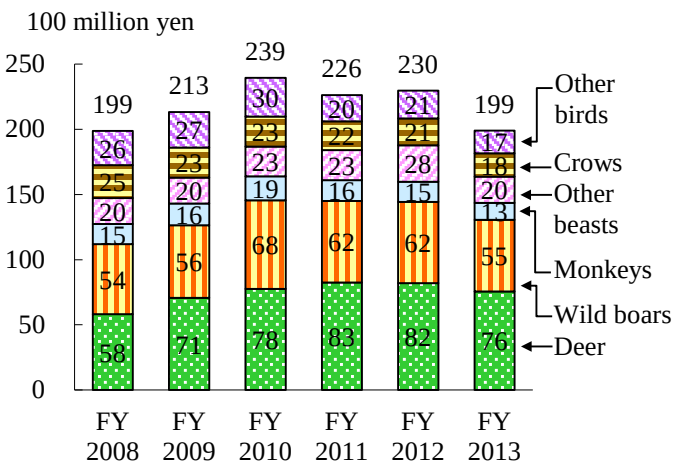


Source: MAFF

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

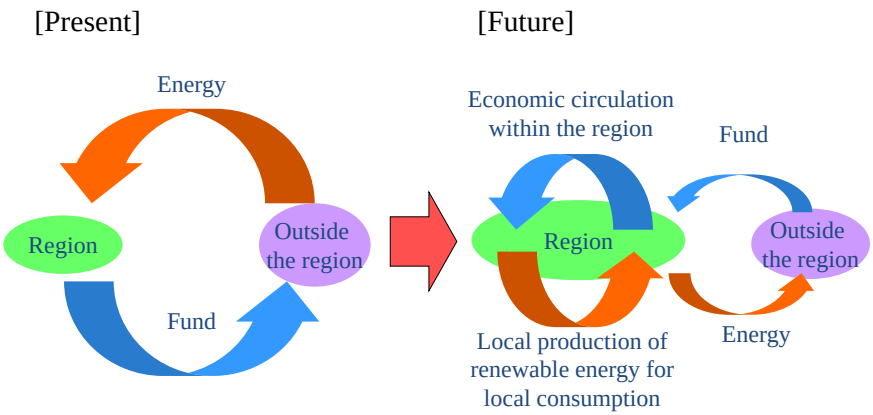
	Total number of municipalities	Number of municipalities having prepared damage prevention plans*	Number of municipalities having established damage prevention measure implementation teams
April 2008	1,741 (As of April 1, 2014)	40	0
April 2009		724	33
March 2010		933	58
April 2011		1,128	87
April 2012		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

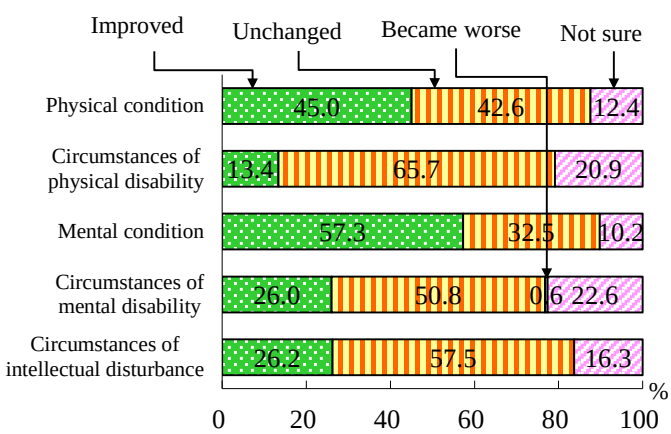
- Measures such as the exploration of new tourism demand through a combination of green tourism and other types of tourism, reinforcement of information transmission, and efforts to attract tourists from abroad to rural areas are promoted in order to realize the vitalization of rural community and a 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

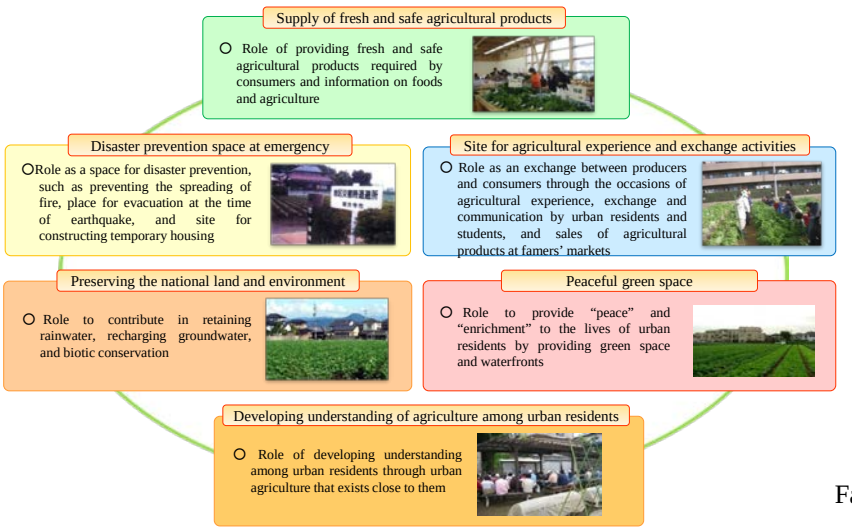


Source: "Investigative Research Report on Collaboration Between Agriculture and Welfare" by Japan SELP Center, a specified non-profit corporation (Published in March 2014)

5 Promotion of urban agriculture

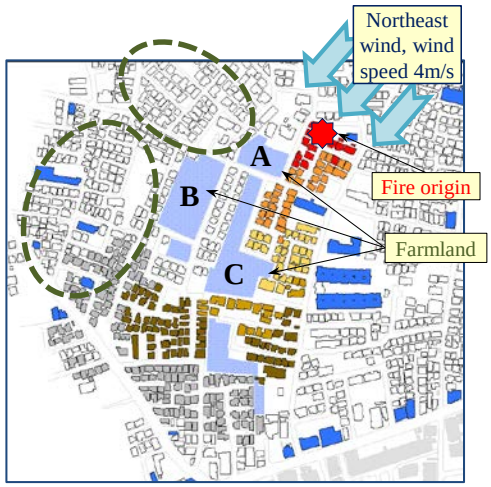
- Urban agriculture plays various roles including the provision of fresh farm products and green and farming experiences and has growingly been expected over recent years to help prevent disasters.
- Urban residents seek health improvement and development of motivation for life through agricultural experience, 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

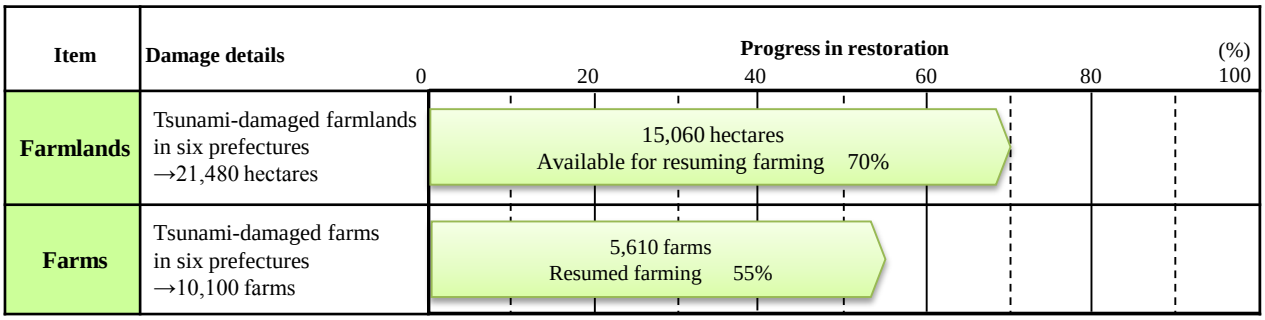
Source: "Report on the Promotion of Urban Agriculture" by the Rural Development Planning Commission (Published in March 2013)

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



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.

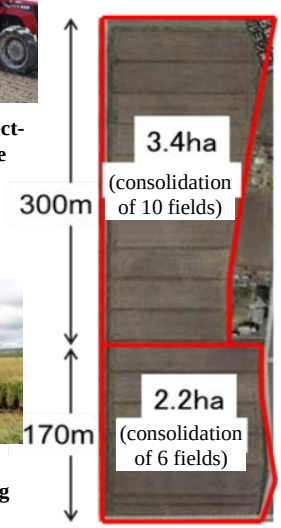
- MAFF will combine many advanced technologies in agriculture, forestry and fisheries that have been developed in industry, academia and government, to implement demonstration studies in Iwate, Miyagi and Fukushima prefectures. At the same time, it will promote the extension /practical utilization of 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

GPS leveler

Field leveling system



Understanding the yield per field using yield combine

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.

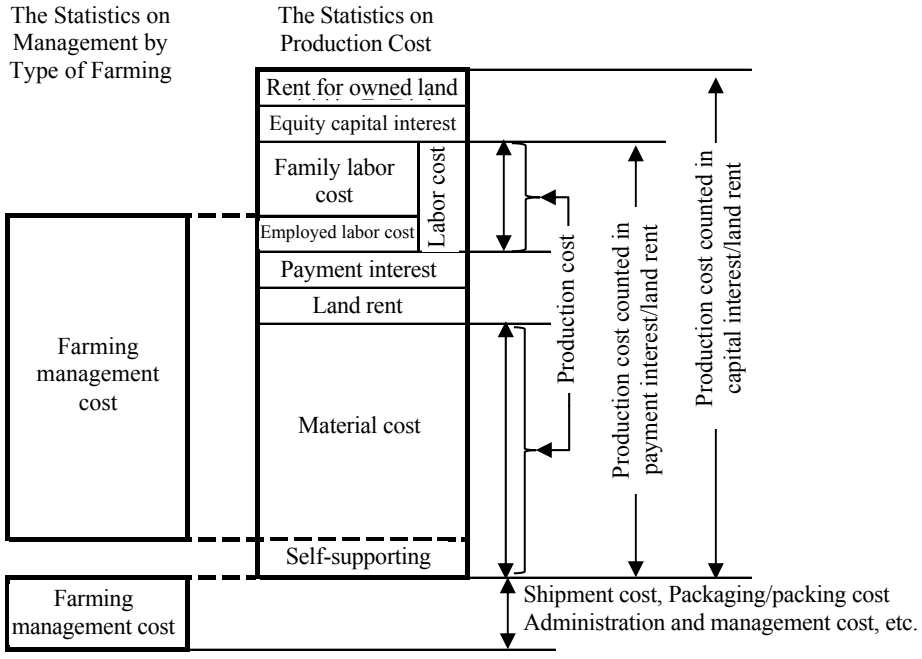
(2) Classification of farm households (definitions used since the 1990 World Census of Agriculture and Forestry)

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

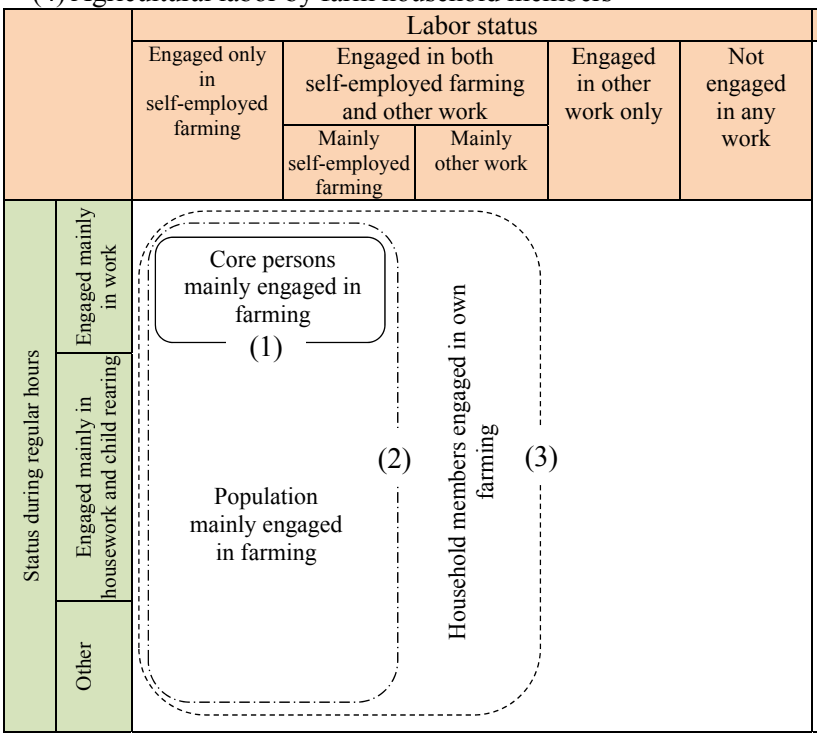
Terminology	Definition
Total income	Agricultural income + Income from agriculture-related production + Nonagricultural income + Income from pensions, etc.
Agriculture income	Gross agricultural income (total income from farming) – Agricultural expenditures (all expenses necessary for farming)
Income from 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.

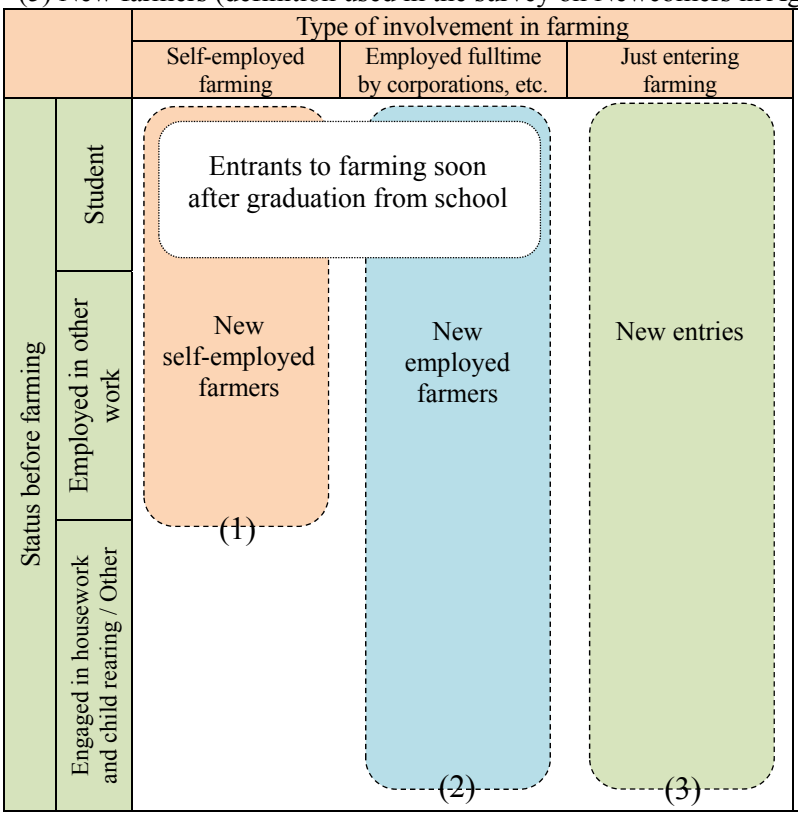
(3) Household members engaged in own farming

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.