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. All people, including urban residents, have benefitted from these roles.

○ In order to maintain and demonstrate these multifunctional roles, the government steadily implements Japanese agricultural direct payments (multifunctional payment, direct payment to farmers in hilly and mountainous areas, direct payment for environmentally friendly agriculture) to support regional cooperation backing such roles, agricultural production in hilly and mountainous areas and effective farming for environmental conservation.

Outline of the Japanese agricultural direct payment system

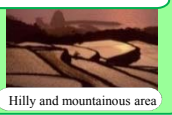
Multifunctional payment

[Farmland maintenance payment]
Supporting local resources conservation activities including agricultural road surface maintenance

[Resource improvement payment]
Supporting simple repair of channels, agricultural roads and ponds, and other cooperative activities to qualitatively improve local resources

Direct payment for hilly and mountainous areas

Supporting the continuation of agricultural production in hilly and mountainous areas

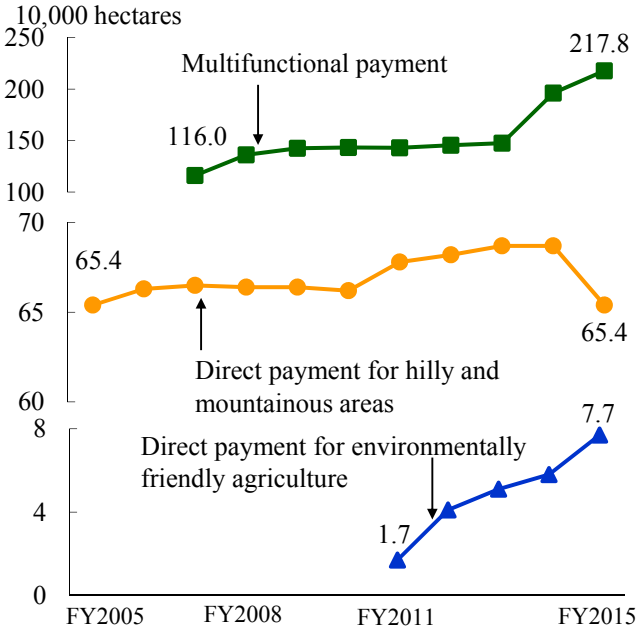


Direct payment for environmentally friendly agriculture

Supporting agricultural production activities contributing to natural environment conservation

Source: MAFF

Changes in total area for initiatives subject to the Japanese agricultural direct payment system



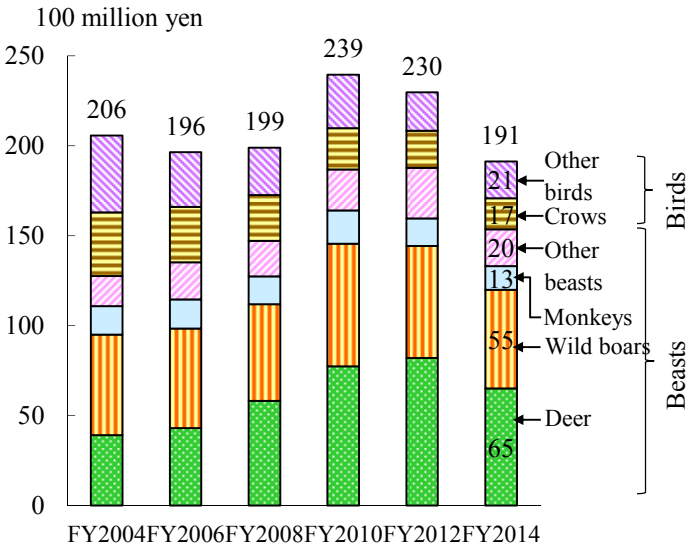
Source: MAFF surveys

2 Responding to wildlife damage

○ Annual wildlife damage to farm products has remained around 20 billion yen in recent years. Such damage discourages farmers from continuing farming and encourages them to retire, bringing about more serious impacts than indicated by the damage value.

○ While most wild animals captured to prevent wildlife damage are buried or incinerated, moves have made progress in recent years to utilize these wild animals as game meat for sales to restaurants and supermarkets.

Changes in crop damage by wildlife



Source: MAFF surveys

Branded game meat

Akan Green Farm in Akan, Kushiro, Hokkaido Prefecture, developed a meat processing facility with thorough sanitation and quality control and acquired the HACCP (Hazard Analysis and Critical Control Point) certification in 2005. The farm has secured stable Yezo sika venison supply by keeping deer captured with enclosure trapping at a ranch as well as receiving deer captured for wildlife damage prevention. It processes some 1,500 deer annually. Yezo sika venison processed at the facility has been branded. The farm has also developed canned Yezo sika venison, soup curry and other products, integrating meat processing and sales.

Yezo sika venison has been provided, in a traceable manner, to consumers in Hokkaido and to restaurants inside and outside the prefecture, establishing its position as a new regional resource.

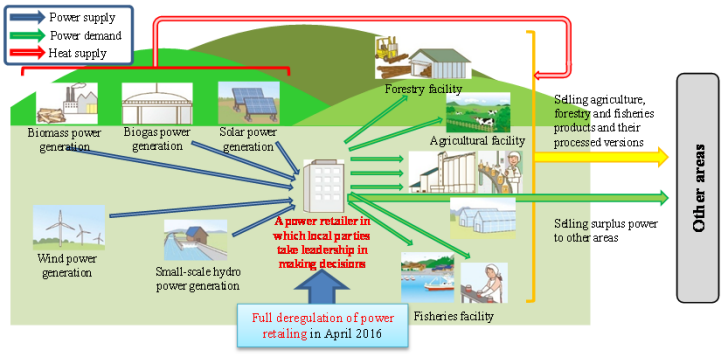
Branded Yezo sika venison

3 Proactive utilization of local resources

○ Abundant local resources in rural areas should be utilized as renewable energy under the local leadership. Such energy should be locally produced and consumed to invigorate rural areas.

○ Development of "Biomass Industrialized Area" which aim to create an eco-friendly community resilient to disasters, is promoted through the encouragement of industrialization utilizing regional biomass.

A rural area's future local production and consumption of renewable energy



Source: MAFF

Biogas power generation facility using local resources

In Hokkaido Prefecture's Betsukai Town, which is one of the biggest dairy farming areas in Japan and was selected as a biomass industrialized area in 2013, a biogas power generation facility using locally provided domestic animal wastes was completed in FY2015 under a core project of the Betsukai Town biomass industrialized area scheme.

The facility's design capacity is about 9,600 megawatt-hours per year covering 44.2% of power consumption by the town's 6,360 households. The facility is one of the largest biogas power plants using domestic animal wastes in Japan.

The facility plans to sell local dairy farmers digested slurry as by-products of fermentation, contributing to local dairy farming. Betsukai Town plans to continuously cooperate with the company in creating local jobs and revitalizing the area.

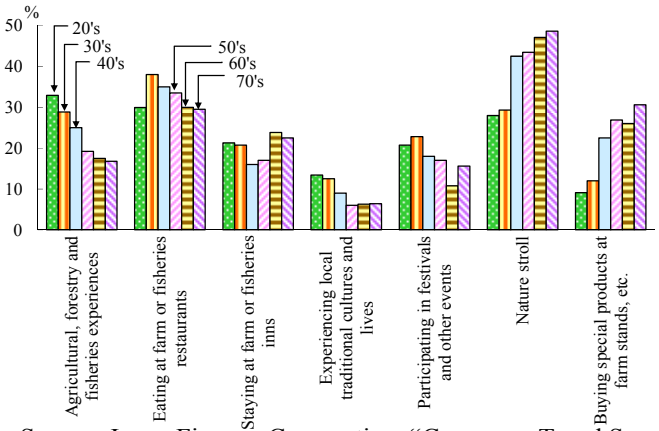
Biogas power plant

4 Exchanges between urban and rural areas through collaboration with various sectors

○ Rural areas have various attractions for urban residents. The number of people staying at farm-inns has been rising along with the number of such inns. The younger generation is more interested in farming experiences.

○ It is important to attract people to rural areas through exchanges between various fields such as education and welfare to trigger the creation of new business operations.

How to spend leisure time in rural areas – a breakdown by age group



Source: Japan Finance Corporation, "Consumer Trend Survey --1st half, FY2014" (released in September 2014)

Exchanges through experience-based educational tours

Suo-Oshima Town in Yamaguchi Prefecture established a Suo-Oshima experience-based tourism promotion council in 2008, launching the acceptance of experience-based educational tours.

Experiences including harvesting the special local product of orange were combined with staying at farm or fisheries inns for these tours, attracting 3,674 students in FY2015. The experience-based tours have won high ratings by participating students, school teachers and tour-accepting farming households.

Orange harvesting experience

Persons with disabilities play active roles in farming

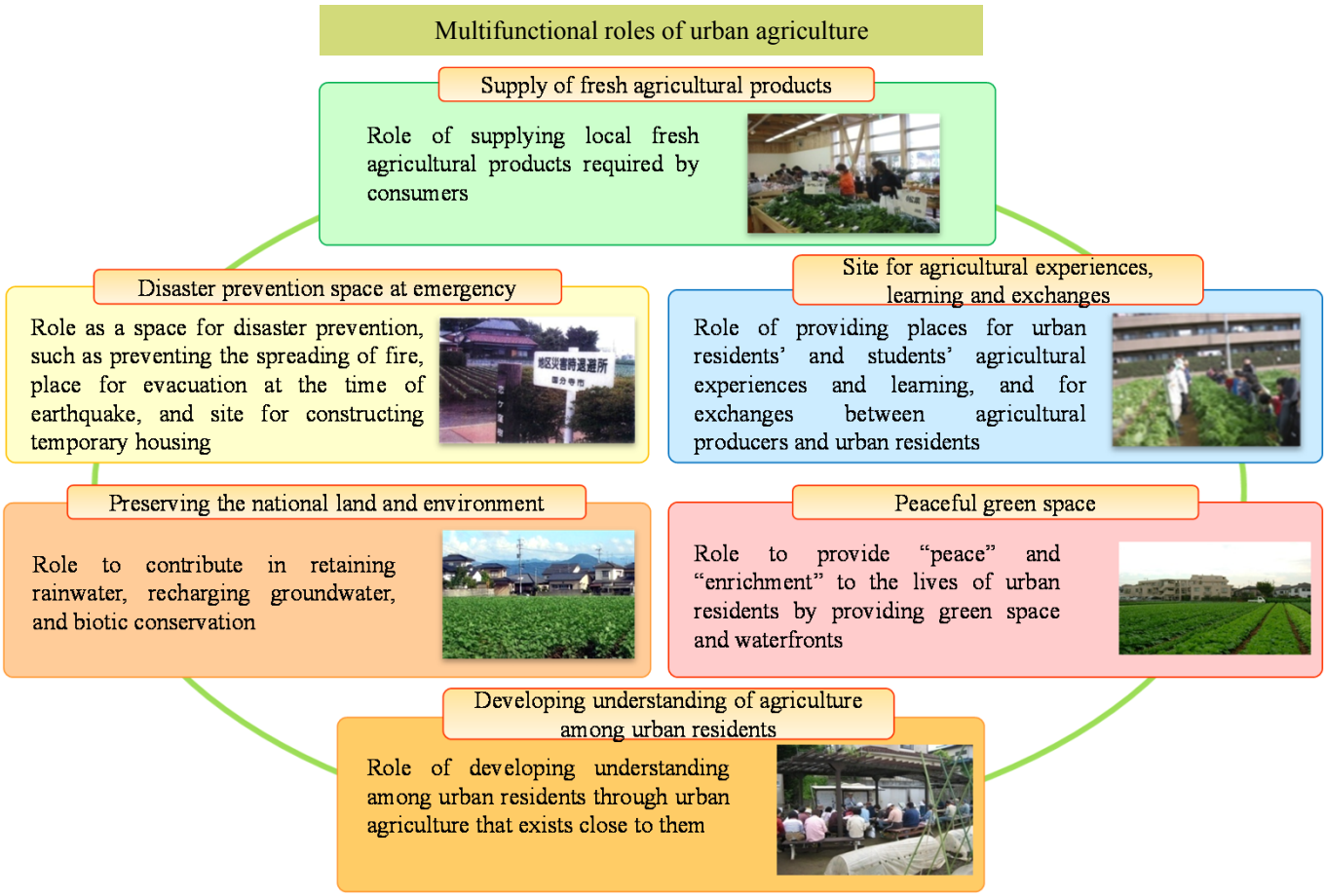
Social welfare corporation E.G.F. in Hagi City of Yamaguchi Prefecture runs a program in which persons with disabilities are engaged in seeding, harvesting and processing for melons, strawberries and vegetables according to their abilities. E.G.F. pursues genuine product manufacturing rather than subcontracting, offering a 2,500-yen pack of 12 organic strawberries and hand-peeled chestnuts in high demand. It makes strong sales efforts, selling farm products and their processed versions. Local residents seeing working persons with disabilities have increasingly asked E.G.F. to use their farmland. (Selected in the 2nd Discover Countryside Treasures in Japan)

People in farming operations

5 Promotion of urban agriculture

○ Urban agriculture plays various roles including the production and supply of fresh agricultural products, the provision of disaster prevention space, the formation of good landscapes, the conservation of the national land and environment, and the provision of farming experience sites.

○ Basic Act on Promotion of Urban Agriculture, which took effect in April 2015, provides a basic philosophy for providing these various functions and calls for creating the Basic Plan for Promoting Urban Agriculture to push necessary policy measures.



Source: MAFF

Activities of a young farmers' group in a suburban area

Six local farming successors in their 20's in Yokosuka City of Kanagawa Prefecture formed a group called "Wakozu" (young cultivators) in November 2012. While producing the special local products such as cabbage and other vegetables, the group takes advantage of urban agriculture close to consumption areas for conducting proactive exchanges with consumers, shipping agricultural products to local farm posts and restaurants. In the area, some consumers are making a point of buying vegetables produced by the visible Wakozu, while some restaurants offer dishes using Wakozu vegetables. Producers and consumers have thus developed mutually beneficial relationships.
The Wakozu are attracting attention as a group of young suburban farmers who proactively use blogs and social networking services to provide information from the viewpoint of young farmers.

Wakozu

1 Earthquake and tsunami damage and restoration/reconstruction efforts

(1) Farmland/farming facility restoration

- ○ 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 15,920ha (74%) by the end of January 2016. Restoration projects will continuously be implemented according to schedule in FY2015 and after, while also promoting expansion of the segmentation of farmland.
- ○ Of the 98 major drainage pump stations required to be restored, restoration has been completed or is being implemented for 91 stations (93%).

Farmland/farming facility restoration conditions (at the end of January 2016)

Item	Damage details	Progress in restoration (%) (0 / 20 / 40 / 60 / 80 / 100)
Farmland	Tsunami-damaged farmland in six prefectures →21,480ha	15,920ha Available for resuming farming: 74%
Major drainage pump stations	98 drainage pump stations required to be restored	91 stations Restored or being restored: 93%

Source: MAFF

(2) Agriculture reconstruction

- ○ The number of farms in the three most damaged prefectures stood at 139,000 in 2015, down 22.5% from 2010 before the 2011 disaster. Meanwhile, the number of corporation farms in the three prefectures came to 2,007 in 2015, up 29.3% from 2010.
- ○ To resume farming and recover farming income, local farmers must introduce cooperative, large-scale and other new farming and distribution systems, as well as new product items and advanced production and management know-how, and address sales challenges including the exploration of new buyers.

Number of farms in the three most damaged prefectures

(Unit: Farms)

	Farms	
		Corporation farms
2010	179,396	1,552
2015	139,022	2,007
Change (%)	-22.5	29.3
(Reference) [Nationwide] change (%)	-18.0	25.3

Source: MAFF, "2015 Census of Agriculture and Forestry"

Food-attached information journal linking producers and consumers in disaster-affected areas

Tohoku Kaikon, a specified non-profit corporation in Hanamaki City, Iwate Prefecture, launched "Tohoku Taberu Tsushin" as a food-attached information journal in July 2013.
The Tohoku Region, while proceeding with reconstruction after the disaster, is plagued with problems such as difficult lives for farming successors and farmers' unwillingness to have children inherit farming.
Representative Director Takahashi thought that linking separated producers to consumers through information would be the key to revitalizing the primary industry and started a "food reform for social reform" initiative. Believing that informing consumers of the value of food products and of what goes on behind the scenes during production, rather than selling them alone, would lead consumers to eat these products with passion, Takahashi created the journal. Takahashi plans to continuously link producers to consumers through the journal and promote initiatives for leading urban consumers to visit rural areas.

Tohoku Taberu Tsushin


Tohoku Kaikon members

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 allow only agricultural and livestock products with radiation readings below the safety standards to be distributed, the government has combined radioactive material reduction and absorption restriction measures with post-harvest inspections to secure safety. These initiatives have substantially reduced agricultural and livestock products that exceed the safety standard levels for radioactive materials. The numbers of products and areas subject to shipment restrictions have declined.

Promoting local chicken for reconstruction

Kawamata Town in Fukushima Prefecture has developed the Kawamata Shamo gamecock, which is juicy and rich while just as resilient as ordinary gamecocks. It has launched a public corporation for producing baby birds and processing and selling gamecock products, which has built a stable shipment system along with 14 farming households that grow the gamecocks.

Due to the Fukushima Daiichi Nuclear Plant accident triggered by the Great East Japan Earthquake, however, Kawamata Shamo sales in the year after the disaster year plunged 40%. The corporation developed indoor poultry growing facilities and conducted steady sales promotion to explore new sales channels. In 2014, shipments totaled about 65,000 birds, exceeding the pre-disaster level, with the sales value recovering. In the town, many "Kawamata Shamo" banners are seen, with the chicken established as a material for ramen noodles and *oyakodon*, a bowl of rice topped with broiled chicken and eggs.

In the future, the town plans to promote the Kawamata Shamo for reconstruction under the annual sales target of 80,000 birds.

Kawamata Shamo being grown

Ratios of agricultural and livestock products exceeding radioactive safety standards (17 prefectures)

(Unit: %)

Category	Until the end of FY2011	FY2012	FY2013	FY2014	FY2015
Rice	2.2	0.0008	0.0003	0.00002	0
Wheat and barley	4.8	0	0	0	0
Pulse	2.3	1.1	0.4	0.1	0
Vegetables	3.0	0.03	0	0	0
Fruits	7.7	0.3	0	0	0
Tea	8.6	1.5	0	0	0
Other cultivated plants (including buckwheat)	3.2	0.5	0	0	0.1
Raw milk	0.4	0	0	0	0
Meat and eggs (excluding wildlife meat)	1.3	0.005	0	0	0

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

Note: As of March 28, 2016

○ Given lingering harmful rumors about food products, the government enhanced countermeasures against harmful rumors by promoting measures against polluted water and disseminating accurate radiation risk information in Japan and other countries.

○ Many foreign countries and regions tightened their import control measures on Japanese agricultural, forestry and fisheries products including food due to the Fukushima Daiichi nuclear power plant accident. As a result of negotiations with those countries and regions, some of them have relaxed or abolished these control measures.

Major initiatives under principles for strengthening countermeasures against harmful rumors and their future directions

Principle 1. Remove the source of harmful rumors

Thorough implementation of radiation tests based on the world's toughest standards.

As in the past, products exceeding the safety standards will not be allowed to enter the market.

Principle 2. Provide accurate and plain information to prevent rumors

Four years after the disaster, more than 400 meetings have been held for exchange of opinions

MAFF will continuously provide accurate and plain information in cooperation with other relevant government agencies and local governments.

Principle 3. Support industries suffered from harmful rumors

・The total number of "Eat to Support" initiatives reached 1,106 by the end of March 2015.
・Distributors are advised to negotiate with local agricultural cooperatives.

・Distributors will be requested to restore shelves for products from disaster-affected areas.
・The government will continue to explain and make requests to relevant foreign countries to remove their import restrictions.

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

Example of countries and regions which have relaxed or abolished their import control measures

[US] April, May and August 2015, January, February and March 2016
Import suspension (Fukushima and 3 other prefectures) → removal (some items)
[Thailand] May 2015
Lifting restrictions (excluding those on some wild animals)
[Russia] July 2015
Import suspension (fisheries products from 8 prefectures) → Lifting suspension for Aomori Prefecture (allowing imports with inspection certificates)
[EU] January 2016
Reducing areas and products subject to certificates of inspection and origin (excluding vegetables and fruits [other than persimmon], livestock products, soba noodles, tea, etc. in Fukushima Prefecture from those subject to certificates of inspection)
[India] February 2016
Lifting restrictions

* As of March 2016, 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 FY2016 Measures for Food, Agriculture and Rural Areas

Summary

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

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

- Initiatives to maintain and improve Japan's food self-sufficiency potential and ratio
- 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 and nutrition 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.

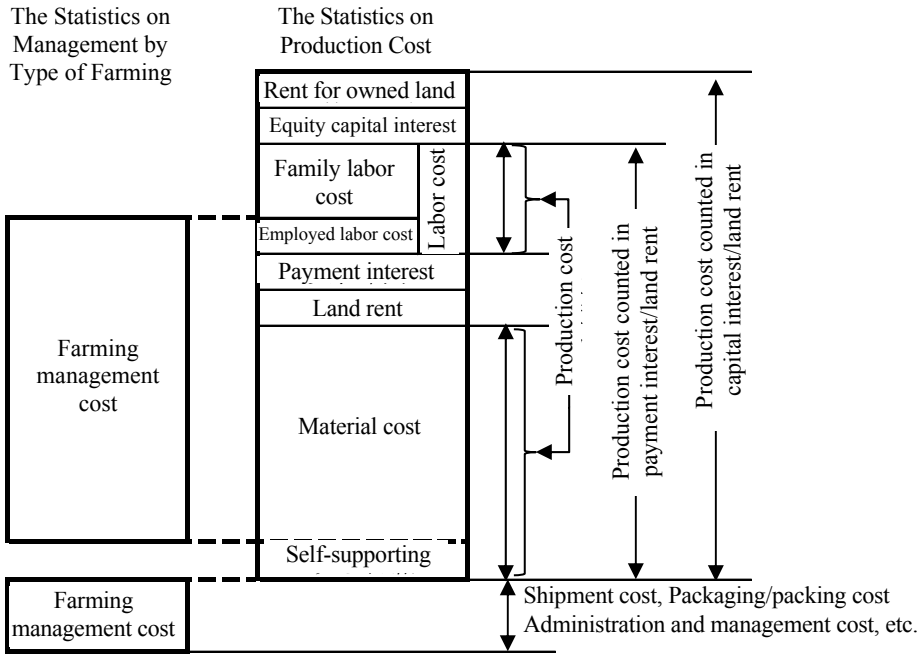
(2) Classification of farm households (definitions used since the 1990 World Census of Agriculture and Forestry)

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

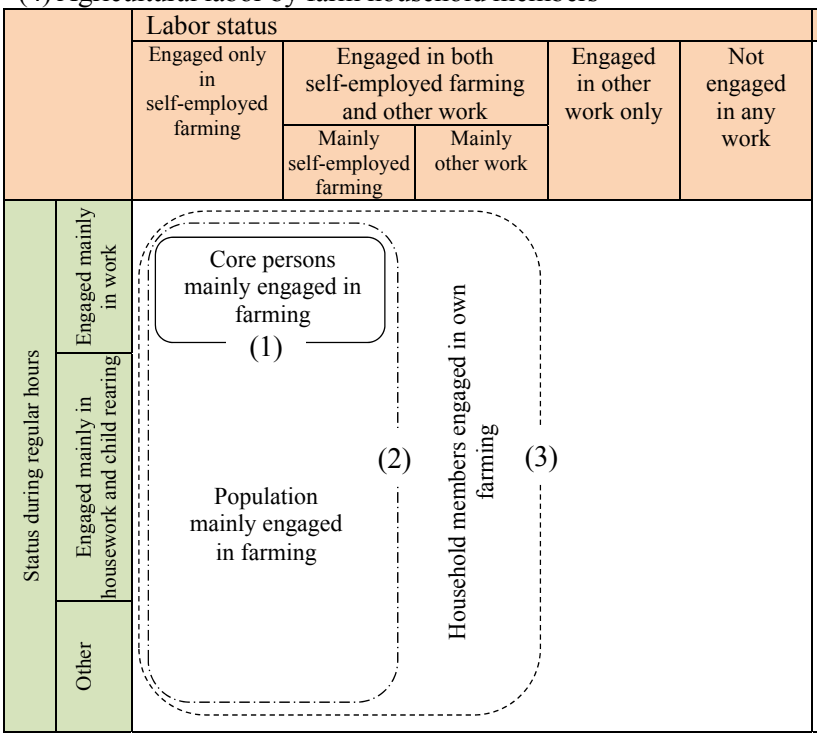
Terminology	Definition
Total income	Agricultural income + Income from agriculture-related production + Nonagricultural income + Income from pensions, etc.
Agriculture income	Gross agricultural income (total income from farming) – Agricultural expenditures (all expenses necessary for farming)
Income from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

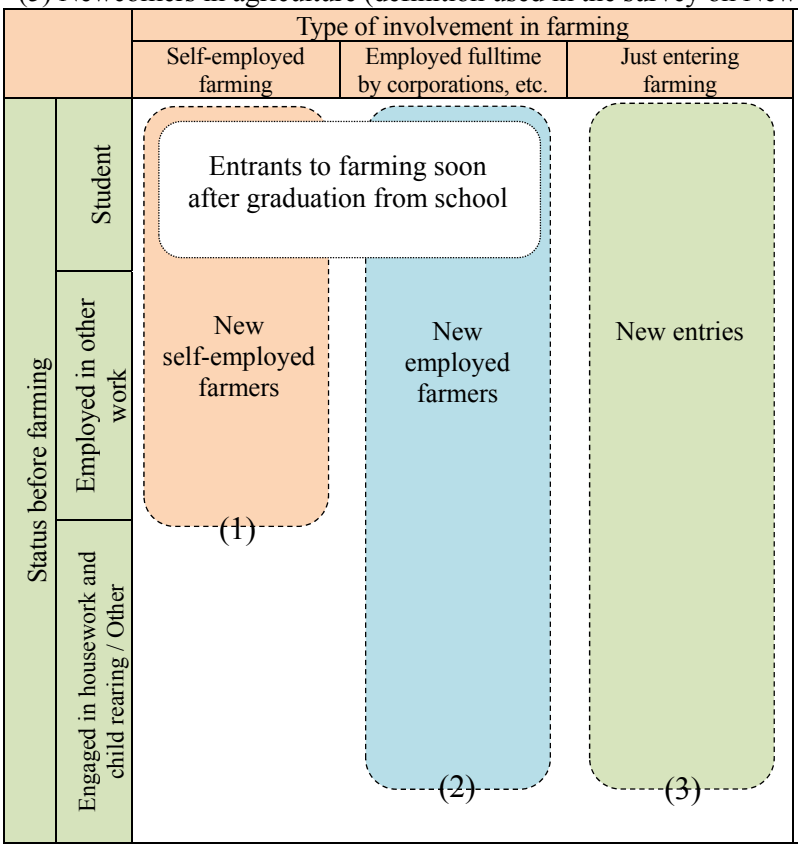
(3) Household members engaged in own farming

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) Newcomers in agriculture (definition used in the survey on Newcomers in Agriculture)



Newcomers in agriculture

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 responsible for farming started anytime within a year of the survey date by securing land and funds on their own, and their partners

- 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) Designated areas under rural promotion acts

Terminology	Definition
"Designated rural areas" under the Act for the Promotion of Infrastructure Development for Vitalization of Agriculture and Forestry in Designated Rural Areas	(Designated rural areas meet any of the first, second and third conditions, and the fourth one below) 1 Paddies on slopes with a gradient of one-20th or more account for 50% or more of the total paddy area that captures 33% or more of the total cultivated land. 2 Upland fields on slopes with a gradient of 15 degrees or more account for 50% or more of the total upland field area that captures 33% or more of the total cultivated land. 3 The ratio of forest and grazing land is 75% or more. 4 Agricultural and forested areas account for 81% or more of the total land area, or persons engaged in agriculture or forestry account for 10% or more of the population aged 15 or more, etc.
"Developing mountain villages" under the Mountain Villages Development Act	○ The ratio of forest and grazing land is 75% or more (1960 forestry census). ○ Population density is 1.16 persons per hectare or less (1960 forestry census), etc.
"Underpopulated areas" under the Act on Special Measures for Promotion for Independence for Underpopulated Areas	Underpopulated areas meet any of the first to three conditions below: 1 Meeting (1) and (2) (1) Population requirement: Any of the following is met 1) Population decline from 1960 to 1995 was 30% or more. 2) Population decline from 1960 to 1995 was 25% or more and the ratio of elderly people (aged 65 or more) in 1995 was 24% or more. 3) Population decline from 1960 to 1995 was 25% or more and the ratio of young people (aged between 15 and 29) in 1995 was 15% or less. 4) Population decline from 1970 to 1995 was 19% or more. In cases 1), 2) and 3), however, communities with a population decline of 10% or more over 25 years from 1970 to 1995 are excluded. (2) Financial capability requirement: The three-year average financial capability index between FY1996 and FY1998 was 0.42 or less, and income from public racing was 1.3 billion yen or less. 2 Meeting (1) and (2) (1) Population requirement: Meeting any of the conditions below: 1) Population decline from 1960 to 2005 was 33% or more. 2) Population decline from 1960 to 2005 was 28% or more and the ratio of elderly people (aged 65 or more) in 2005 was 29% or more. 3) Population decline from 1960 to 2005 was 28% or more and the ratio of young people (aged between 15 and 29) in 2005 was 14% or less. 4) Population decline from 1980 to 2005 was 17% or more. In cases 1), 2) and 3), however, communities with a population decline of 10% or more over 25 years from 1980 to 2005 are excluded. (2) Financial capability requirement: The three-year average financial capability index between FY2006 and FY2008 was 0.56 or less, and income from public racing was 2.0 billion yen or less. 3 Meeting (1) and (2) (1) Population requirement: Meeting any of the conditions below: 1) Population decline from 1965 to 2010 was 33% or more. 2) Population decline from 1965 to 2010 was 28% or more and the ratio of elderly people (aged 65 or more) in 2010 was 32% or more. 3) Population decline from 1965 to 2010 was 28% or more and the ratio of young people (aged between 15 and 29) in 2010 was 12% or less. 4) Population decline from 1985 to 2010 was 19% or more. In cases 1), 2) and 3), however, communities with a population decline of 10% or more over 25 years from 1985 to 2010 are excluded. (2) Financial capability requirement: The three-year average financial capability index between FY2010 and FY2012 was 0.49 or less, and income from public racing was 4.0 billion yen or less.
"Peninsula promotion measures implementation area" under the Peninsula Promotion Act	○ An area that is surrounded by sea in three directions, has lagged behind other areas in developing industrial infrastructure and a living environment due to less flatland, poor water resources and other constraints on national land resources use, covers two or more municipalities and has certain social and economic sizes.
"Remote island development measures implementation area" under the Remote Islands Development Act	○ A remote island area where measures are recognized as required to promote the independent development of a remote island playing key roles in maintaining Japan's territory and exclusive economic zone, using marine resources and conserving natural environments and to stabilize livelihoods for island residents and improve their welfare.

(8) 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

2. Basic Terminology

AFFrinnovation	AFFrinnovation means initiatives for agriculture, forestry and fisheries operators to voluntarily cooperate with others to comprehensively and integrally promote agriculture, forestry and fisheries as the primary industry, manufacturing as the secondary industry and retailing as the tertiary industry to utilize regional resources for producing new added value.
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.
Agricultural production legal person (or corporation)	This is a legal person that can acquire rights to farmland and satisfy all of the following requirements: (1) Requirements for incorporation (a stock corporation [not a publicly traded company], a membership company or agricultural producer's cooperative corporation), (2) Requirements for business operations (main business is farming), (3) Requirements for members of the corporation (farming people account for at least three quarters of the voting rights), (4) Requirements for executives (the majority of executives are engaged in farming full time).
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.
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.
Farmland concentration and intensification	Farmland “concentration” means owning or leasing farmland to expand farmland for utilization. Farmland “intensification” means exchanging farmland use rights to allow farming to be conducted continuously without difficulty.
Food security	As for food security in Japan, the Food, Agriculture and Rural Areas Basic Act states, “Even in the case that domestic supply is insufficient to meet demand or is likely to be for a certain period, due to unexpected situations such as a bad harvest or interrupted imports, the minimum food supply required for the people shall be secured in order not to be a hindrance to the stability of peoples' lives and smooth operation of the national economy.” As for global food security, meanwhile, the Food and Agriculture Organization (FAO) states, “Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life.” This widely accepted definition points to the following dimensions of food security: the availability of sufficient quantities of food of appropriate quality, supplied through domestic production or imports (food availability), the legal, political, economic and social entitlements of individuals to access foods for a nutritious diet (food access), utilization of food through adequate diet, clean water, sanitation and health care to reach a state of nutritional well-being where all physiological needs are met (utilization), and stable access to adequate food at all times for a population household or individual (stability).
Food self-sufficiency potential	This concept expresses the potential capacity of food production in the Japanese agriculture, forestry and fisheries sectors. The components of the food self-sufficiency potential for agricultural production are agricultural resources such as farmland and irrigation systems, agricultural technology, and people engaged in farming. The components of the food self-sufficiency potential for fishery production are potential production volume and people

	engaged in fishery. ○ "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
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 Feed Composition.*
Foot-and-mouth disease	An animal disease caused by Foot-and-mouth disease 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 mortality rate is several percent for adult animals but can exceed 50% for young animals. Due to the rapid spread, high infectivity and the lack of effective treatments, the World Organization for Animal Health (OIE) regards it as one of the most important infectious diseases. Meat of infected animals will not be placed on the market. The meat and milk derived from infected animals are safe for human consumption.
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.
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.
Greenhouse gas (GHG)	Greenhouse gases heat the earth's surface by absorbing and radiating a portion of infrared radiation reflected from the ground. The Kyoto Protocol designates carbon dioxide (CO_2),

	methane (CH_4, generated by rice paddies and final waste disposal sites), dinitrogen monoxide (N_2O, generated during the process of manufacturing some raw ingredients for chemical products and from livestock waste), hydrofluorocarbons (HFCs, used as coolants for air conditioning devices), perfluorocarbons (PFCs, used in the production of semiconductors), sulfur hexafluoride (SF_6, used in the production of semiconductors) and nitrogen trifluoride (NF_3, used in the production of semiconductors; added in the second commitment period) as greenhouse gases that should be reduced.
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.
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.
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.
Multiple farming (entity)	Entity with less than 60% of the sales value of agricultural products is from the sales of the top sector.
Semi-multiple farming (entity)	Farming (or a farming entity) where sales in the biggest division account for 60% to less than 80% of total farm product sales.
Regulatory science	Regulatory science is a science to bridge scientific knowledge and regulatory and other administrative policies and measures. It includes both research to acquire scientific knowledge available for considering administrative policies and measures and administration to decide policies and measures based on scientific knowledge.
Total agricultural output	In agricultural production, the total agricultural output is the total output of all finally completed agricultural goods. It is the amount of the item-based production volume of agricultural products minus intermediate products such as seeds and fodder to prevent overlapping calculations, multiplied by the price of each item when delivered from the farms.
Traceability	This means the ability to trace and follow the movement of an agricultural product, processed product, or other food, from where the food came and to where the food went. The establishment and maintenance of records regarding movements of foods through all stages of production, processing and distribution enables identification of the movements from production to distribution and facilitates rapid withdrawal in the case of a food incident.
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.
WTO	The World Trade Organization (WTO) is an international organization established in January 1995 as a result of the Uruguay Round negotiations, which has set a wide variety of multilateral trade rules. The WTO not only addresses new trade agenda but also implements and operates these current trade rules through a dispute settlement mechanism. The headquarters is located in Geneva, Switzerland.

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.
Decomposition 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.