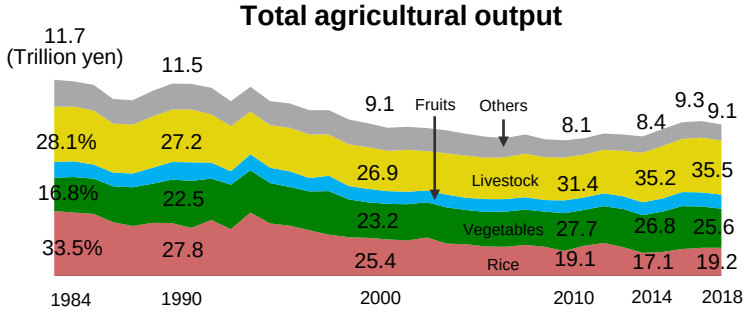
1. Trends of agricultural output, agricultural production income, etc.

- Total agricultural output increased for the third straight year since 2015 due to demand-based production, etc., but the total agricultural output in 2018 was 9.1 trillion yen, a 2.4% decrease from the previous year due to the lower prices of vegetables, pork, hen eggs, etc., following the increase in production volume.

- Agricultural income per entity in 2018 increased from the previous year in greenhouse grown vegetable farming and fruit farming, but it decreased in paddy field farming, dairy farming and fattening cattle farming.

Total agricultural output



Source: MAFF, Statistics of Agricultural Income Produced

Management conditions per entity (Unit: ha, 10,000 yen)

		2014	2015	2016	2017	2018
Paddy field farming	Paddy field farming's aggregate planted area of crop	1.83	1.92	2.01	2.14	2.23
	Agricultural income	34.3	63.3	77.6	89.6	72.4
20ha or more	Paddy field farming's aggregate planted area of crop	36.04	40.20	42.24	45.04	43.55
	Agricultural income	1,363.5	1,808.8	1,967.2	2,247.2	1,719.7
Greenhouse grown vegetable farming	Greenhouse grown vegetable farming's aggregate planted area of crop	0.47	0.51	0.53	0.54	0.55
	Agricultural income	429.5	509.9	572.9	522.5	543.7
2ha or more	Greenhouse grown vegetable farming's aggregate planted area of crop	4.09	4.74	4.38	4.86	4.55
	Agricultural income	1,260.4	1,579.7	2,163.6	1,446.0	1,940.9

Source: MAFF, Management Status Per Agricultural Entity Based on the Statistics on Management by Farming Type (estimate)
Note: Results of weighted average of the survey results of individual entities and organized/corporation entities by the number of entities in the population (Census of Agriculture and Forestry) per entity

2. Promoting structural reform of agriculture

Farmland accumulation and consolidation through operation of the Public Corporation for Farmland Accumulation to Business Farmers through Renting and Subleasing (Farmland Banks)

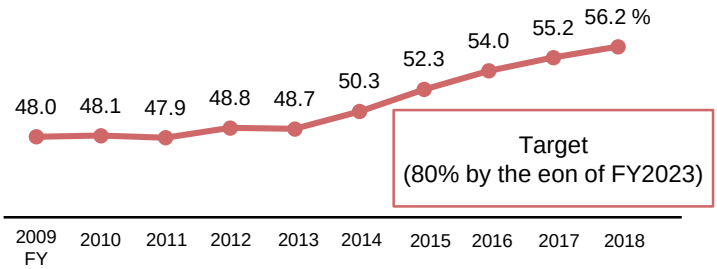
- The total farmland area in 2019 was 4.40 million ha, a decrease of 23,000 ha from the previous year.

- As a result of the Farmland Bank initiative launched in 2014, business farmers' share of total farmland rose each year, reaching 56.2% at the end of FY2018.

- To achieve the 80% target of the business farmers' share of total farmland by the end of FY2023, the revised Farmland Banks Act was promulgated in May 2019 and promoted the realization of "the Farmers and Farmland Plans".

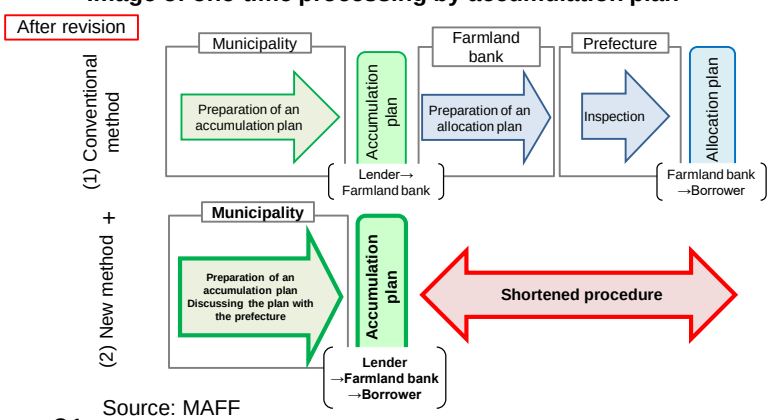
- Further, farmland accumulation and consolidation for business farmers are accelerated by simplifying borrowing and subleasing farmland through Farmland Banks.

Business farmers' share of total farmland



Source: MAFF
Note: Covering accumulation through means other than farmland banks

Image of one-time processing by accumulation plan

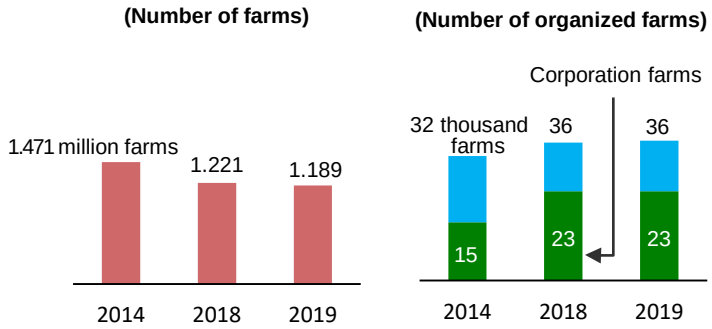


Source: MAFF

Developing and securing business farmers and strengthening human resources

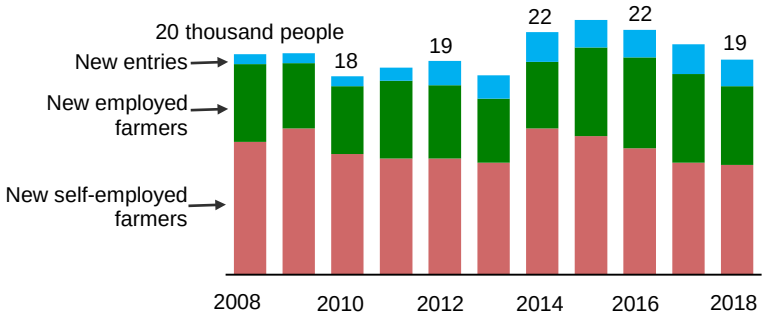
- The number of core persons engaged mainly in farming in 2019 decreased by 3.2% from the previous year to 1.404 million, with their average age standing at 67.
- The number of farms decreased by 2.6% from the previous year to 1.189 million farms. While the number of farms decreased, the number of corporation farms increased by 3.1% from the previous year to 23,000 due to their easier employment and business continuation.
- Amid intensifying competition for human resources with other industries, the number of newcomers in agriculture aged 49 or younger was 19,000 in 2018, which has been decreasing in recent years.
- In FY2019, the Investment Project for Next Generation of Farmers that supports young newcomers has extended the conventional age requirement for its benefit payment, which was age 44 or younger, to age 49 or younger to promote the use of the Project to solve the shortage of business farmers in hilly and mountainous areas.
- To address an increasingly serious labor shortage, Specified Skilled Worker Residency Status was established in April 2019 to accept new foreign workers. As of the end of March 2020, 686 foreign workers have been accepted in the agricultural sector.

Numbers of farms and organized farms



Source: MAFF, Survey on Movement of Agricultural Structure, 2015 Census of Agriculture and Forestry

Number of 49-year-old or less newcomers in agriculture



Source: MAFF, Survey on Newcomers in Agriculture

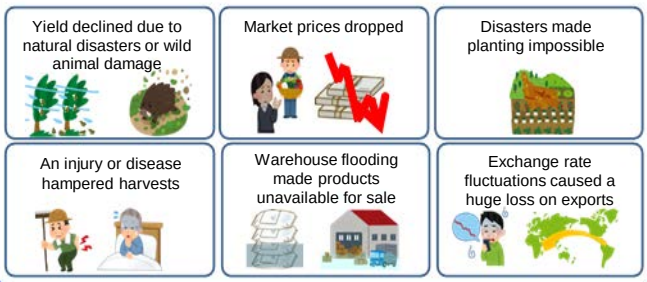
Implementation of revenue insurance

- A revenue insurance system was launched in January 2019 which compensates for income loss caused by not only natural disasters but also various risks. This is only available to farmers who file the blue form tax returns.
- In 2019, 23,000 farms enrolled in the insurance.
- From 2020, a new type will be created that offers an up to 40% discount in insurance premiums when the lower limit of compensation is selected. Agricultural mutual relief associations, governments, agricultural cooperatives and other related organizations are working to promote the enrollment by establishing promotion systems.

<Overview of revenue insurance>

- Insurance premium rates are around 1%, with 80% or more of the standard revenue being insured.
- The revenue insurance covers not only natural disasters but also a wide range of agricultural business risks such as price drops for all agricultural products.

<Example risks covered by revenue insurance>



*Up to 40% discount is offered when 70% of the standard revenue is selected as the lower limit of compensation.
Source: MAFF

<Case study> Voice of the insured person (Hokkaido Prefecture)

- Considering the risk of fluctuation in the market prices of vegetables, such as Japanese yams, I have been working to build a stable management program by increasing contract cultivation, but since it is not perfect, I also enrolled in the revenue insurance where income loss caused by price falls, etc., is also covered for compensation.


Yoshitsugu Kuroda

Source: MAFF

3. Developing and conserving agricultural production infrastructure

Enhancing agriculture's competitiveness through expanding farmland partitions, developing multipurpose paddy fields and converting paddy fields into upland fields

- In 2018, 66% of rice paddies had been consolidated into 30 a or larger partitions, 70% were well drained and available as upland fields. Irrigation facilities had covered 24% of upland fields.
- Expanding farmland partitions, developing multipurpose paddy fields and converting paddy fields into upland fields can promote farmers to introduce smart agriculture and switch to a farming system that incorporates highly profitable crops, such as vegetables.
- The productivity at the construction sites for agriculture and rural area development has improved through computer-aided measures using information and communications technologies.

Extending service lives of agricultural irrigation facilities

- Developed agricultural irrigation facilities include core channels totaling 51,154 km and 7,582 core facilities including dams and diversion weirs.
- Systematic and efficient repairs, updates, etc., are implemented to extend the lives of facilities and reduce life cycle costs.

<Case study> Farmland development project in collaboration with Farmland Banks (Aichi Prefecture)

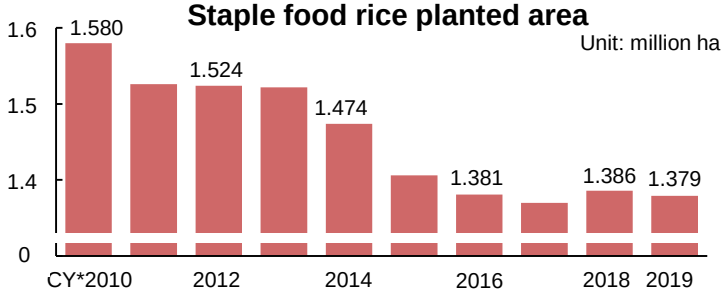
- Wajiota District in Tahara City, Aichi Prefecture was developed as paddy fields but most of it has become dilapidated farmland. It has been arranged to convert paddy fields to upland field, but it is not realized due to the problem of cost sharing.
- In response to the establishment of a farmland development project related to Farmland Banks to implement farmland development without costs for farmers, the project was launched to consolidate the farmland to 12 business farmers.
- To achieve more efficient land use by farmers, enlargement of paddy fields and conversion of paddy fields to upland fields are promoted. (scheduled to be completed in 2023).

District implemented with infrastructure development

4. Trends of rice policy reform

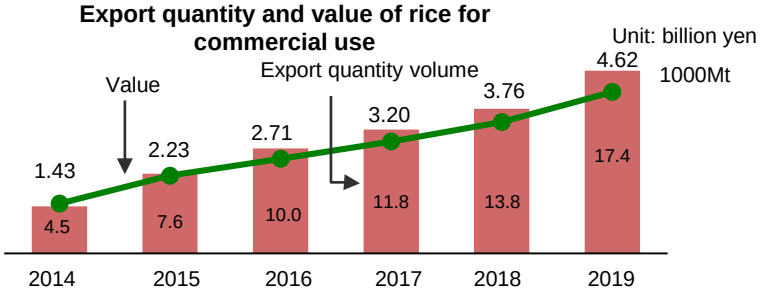
- Given the decline in annual rice consumption, the government abolished administrative allocation of a production target from CY2018, switched to a policy of leading production areas and producers to produce and sell various types of rice in line with demand and is promoting the policy so it becomes firmly established.
- While Japan's staple food rice planting area in CY2019 decreased by 7,000 ha from the previous year, the rice crop condition index was limited to 99, resulting in a 0.9% decrease in production to 7.26 million Mt. Prices remained almost at the same level as the previous year.
- As demand for staple food rice is expected to continue decreasing, farmers are encouraged to switch to strategic rice paddy products, such as wheat, soybeans, rice for rice flour and rice for feed, and highly profitable crops, such as vegetables and fruit trees, which are in demand.
- Exports of rice for commercial use have increased about fourfold over the last five years. Measures, such as development of overseas demand by exporters and linking between exporters and production areas, are promoted.
- The demand for rice for rice flour increased by 24% in CY2018 due to the operation of the third party certification system for non-gluten rice flour products, etc.

Staple food rice planted area



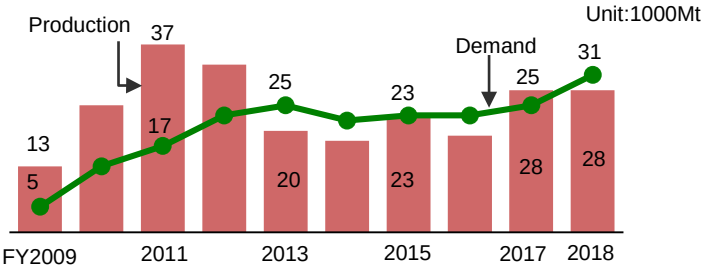
Source: MAFF, Statistics on Cultivated Land and Planted Area
Note: CY is crop year.

Export quantity and value of rice for commercial use



Source: Prepared by MAFF based on Trade Statistics by MOF
Note: The government's rice food aid is excluded.

Production and demand of rice for rice flour



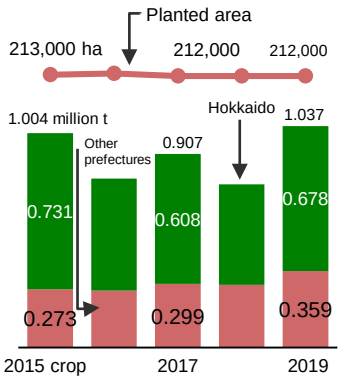
Source: MAFF

5. Production trends for major farm and livestock products

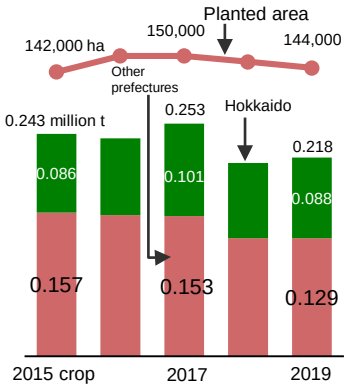
Wheat/Soybeans

- The yield of wheat produced in 2019 increased by 36% from the previous year due to favorable weather conditions, etc. The yield of soybeans remained about the same as the previous year.
- Given the growing demand for domestic wheat and soybeans, it is necessary to realize/stabilize the quality according to demand. Therefore, various measures are promoted, such as strengthening collaboration with the food industry, cost reduction through smart agriculture, drainage measures and development/introduction of new varieties with excellent processing suitability, etc.

Wheat planted area and yield



Soybean planted area and yield

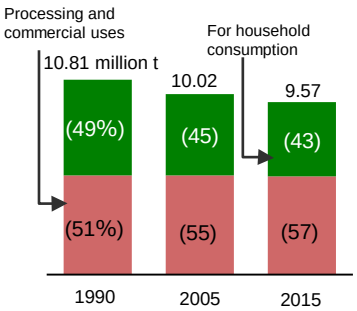


Source: MAFF, Statistics on Crops

Vegetables

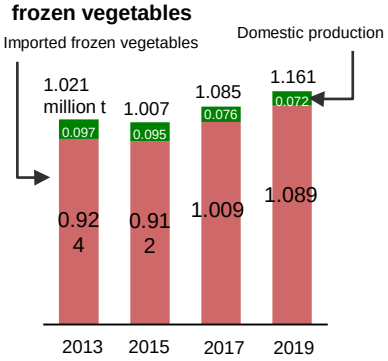
- Vegetable production in 2018 decreased by 2.1% from the previous year due to the adverse weather conditions.
- Demand for processing and commercial uses expanded to 60% of the total. In particular, frozen vegetables are on the rise due to their convenience, etc. Imported frozen vegetables account for most of the domestic distribution volume.
- To strengthen the production system to meet these new demands, various measures are promoted in collaboration with multiple production areas, such as the development of production base operators who will provide a stable supply to buyers and creation of new production areas utilizing paddy fields.

Supplies for processing and commercial uses and household consumption (main vegetables)



Source: Policy Research Institute, Ministry of Agriculture, Forestry and Fisheries
Notes: 1) Estimated by using vegetables designated as main items (13 items).
2) Figures in parentheses indicate the ratios of vegetables for processing and commercial uses and household consumption.

Domestic distribution volume of frozen vegetables

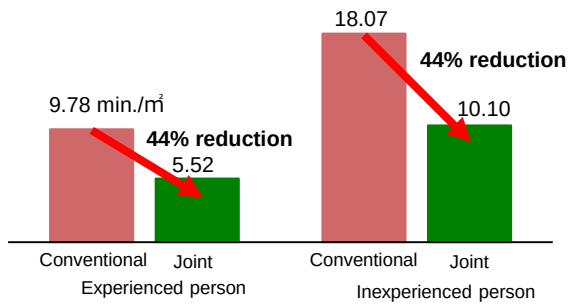


Source: Prepared by MAFF based on Production and Consumption of Frozen Food Products by Japan Frozen Food Association
Note: Distribution volume of frozen vegetables is the sum of imports and domestic production.

Fruits

- Fruit production in 2018 increased by 0.9% from the previous year, which was affected by adverse weather conditions.
- To secure the production in line with demand amid the weakening production base, introduction of labor-saving tree forms that can improve labor productivity is promoted.
- While externalization/simplification of diet is progressing, supplies of fruits and processed fruits that meet consumer needs, such as deliciousness and easiness to eat, are promoted.

Pruning labor saving effect of the joint method (Example of pear trees)

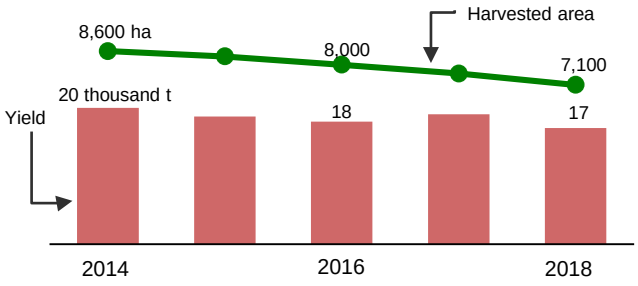


Source: Kanagawa Agricultural Technology Center, "Joint tree method for Japanese pear trees - Towards achieving early yield and developing labor-saving/low-cost cultivation technology"

Leaf tobacco

- While the planted area and yield of leaf tobacco are decreasing due to the aging of farmers, JT provides support for improving productivity.

Leaf tobacco harvested area and yield



Source: Prepared by MAFF based on Purchase Data by Japan Tobacco Inc.

Livestock products

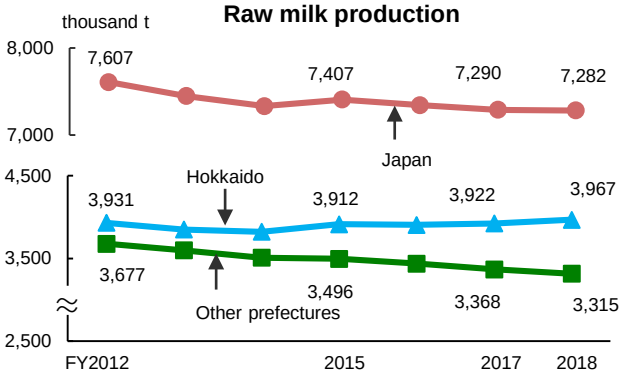
- While the number of households raising livestock decreased for each livestock category, the number of animals raised per household increased, indicating the growth of large-scale production..

- Japan's total raw milk production still remains on a declining trend because while the raw milk production is increasing in Hokkaido, it is decreasing in other prefectures. However, given that the number of heifers less than 2 years old, which will be raised for milk cows, is increasing, raw milk production is expected to recover.

- Beef production increased for the second straight year due to an increase in the number of breeding cows.

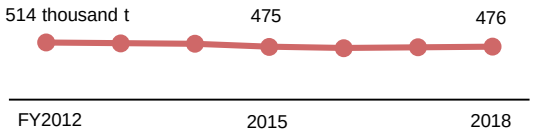
- To respond to the growing domestic demand for dairy products and beef and expand exports, various measures are promoted, such as strengthening the production base by awarding financial incentives to cattle farmers for increasing their stock of dairy and beef cows and succession of the management base by improving facilities run by small and medium sized-business owners and families.

Raw milk production



Source: MAFF, Statistics on Milk and Dairy Products

Beef production



Source: MAFF, Food Balance Sheet

6. Promoting measures to enhance agricultural production competitiveness

Promoting smart agriculture

- Since FY2019, Smart Agriculture Demonstration Project, which introduces/demonstrates smart agriculture technologies at production sites, has been launched in 69 districts across the country and its management effects will be verified over two years.

- In April 2019, the operation of Agricultural Data Collaboration Platform (WAGRI), which allows collaboration and use of various agricultural data, was started and the participating companies began to offer services using WAGRI.

- To further spread agricultural drones, environmental improvements have been made in July 2019, such as facilitating the procedure for the aerial spraying of pesticides.

Main examples of the Smart Agriculture Demonstration Project

Variable fertilizer rice planter (Niigata City, Niigata Prefecture)

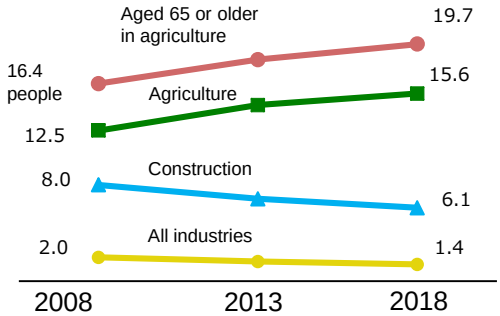
Wireless remote mower (Yabu City, Hyogo Prefecture)

Promoting farming safety measures

- The number of people who died due to accidents during farming per 100,000 people was 15.6, which was higher than other industries.

- Accidents related to agricultural machinery work are the main cause of farming accidents. To reduce the number of these accidents, various measures are being promoted, such as installation of safety cabins and frames on tractors and wearing seat belts and helmets.

The number of deaths caused by farming accidents per 100,000 people



Source: Prepared by MAFF based on Fatal Accident Report by MHLW; Labor Force Survey by MIC; Survey on Fatal Accidents in Agriculture, Census of Agriculture and Forestry and Survey on Movement of Agricultural Structure by MAFF

7. Promotion of environmental policy such as responses to climate change

Promoting climate change mitigation/adaptation measures, etc.

- According to the IPCC Special Report on Climate Change and Land released in August 2019, agriculture, forestry and other land use activities account for around 23% of global total net anthropogenic greenhouse gas emissions.
- In April 2019, MAFF compiled the Basic Concept of Agriculture, Forestry and Fisheries Towards a Decarbonized Society, promoting efforts to achieve a significant reduction of greenhouse gases under the four action policies.
- To adapt to inevitable climate change, development and dissemination of varieties and technologies that prevent/reduce the impact on agriculture is promoted, such as paddy field rice that does not deteriorate under high temperatures.

Basic Concept of Agriculture, Forestry and Fisheries Towards a Decarbonized Society (April 2019)

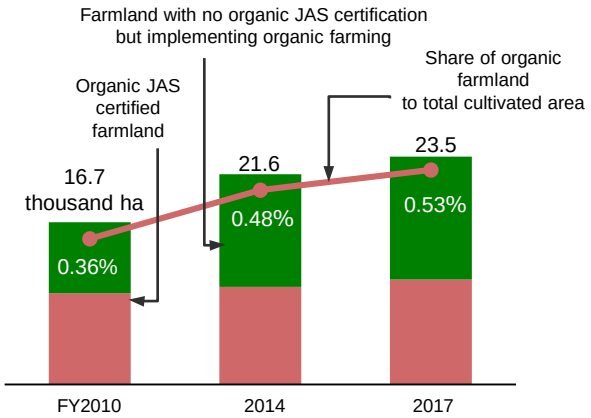
Full utilization of renewable energy and decarbonization of production processes	Promotion of carbon sequestration and storage and utilization of biomass resources
Four action policies towards a decarbonized society	
Reduction of emissions from the agriculture and livestock industries and increasing consumer understanding	Contribution to greenhouse gas reduction of overseas agriculture, forestry and fisheries industries

Source: MAFF

Promotion of ecofriendly agriculture

- The Japanese organic food market expanded 1.4 times in about 10 years. The organic farming area also expanded by 40% to 24,000 ha but it only accounts for 0.5% to the total farming area.
- In the new Basic Policy on the Promotion of Organic Farming, production and consumption targets are set for increasing production of organic farming and expanding domestic products share in Japanese organic market.

Japan's organic farming area



Source: MAFF

Targets of the new Basic Policy on the Promotion of Organic Farming

[Organic farming area]	23,500 ha (2017) → **63,000 ha** (2030)
[Number of organic farmers]	11,800 people (2009) → **36,000 people** (2030)
Domestic products share in Japanese organic market]	60% (2017) → **84%** (2030)
[Percentage of consumers who use organic foods at least once a week]	17.5% (2017) → **25%** (2030)

Source: MAFF

8. Agriculture-related organizations supporting agriculture

- During the agricultural cooperative reform intensive promotion period, progress has been made in the self-reform efforts aimed at increasing the farmers' income, such as the advantageous sale of agricultural products and the advantageous procurement of production materials.
- With the establishment of the Agricultural Committee Members for promotion of optimized farmland usage separate from the existing Agricultural Committee members, efforts of the Agricultural Committee to optimize the use of farmland in each region are expected to be vitalized.

Questionnaire on reform of agricultural cooperatives

(Unit: %)

Category	Respondents	FY2016	FY2019
Regarding the review of agricultural product sales business, those who responded "concrete measures have been initiated"	Total JAs	68.0	91.4
	Farmers	25.6	40.4
Regarding the review of production material procurement business, those who responded "concrete measures have been initiated"	Total JAs	65.5	91.7
	Farmers	24.0	43.7

Source: MAFF, Questionnaire survey on JA Self-Reform (released in September 2019)

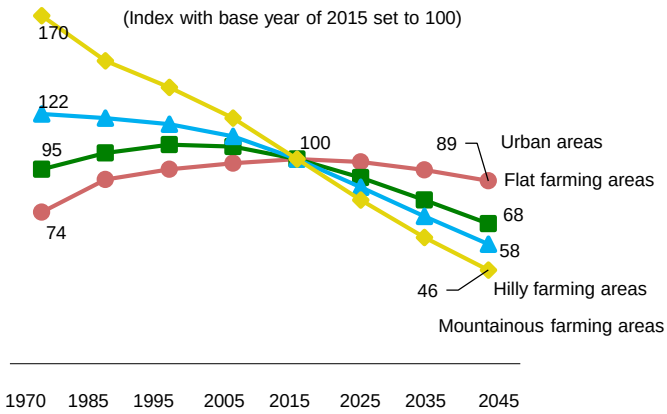
Chapter 3 Taking Advantage of Local Resources to Promote and Vitalize Rural Areas

1. Current status of rural areas and trends of regional empowerment

- While it is projected that the population will decrease in all types of areas, including urban areas, by 2045, there is a growing movement centered on young people who are interested in “returning to rural living” from urban areas.
- In the second phase of the Comprehensive Strategy for Revitalizing Towns, People and Work formulated in December 2019, it is stated that related ministries and agencies will work together to implement measures to rectify the over-concentration of people in the Tokyo metropolitan area.
- Under the Act on Promotion of Specified Regional Development Business, various regional jobs are combined to create employment opportunities throughout the year and promote the settlement of young people in rural areas.

Population changes and future forecast by classification of agriculture area

(Index with base year of 2015 set to 100)



Source: Policy Research Institute, Ministry of Agriculture, Forestry and Fisheries, Future Projections for Population in Rural Areas and Agricultural Communities - Agricultural Structure in 2045

2. Promoting agriculture in hilly and mountainous areas

- Hilly and mountainous areas account for 10% of Japan’s population and 40% of its total farming area and output, playing a key role in performing multiple functions including food production.
- Infrastructure development and revitalization are promoted, aiming to create 250 districts by FY2024 that will make various initiatives using local resources, such as contributing to increasing income in hilly and mountainous areas.
- The Act on vitalization of Tanada region came into effect in August 2019. Comprehensive support across relevant ministries and agencies is provided for initiatives/activities which various regional entities collaboratively take part in.

<Case study> Regional vitalization focused on rice terraces (Nagasaki Prefecture)

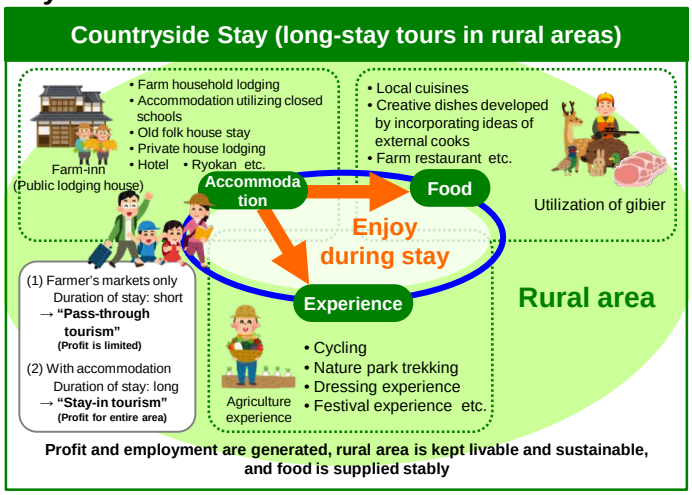
- Kasuga Village in Hirado City, Nagasaki Prefecture was designated as an Important Cultural Landscape by the Agency for Cultural Affairs. Taking this opportunity, the village has established tourist guide boards and promenades in consideration of history and scenery, been offering agricultural experiences utilizing abandoned farmland and commercialization of Japanese sake and other products using rice grown on terraced fields.
- In 2018, the village was registered as a World Heritage Site and the number of visitors increased to 20,000 people.
- In the village, the residents welcome visitors at the information center which was renovated from a vacant house.

Hospitality provided by the Kasuga Village

3. Harmonious coexistence and interactions between cities and rural areas centered on countryside stay

- Aiming to create areas prepared for countryside stay business, MAFF has selected 515 areas and supports their efforts for countryside stay.
- Up to FY2018, 349 areas had been supported by MAFF and the total number of guests, including foreign tourists, who stayed in these areas increased from 2.88 million in FY2016 to 3.66 million in FY2018.

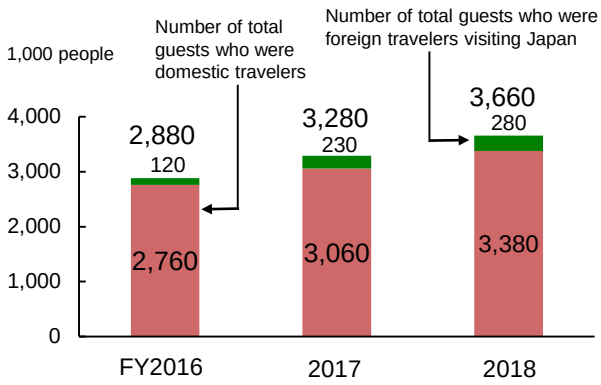
Image of countryside stay



Source: MAFF

- The number of regions certified as SAVOR JAPAN regions that utilize mainly local food, and agriculture, forestry and fisheries to attract mainly foreign travelers increased to 27, including 6 new regions certified in FY2019.
- In 2019, the Discover Countryside Treasures in Japan program selected 31 areas and 5 people as excellent examples of revitalizing communities and/or rising income by drawing out the potential of the rural areas. Also, the Summit participated in by the areas selected until then was held.

Total number of guests



Source: MAFF

Notes: 1) Targeted 349 countryside stay areas supported by FY2018
2) As of the end of April 2019

<Case study> Increased visitors from overseas and cities through countryside stay (Miyazaki Prefecture)

- Forestpia Takachiho-go Tourism Association covering five towns in Miyazaki Prefecture, Takachiho, Hinokage, Gokase, Morotsuka and Shiiba, was established in 2012 as an initiative to increase visitors.
- By offering rural living experience, cultural exchange programs, such as straw and bamboo work and local cuisine, the Association attracts general travelers and students on overseas school trips.
- The first SAVOR JAPAN certified region in Kyushu.

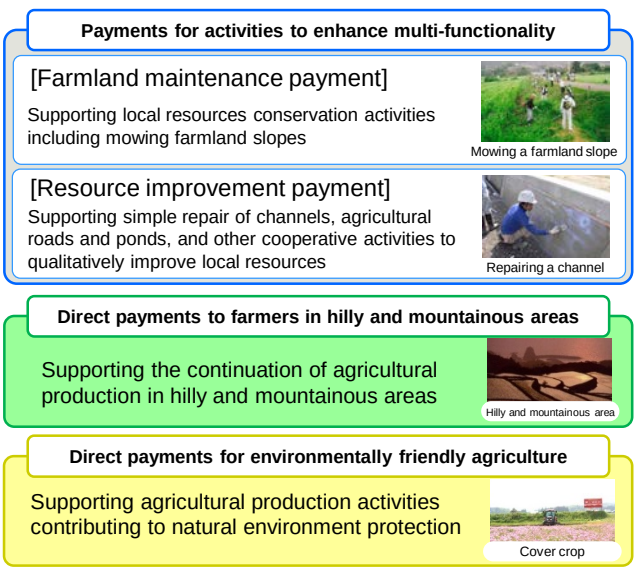
A renovated old folk house rented for countryside stay, Corasita (Western-style room)

(Japanese-style room)

4. Maintaining and demonstrating multifunctional roles of agriculture and rural areas

- The effects of agriculture and rural areas' multifunctional roles (conservation of national land, cultivation of water resources, conservation of the natural environment, formation of good landscapes, maintenance of cultural traditions, etc.) are an important asset of not only rural residents but also all people, and it is important to continue agriculture to maintain and bring out these effects. It is also important to deepen the understanding of the people.
- The payment for activities to enhance multi-functionality has brought about various effects including non-farming people's growing participation where 2.42 million people and groups participated in joint activities in FY2018, and the appropriate conservation and management of agricultural irrigation facilities.
- The direct payment to farmers in hilly and mountainous areas has contributed to preventing the reduction of 75,000 ha of farmland.
- Activities supported by the direct payments for environmentally friendly agriculture contributed to reducing greenhouse gas emissions by 140,000 t a year.
- Initiatives towards branding of agricultural products and promotion of tourism are implemented that take advantage of the designation of Globally Important Agricultural Heritage Systems(GIAHS), Japanese Nationally Important Agricultural Heritage Systems(J-NIAHS) or World Heritage Irrigation Structures.

Outline of the Japanese agricultural direct payment system



Source: MAFF

Kakegawa area, Shizuoka Prefecture
Green tea popcorn

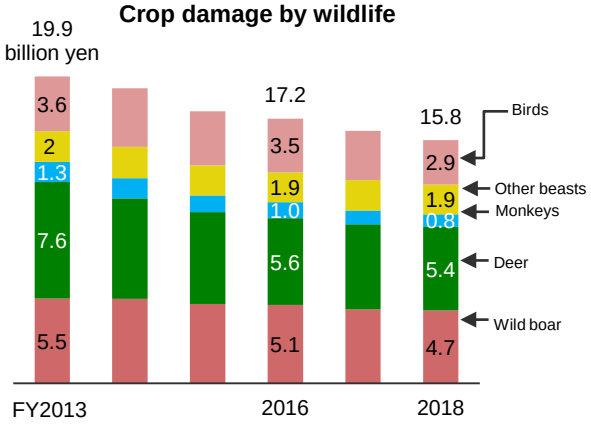
Kunisaki Peninsula Usa area, Oita Prefecture
Brand certified rice

5. Wildlife damage and Gibier

Current status of wildlife damage and countermeasures

- Wildlife damage has been decreasing every year to 15.8 billion yen in FY2018, however, such damage discourages farmers from continuing agriculture or encourages them to abandon cultivation, posing serious impacts on rural areas.
- Based on the Act on Special Measures for Prevention of Damage Related to Agriculture, Forestry and Fisheries Caused by Wildlife, 1,198 municipal governments have established wildlife damage countermeasure teams as of the end of April 2019.
- The ICT-supported traps have also been deployed. The numbers of deer and wild boars captured have doubled in 10 years. On the other hand, there are still areas that are seeing increased damage, so measures that are tailored to the actual situations of each region are necessary.

Crop damage by wildlife

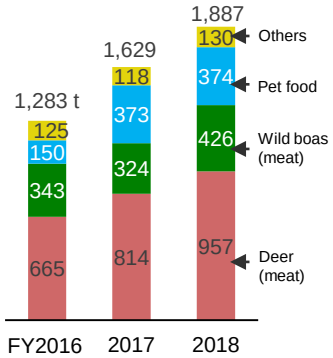


Source: MAFF

Growing Gibier Consumption

- Gibier consumption in FY2018 increased by 15.8% from the previous year to 1,887 t. The gibier utilization rate stood at 13% for deer and 6.0% for wild boars, both remaining low. Also, considering the impact of CSF infected wild boars on the meatpacking facilities in the affected areas, efforts are made to promote the conversion to deer meat use and prevent the spread of infection in wild boars.
- Efforts, such as the establishment of a domestic gibier certification system to ensure customers' security concerning gibier and the promotion of gibier, are made to promote the expansion of demand for gibier.
- Deer meat has been attracting attention as being a low-calorie and highly nutritional ingredient. Consumption by athletes is also expected.

Gibier consumption



Gibier certification mark

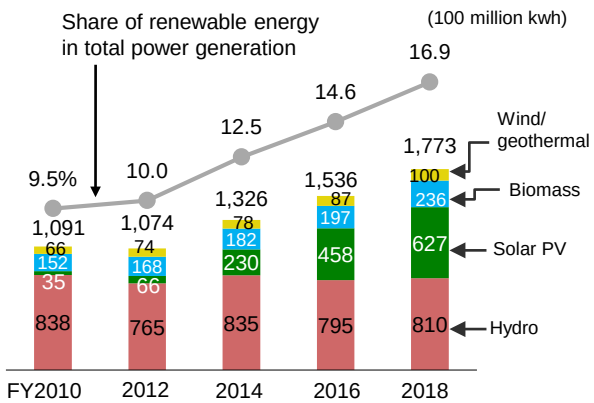
国産ジビエ
認証

Source: MAFF, Fact-finding Survey on Wildlife Resources Utilization
Note: "Others" indicate wildlife meat other than deer and wild boars, meat for household consumption, etc.

6. Utilizing renewable energy

- The Long-term Energy Supply and Demand Outlook indicates a target of boosting renewable energy's share of total power generation to 22-24% by FY2030. The share in FY2018 rose by 0.9 percentage points from the previous year to 16.9%.
- Under the basic policy based on the Act on Promoting the Generation of Electricity from Renewable Energy Sources Harmonized with Sound Development of Agriculture, Forestry and Fisheries revised in July 2019, the target of economic scale, such as revenues related to the electricity/heat generated from renewable energy sources, is set to 60 billion yen.
- By supporting the introduction of biogas plants, etc., the realization of local energy production and consumption and establishment of a new management model that also utilizes byproducts as fertilizer are promoted.

Renewable energy's share of total power generation

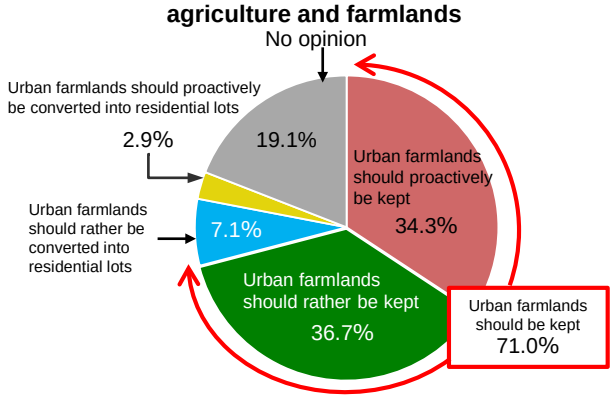


Source: Prepared by MAFF based on General Energy Statistics of Japan by Agency for Natural Resources and Energy, METI

7. Promotion of urban agriculture

- A poll of urban residents found that 70% of respondents sought to keep urban agriculture and farmlands.
- With an urban farmland leasing act put into force in September 2018, leasing farmlands in productive green zones can now be done with security and 83,000 ㎡ of farmland has been certified/approved at the end of FY2018.

Urban residents' views on conservation of urban agriculture and farmlands

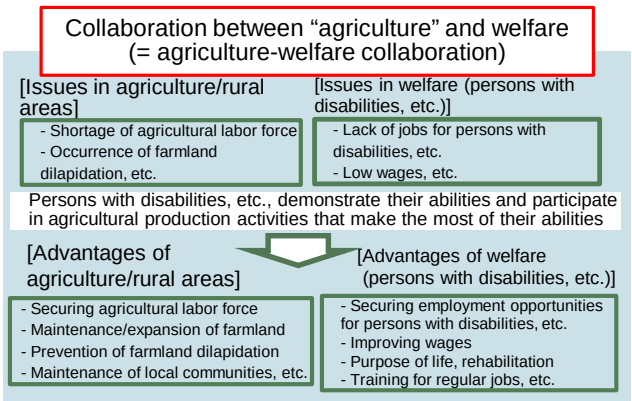


Source: MAFF, Poll on Urban Agriculture
Notes: 1) Poll conducted as of May 2019
2) Online questionnaire conducted for residents of specified cities in three major metropolitan areas
3) Completed by 2,000 people

8. Promoting agriculture-welfare collaboration

- Farmers answered that working on agriculture-welfare collaboration was effective in improving their annual sales and efficiency by reviewing their work and persons with disabilities answered that their wages improved.
- In June 2019, the vision for promoting agriculture-welfare collaboration was decided at an agriculture-welfare collaboration promotion meeting.
  - To expand agriculture-welfare collaborations throughout the country, various efforts are promoted, such as development of strategic promotion plans, one-stop contact system, matching system and specialized human resources.
  - By FY2024, 3,000 new entities to work on agriculture-welfare collaboration will be created.
- To promote employment of persons with disabilities, etc., various efforts are promoted, such as raising awareness of agriculture-welfare collaboration by holding seminars, etc., and providing support for the installation of greenhouses, processing facilities and safety facilities, such as resting areas and handrails, for persons with disabilities will be working.

Image of agriculture-welfare collaboration



Source: MAFF

<Column> Specialized human resources that are the key to promoting agriculture-welfare collaboration

- Efforts to develop and dispatch specialized human resources who offer assistance between farmers and persons with disabilities to support the job retention of persons with disabilities are expanding to various regions.

Hands-on training for agricultural job trainers
Source: Mie Prefecture

<Column> "Noufuku" JAS Certification created by Agri- ("Nou")-Welfare ("Fukushi") collaboration

- "Noufuku" JAS, established in March 2019, specifies the production process and labelling standards for the production of agricultural, forestry and fishery products including processed foods produced by persons with disabilities engaging in major production processes.
- As of March 2020, 10 business operators have been certified.

First Nofuku JAS Certification

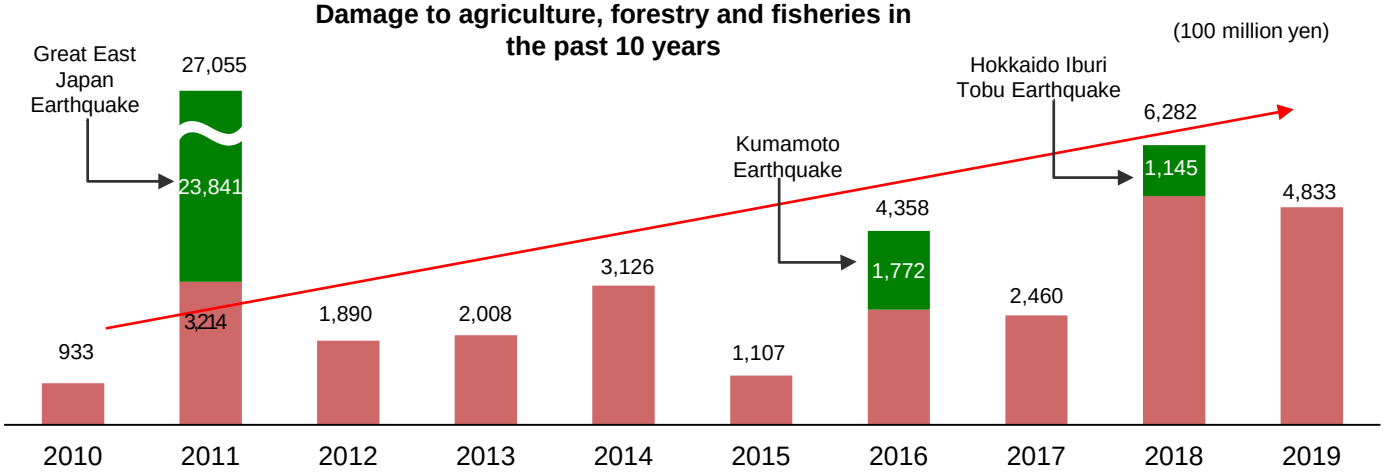
Nofuku JAS mark

1. Restoration/Reconstruction from natural disasters in FY2019

Frequent natural disasters in recent years and damage to agriculture, forestry and fisheries

➢ In recent years, damage to agriculture, forestry and fisheries caused by natural disasters is increasing. In 2019, the damage caused by natural disasters, such as Typhoon Faxai (Typhoon No. 15) and Typhoon Hagibis (Typhoon No. 19), was 488.3 billion yen.

Damage to agriculture, forestry and fisheries in the past 10 years



Source: MAFF
Notes: As of the end of April 2020

Responses to FY2019 Disasters

➢ Liaisons were dispatched to local governments, etc., in disaster-affected areas to quickly grasp the damage situation. For Typhoon Hagibis, etc., the liaisons accounted for a total of 871 man-days.

➢ According to the situations of the disaster-affected areas, push-type food containers and drink support were provided.

➢ Disasters, such as heavy rain due to the weather systems from August to September and Typhoon Hagibis, were designated as ordinance-designated severe disasters early and in a wide range to help local governments in disaster-affected areas to quickly work on restoration/reconstruction.

➢ In November, the government compiled “a countermeasure package for reconstructing the lives and businesses of people in affected areas”.

➢ Based on local requests regarding the disasters that caused considerable damage, MAFF decided on “support measures for damage related to agriculture, forestry and fisheries” necessary to continue farming. A pre-assessment construction system was used for early resumption of farming and national technical staff (MAFF-SAT) were dispatched to local governments in disaster-affected areas, providing physical and technical support for their early restoration.

Key points of the countermeasure package

	Main contents of support
Support for fruit tree farmers	Provision of support for the replanting of damaged fruit trees, management of young trees and farming in substitute farmland to secure income until the next production of fruits
Support for rice farmers	Implementation of special measures for rice farmers to resume farming for the next crop based on the flood damage to the preserved rice and rice straw in the private sector as well as a wide spread of cultivated areas.
Support for restoration of agricultural machinery	Provision of support for the reconstruction/repair of damaged agricultural greenhouses, agricultural machinery, etc. Regarding the damage caused by Typhoon Hagibis, which was designated as a specified extraordinary disaster, increasing the subsidy rate for agricultural machinery not covered by the horticultural facility mutual aid
Utilization of group subsidies	MAFF will collaborate with the Small and Medium Enterprises Agency to make group subsidies available in the agricultural field for the four disaster-affected prefectures

Source: MAFF

Status of restoration from FY2019 disasters

- For the restoration of agricultural greenhouses damaged by Typhoon Faxai, pre-assessment construction is promoted in each region to help farmers to quickly resume their farming through support, such as the comprehensive support grant available for disaster-affected farmers that will help develop a stronger agricultural base.

- Disaster assessment has been completed and restoration construction is gradually expanding for approximately 2,100 ha of paddy fields flooded with a large amount of sediments due to Typhoon Hagibis, etc. For the other approximately 15,600 ha of paddy fields, farmers are undertaking self-restoration efforts, removing accumulated rice straw, preparing soil, etc. For fruit trees damaged in Nagano and Fukushima prefectures, restoration work, such as removing mud and other debris, and pruning, has been completed.

Damaged glass greenhouses (Typhoon Faxai)

Removing rice straw (Typhoon Hagibis, etc.)

2. Disaster prevention/reduction, strengthening national resilience and preparations that should be made by farmers

Promoting measures for disaster prevention/reduction and strengthening national resilience

- As a response to natural disasters that are becoming increasingly frequent and severe, measures, such as providing an aseismatic structure to agricultural irrigation facilities and reinforcing agricultural greenhouses, are promoted based on the 3-years emergency measures package for preventing/reducing disasters and enhancing national resilience.

- Regarding reservoirs, measures, such as creation of hazard maps and repair of levees, are promoted for critical reservoirs for disaster prevention that were re-selected at the end of May 2019. Also, based on the Act on Management and Conservation of Agricultural Reservoirs that came into force in July, necessary measures for proper management and conservation of agricultural reservoirs are implemented by requiring mandatory reporting by persons involved in agricultural reservoirs, such as owners and managers, designating specific agricultural reservoirs by prefectures, etc.

Preparing for disasters

- To prepare for disasters, farmers themselves need to make efforts, such as introducing species and cultivation technologies that adapt to extreme weather conditions, maintaining and managing agricultural greenhouses and using agricultural insurance, etc. MAFF promotes technical guidance for preventing typhoon and snowfall damage and farmers' enrollment in horticulture facility mutual aid offering a new premium discount package and revenue insurance.

Examples of disaster preparations that should be made by farmers themselves

- Introducing species and cultivation technologies that adapt to extreme weather conditions
- Maintaining, managing and reinforcing agricultural greenhouses
- Introducing low-cost weather-resistant greenhouses
- Enrolling in agricultural insurance and other relevant insurance
- Securing emergency power sources
- Establishing a business continuity plan (BCP)
- Implementing measures against diseases and pests based on occurrence prediction information released from prefectural plant pest control stations
- Removing/cutting coverings of agricultural greenhouses ahead of severe weather events, such as when a typhoon is approaching

Source: MAFF

3. Restoration/Reconstruction from Great East Japan Earthquake

Earthquake and tsunami damage and restoration/reconstruction

- Salt removal, rice paddy boundary reconstruction and other restoration operations have made progress in 19,760 ha of farmland subjected to restoration and farming was resumed in 93% of this farmland as of the end of January 2020.

- In Iwate, Miyagi and Fukushima prefectures, farmland partitions have been expanded during restoration.

Impacts of the accident at Tokyo Electric Power's Fukushima Daiichi Nuclear Power Station and restoration/reconstruction

- In 12 accident-affected municipalities, the resumption rate of farming is polarized depending on the time when the government lifted evacuation orders.

- Toward resumption of farming, related agencies established a farming resumption promotion team in collaboration to promote the formulation of a future vision for the production areas, etc. MAFF will dispatch its staff to the 12 accident-affected municipalities from FY2020.

- To dispel harmful rumors, comprehensive support is provided from production to distribution/sales, such as promotion of the acquisition of a third-party GAP certification, investigation of distribution situations and sales promotion.

- As a result of sharing information, such as scientific data, with the 54 countries and regions that have introduced import measures on Japanese food following the nuclear power plant accident, 34 have now eliminated them.

Removal or relaxation of import measures in major export destinations due to the Tokyo Electric Power Fukushima Daiichi Nuclear Power Plant accident (FY2019)

	Export destinations
Removal	Democratic Republic of Congo (June), Brunei (October), Philippines (January)
Relaxation	U.S. (April, September, November, January), Philippines (May), UAE (July), Macao (October), EU and EFTA member countries (November), Singapore (January), Indonesia (January, February*)

Source: MAFF
Note: *From May 20, 2020

<Column> Victory bouquet made with flowers from the disaster-affected areas

- At the Tokyo 2020 Olympic Games and Paralympic Games, victory bouquets will be awarded to medalists as an extra prize.

- These bouquets will be made and provided by using flowers produced in the areas affected by the Great East Japan Earthquake, such as eustoma from Fukushima Prefecture. It is hoped that these bouquets will become a symbol of the progress of restoration efforts and appreciation for the support from all around the world in the aftermath of the earthquake.

Image of victory bouquets
Photo by Tokyo 2020 / Shugo TAKEMI

4. Restoration/Reconstruction from Kumamoto Earthquake

- At the end of FY2019, almost all farms seeking to resume farming had done so.
- Under a creative reconstruction initiative, the expansion of farmland partitions has been implemented.

5. Response to the Novel Coronavirus

Impact on the agricultural, forestry and fisheries products and food industry

- Novel Coronavirus was identified in China in December 2019 and has since spread all over the world.

- Due to the temporary closure of elementary and junior high schools, the government request to refrain from holding events, decreasing demand for eating out/tourism including inbound demand, entry restrictions from foreign countries, etc., in consideration of the spread of infection, Japan's agriculture, forestry and fisheries, and food industries are facing serious issues. These issues include cancellation of orders of milk, etc., for school lunches, decrease in sales and prices of flowers, beef, fruits, etc., cancellation of reservations for countryside stays, stagnation of acceptance of foreign technical interns and a decrease in exports.

Emergency response to affected industries

Considering the impact of the spread of the infection in Japan, the government decided to enact the first emergency measures in February 2020 and the second ones in March. The following measures are implemented in the agricultural, forestry and fisheries products and food industries.

- As financing support measures for agriculture, forestry and fisheries workers, raising the maximum amount of loans from the Agriculture, Forestry and Fisheries Safety Net Fund, providing loans with virtually no interest for the first five years, etc.

- Subsidizing the leave allowances, etc., paid to employees through the Employment Adjustment Subsidy and ensuring that all industries are thoroughly informed about it.

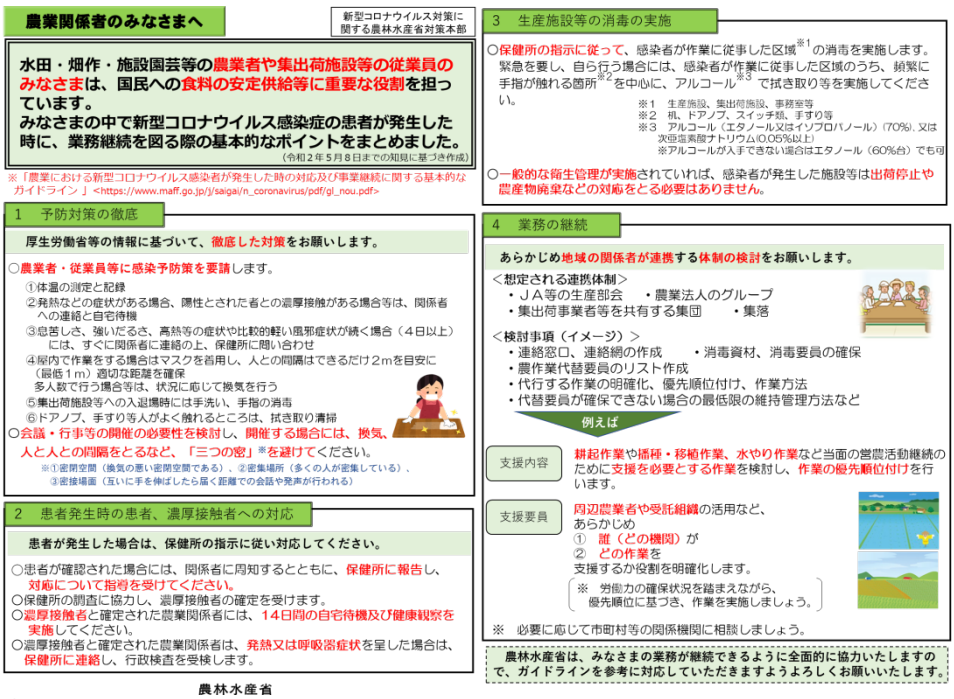
- Implementation of support for producers and venders who were planning to deliver their agricultural products for school lunches to find alternative sales channels for these remaining products and support for price differences caused by changing the use of raw milk intended for school lunches to processing skimmed milk powder, butter, etc.

- Providing information on preventive measures for the novel coronavirus to areas nationwide offering countryside stays.

Initiatives towards securing a stable food supply for the people

- To ensure a continuous food supply, guidelines on business continuity for the entire food supply chain have been formulated. Farmers, food business operators, etc., are called to establish a support system in accordance with these guidelines.

Guidelines on business continuity for farmers (PR version)



Source: MAFF
Notes: 1) Guidelines revised on May 22, 2020
2) Guidelines for business types other than farmers have also been formulated and posted on the website of MAFF.

- MAFF created a special page on its website and also used SNSs, video-sharing services and other media to provide the public with information on the supply status, etc., of food products in an easy-to-understand manner. MAFF also established new coronavirus inquiry counters in Regional Agricultural Administration Offices.

- The government has requested food business operators, etc., to maintain a smooth food supply and called upon people not to overstock. Investigation/monitoring has been implemented to prevent buying up or holding back sales of food.

- To increase consumption of domestic agricultural, forestry and fisheries products, the *Hana Ippai Project* (*for promoting the consumption of flower)* and *Kokusan Shokuzai Morimori Campaign* (for promoting the consumption of domestically grown foods) have been launched.

Example of *Hana Ippai Project* initiative

***Kokusan Shokuzai Morimori Campaign* logo mark**

Decision on emergency economic measures

- To prevent the spread of the novel coronavirus infection and subsequent economic recovery, the government has decided on Emergency Economic Measures in April 2020.
  To maintain/continue the production base and stimulate demand, these Measures include providing financing support for business continuity of agriculture, forestry and fisheries workers, securing the labor force, providing support for business operators facing difficulties in maintaining their business, promoting sales to maintain the production/supply system and promotion of public-private integrated campaigns for increasing demand.

- The government will continue to monitor and flexibly respond to changes in the situations in each region.

<Column> Disasters come before they are forgotten - The government has prepared various support measures for risks

- FY2019 has been a challenging year to deal with not only the novel coronavirus but also various other disasters, such as Typhoon Faxai, Typhoon Hagibis and CSF (Classical swine fever) which continued from September 2018.
- To address these natural disasters, infectious diseases of livestock and other various risks, the government takes detailed support measures while listening to requests, etc., from the affected sites.
- For various risks that may also occur in the future, it is important for farmers themselves to be always prepared by working on what needs to get done, such as inspecting/reinforcing agricultural greenhouses, enrolling in agricultural insurance, etc., and complying with the Standards of Rearing Hygiene Management. The government provides full support to farmers making such efforts to continue farming.

On the website of MAFF,
check out “Disaster information”, “Reverse lookup dictionary” and support measures related to disaster prevention/reduction.

FY2020 Measures for Food, Agriculture and Rural Areas

Summary

- Policy priorities, fiscal measures, legislative actions, tax measures, monetary measures

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 targets for each major item

II Measures for securing a stable supply of food

- Exploration of demand through the creation of new values
- Strategic exploration of global market
- Deepening of the connection between consumers and food and agriculture
- Securing food safety compatible with international trends and securing consumer confidence
- Establishing comprehensive food security in anticipation of food supply risks
- Response to a new international environment, such as TPP and strategic reactions to international negotiations

III Measures for sustainable development of agriculture

- Development of/securing business farmers for realizing a strong and sustainable agricultural structure
- Active participation of diverse human resources and entities that support agricultural sites
- Consolidation of farmland to business farmers and securing farmland
- Promotion of initiatives towards stabilization of agricultural management
- Development of an agricultural production base that contributes to the transformation of agriculture into a growth industry and strengthening national resilience
- Strengthening of the production bases compatible with changes in the demand structure, etc., and streamlining of distribution/processing structures
- Promotion of innovations at agricultural production/distribution sites by utilizing information and communication technologies, etc.
- Promotion of environmental policy, such as responses to climate change

IV Measures for promotion of rural areas

- Securing income and employment opportunities by utilizing local resources
- Improvement of conditions necessary for people to continue to live in rural areas including hilly and mountainous areas
- Creation of new movements and vitality to support rural areas
- Development of a collaborative system of related ministries and agencies to continuously promote measures in line with the above three items

V Measures for restoration/reconstruction from the Great East Japan Earthquake and large-scale natural disasters

- Restoration/Reconstruction from Great East Japan Earthquake
- Preparedness for large-scale natural disasters
- Restoration from large-scale natural disasters

VI Measures for groups

VII Measures for forming a national consensus through the expansion of national movements on food and agriculture

VIII Response to new infectious diseases including novel coronavirus infections

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

Definitions

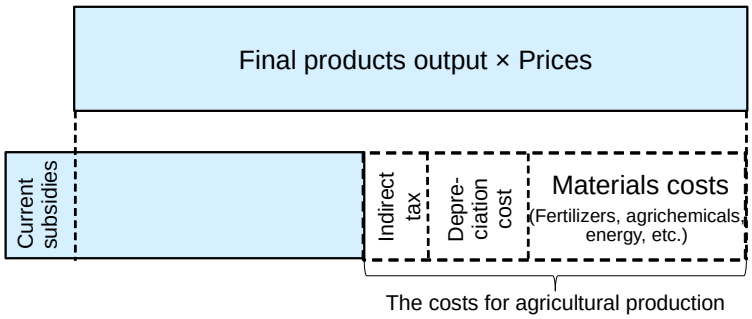
1. Confusing terms

Production value, income

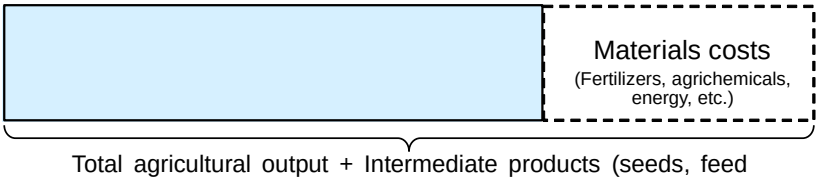
Purpose	Term	Statistical data <source>
To know the total value of sales of agricultural products produced in Japan	Total agricultural output	**9.1 trillion yen (2018)** <Statistics of Agricultural Income Produced>
To know the value added of agricultural products produced in Japan, or their sales value minus the costs for agricultural production	Agricultural production income	**3.5 trillion yen (2018)** <Statistics of Agricultural Income Produced>
To compare the value added by agriculture as part of gross domestic product (GDP) with values in other industries and foreign countries	Gross agricultural production	**5.7 trillion yen (2018)** <National accounts>

• Total agricultural output: 9.1 trillion yen

• Agricultural production income: 3.5 trillion yen



• Gross agricultural production: 5.7 trillion yen



Agriculture management entities

Purpose	Term	Statistical data <source>
To know the number of entities engaged in agricultural production or agricultural work under contract	Agriculture management entities*1	**1.19 million entities (2019)** <Survey on Movement of Agricultural Structure>
To know the number of households engaged in agriculture	Family management entities*1	**1.15 million entities (2019)** <Survey on Movement of Agricultural Structure>
To know the number of households producing mainly agricultural products for sales out of farm households	Commercial farm households*2	**1.13 million households (2019)** <Survey on Movement of Agricultural Structure>
To know the number of agriculture business companies, community-based farm cooperatives, etc.	Organized management entities*1	**40,000 entities (2019)** <Survey on Movement of Agricultural Structure>

*1: See Definitions 2 (1)
*2: See Definitions 2 (2)

Farm households

Purpose	Term	Statistical data <source>
To know the number of all farm households including those producing agricultural products for their own consumption	Farm households*1	**2.16 million households (2015)** <Census of Agriculture and Forestry 2015>
To know the number of households producing agricultural products mainly for sales	Commercial farm households*1	**1.13 million households (2019)** <Survey on Movement of Agricultural Structure>
To know the number of households whose head is younger than 65 years old and whose main income is from agriculture	Business farm households*1	**0.24 million households (2019)** <Survey on Movement of Agricultural Structure>
To know the number of farm households having no non-agricultural job holders (without any age limit)	Full-time farm households*1	**0.37 million households (2019)** <Survey on Movement of Agricultural Structure>
To know the number of farm households including non-agricultural job holders (without any age limit)	Part-time farm households*1	**0.76 million households (2019)** <Survey on Movement of Agricultural Structure>
To know the number of farm households producing agricultural products mainly for their own consumption	Noncommercial farm households*1	**0.83 million households (2015)** <Census of Agriculture and Forestry 2015>

Members of commercial farm households

Purpose	Term	Statistical data <source>
To know the number of farm household members who worked as self-employed farmers for one day or more per year	Household members engaged in own farming*2	**2.76 million persons (2019)** <Survey on Movement of Agricultural Structure>
To know the number of farm household members who worked mainly as self-employed farmers (including housewives engaged mainly in housework and childcare, students, etc.)	Population mainly engaged in farming*2	**1.68 million persons (2019)** <Survey on Movement of Agricultural Structure>
To know the number of farm household members who usually worked mainly as self-employed farmers (excluding housewives engaged mainly in housework and childcare, students, etc.)	Core persons mainly engaged in farming*2	**1.40 million persons (2019)** <Survey on Movement of Agricultural Structure>

Employed farmers

Purpose	Term	Statistical data <source>
To know the number of persons employed as farmers for a long term (seven months or more)	Permanently hired worker on farm*2	**0.24 million persons (2019)** <Survey on Movement of Agricultural Structure>
To know the number of persons employed as farmers for a short term (temporarily)	Temporary hired worker on farm*2	**2.35 million persons (2019)** <Survey on Movement of Agricultural Structure>

*1: See Definitions 2 (2)
*2: See Definitions 2 (4)

2. Basic statistical terminology

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

Terminology	Definition
Agriculture management entities	An establishment that performs agricultural production either 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, 1995 and 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.
Single farming entities	Entities whose main agricultural product sales account for 80% or more of income from all agriculture product sales.
Semi-multiple farming entities	Entities whose main agricultural product sales account for 60% to less than 80% of income from all agriculture product sales.
Multiple farming entities	Entities whose main agricultural product sales account for less than 60% of income from all agriculture product sales (excluding the management entities without any sales).

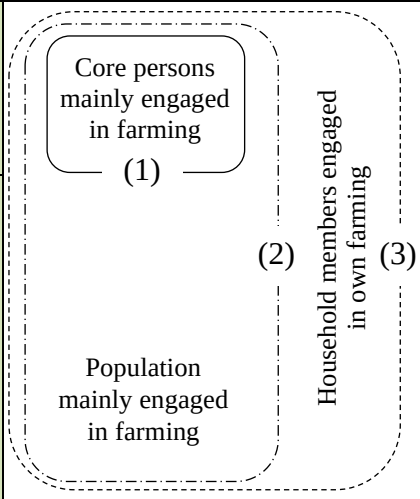
(2) Classification of farm households (definitions used since the 1990 World Census of Agriculture and Forestry)

Terminology	Definition
Farm household	Household engaged in farming and managing cultivated land of 10 ares or more, or earning 150,000 yen or more per year from sales of agricultural products.
Commercial farm household	Farm household managing cultivated land of 30 ares or more, or earning 500,000 yen or more per year from sales of agricultural products.
Business farm household	Farm household whose main source of income (50% or more) is farming, and which possesses at least one family member under the age of 65 who is engaged in self-employed farming for 60 days or more 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 60 days or more a year.
Side-business farm household	Farm household without any members under the age of 65 engaged in self-employed farming for 60 days or more 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 earning main income from farming	A part-time farm household earning more income from farming than from others
Farm household earning main income from other jobs	A part-time farm household earning more income from non-farming jobs than from farming
Noncommercial 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 services 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 household	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 of business related to agricultural production + Non-agricultural income + Income from pensions, etc.
Agricultural income	Agricultural gross income (total income from farming) – Agricultural expenditures (all expenses necessary for farming)
Income of business related to agricultural production	Gross income of business related to agricultural production (gross income 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 of business related to agricultural production (expenditures such as labor and material costs required for the aforementioned businesses)
Non-agricultural income	Non-agricultural gross income (e.g., gross income from independent part-time nonagricultural businesses, salaries and wages) – Non-agricultural expenditures (e.g., expenditures for independent part-time non-agricultural businesses, transportation expenditures for commuting)
Production cost	The production cost is the total cost (combining material and labor costs) for production of farm products minus by-product values.
Material cost	Liquid goods costs expended for producing agricultural products (seeding, fertilizers, agricultural chemicals, heating, lighting, power and other materials costs) + Depreciation costs for fixed goods (depreciable assets including buildings, automobiles, agricultural machines and production management equipment)
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, Labour and Welfare).
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.

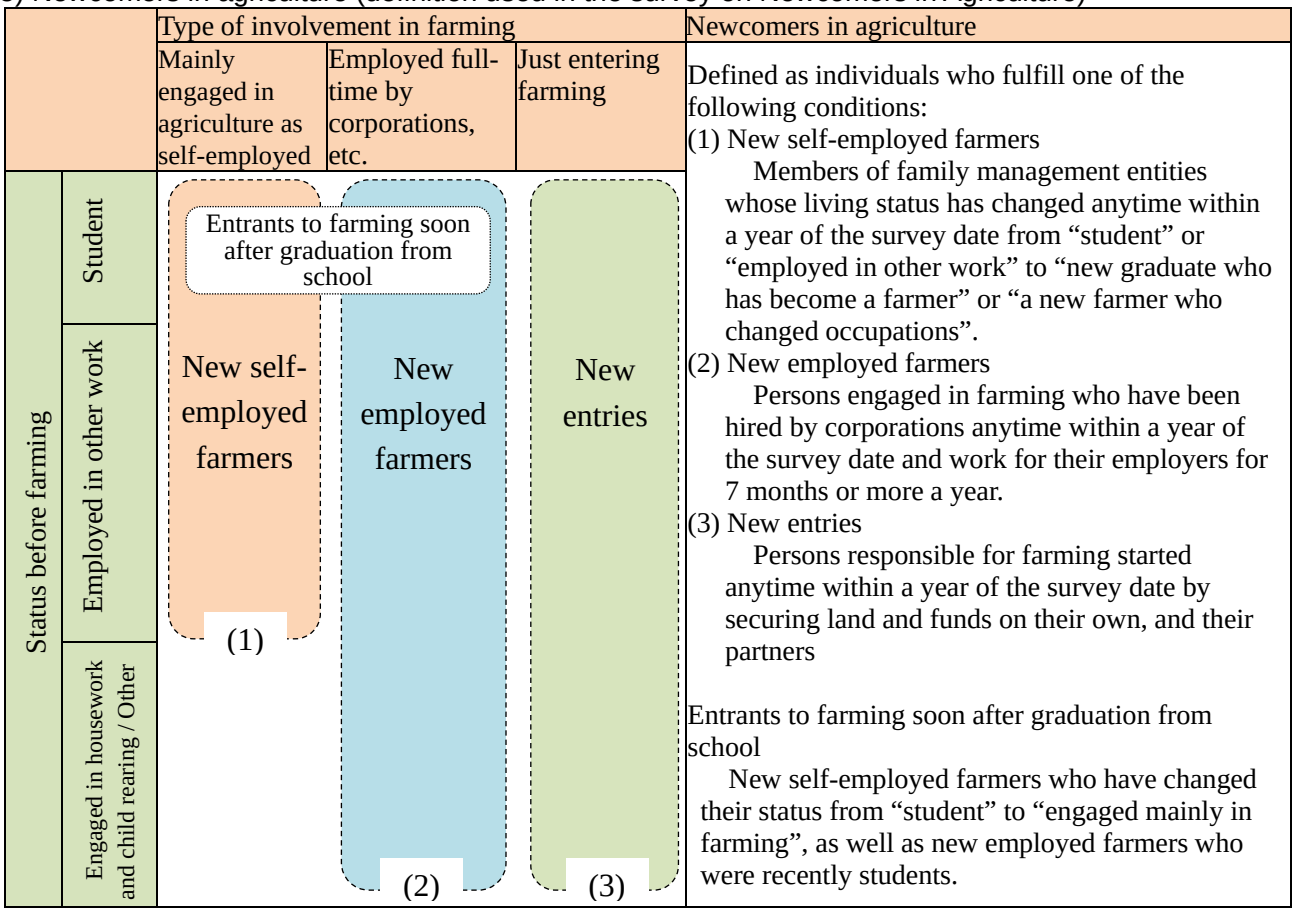
(4) Agricultural labor by farm household members

<table>
<tr><td colspan="2" rowspan="2"></td><td colspan="3">Involvement in farming</td><td rowspan="2">Household member</td></tr>
<tr><td>Engaged only in farming</td><td>Engaged in both farming and other
Mainly farming | Mainly other</td><td>Not engaged in farming</td></tr>
<tr><td rowspan="2">Status during regular hours</td><td>Engaged mainly in work</td><td colspan="3" rowspan="2"> 
</td><td rowspan="2">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 one day or more per year.

Full-time farmers
Among persons engaged in mainly farming, those who are engaged in self-employed farming for 150 days or more per year</td></tr>
<tr><td>Other (housework, school, etc.)</td></tr>
<tr><td colspan="2">Permanently hired worker on farm</td><td colspan="4">Refers to workers hired mainly for farm management with an employment agreement (including verbal agreement) covering a period of seven months or more (including the workers hired regardless of an employment period).</td></tr>
</table>

Temporary hired worker on farm	Refers to day and/or seasonal workers hired on a temporary basis for farm management (including mutual help among farm households (labor exchange) and assistants (labor accepted for free)), but not including the laborers employed under a partial farm work contract. It includes cases in which workers are hired mainly for non-farm management work but engaged in farm management during the busy season, as well as those who had an employment agreement for seven months or longer but quit before reaching seven months.

(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 family management entities 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 or more a year.

(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
New self-employed farmers who have changed their status from "student" to "engaged mainly in farming", as well as new employed farmers who were recently students.

(6) Classification of agriculture area

Terminology		Definition
Classification of agriculture area		Classification of present and former cities, wards, towns, and villages (hereinafter referred to as "municipalities") based on fundamental conditions (e.g., cultivated, forest and grazing land shares, farmland gradients) that define the structure of regional agriculture
	Category	Standard index (fulfills one of the following conditions)
	Urban area	- Present and former municipalities where the DID's share of habitable land is 5% or more with a population density of 500 persons per square kilometer or more or a DID population of 20,000 or more. - Present and former municipalities where the residential area's share of habitable land is 60% or more with a population density of 500 persons per square kilometer or more. Regions with forest and grazing land's share of 80% or more are excluded.
	Flat farming area	- Present and former municipalities where cultivated land accounts for 20% or more of the total area with forest and grazing land accounting for less than 50% of the total area. However, areas where all paddy fields with gradients of 1/20 or more and all upland fields with gradients of 8° or more account for 90% or more of the total area are excluded. - Present and former municipalities where cultivated land accounts for 20% or more of the total area, with forest and grazing land accounting for 50% or more of the total area and with all paddy fields with gradients of 1/20 or more and all upland fields with gradients of 8° or more accounting for less than 10% of the total area.

	Hilly farming area	- Present and former municipalities where cultivated land accounts for less than 20% of the total area, other than urban and mountainous farming areas. - Present and former municipalities where cultivated land accounts for 20% or more of the total area, other than urban and flat farming areas.
	Mountainous farming area	- Present and former municipalities where forest and grazing land accounts for 80% or more of the total area, with cultivated land accounting for 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 municipalities 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

3. Basic terminology

A	
AFFrinnovation	AFFrinnovation which 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.
African swine fever	African swine fever is an infectious disease caused by African swine fever (ASF) virus for swine and wild boars. It is a highly fatal disease featuring fever and whole-body hemorrhagic lesions. There is no effective vaccine or therapy for this disease. It is seen chronically in Africa and has been identified in Russia and its vicinity. In August 2018, China became the first Asian country to identify an African swine fever epidemic. Since then, the disease spread in Asia. Japan has remained free from the disease, having identified no epidemic. ASF virus does not infect humans.
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 in 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.
AI	AI stands for artificial intelligence, referring to computer systems that have human intelligence functions including learning, inference and judgment.
ASEAN	ASEAN stands for the Association of Southeast Asian Nations. ASEAN was established in the Thai capital of Bangkok in 1967 for cooperation in addressing the

	promotion of economic growth, and social and cultural development, the achievement of political and economic stability and other challenges in Southeast Asia. Upon its establishment, it consisted of five countries – Indonesia, Malaysia, the Philippines, Singapore and Thailand. Brunei acceded to ASEAN in 1984, Vietnam in 1995, Laos and Myanmar in 1997 and Cambodia in 1999. ASEAN now thus comprises 10 countries. Prompted by the 1997 Asian currency crisis, Japan, China, South Korea and ASEAN have formed the ASEAN+3 framework for cooperation in East Asia.
ASF	ASF stands for African swine fever. For details, refer to African swine fever.
ASIAGAP	Refer to JGAP/ASIAGAP.
B	
BCP	BCP stands for business continuity plan, meaning a plan to secure the continuation of key operations even in the event of risks such as disasters. It is also a peacetime plan to strategically prepare for restoring key operations within a target time and minimizing risks even if business operations are suspended.
Big data	Big data represent a massive, structurally complex data group that has the potential to produce new values through analysis of relationships between data.
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 CO_2 through photosynthesis using solar energy falling on the earth. These types of resources are renewable throughout its life cycle as long as there are organisms and solar energy.
Business plan approved under the AFFrinnovation act	These business plans are for agriculture, forestry and fishery business operators to integrate the production of agriculture, forestry and fisheries products and by-products (including biomass) with their processing or sales to improve their operations under the Act on Promotion of the "Sixth Industry" to Create New Value Added Using Agricultural Products in Rural Areas (AFFrinnovation Act).
C	
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, Labour and Welfare. It is necessary to keep in mind that calculations for both values are entirely different, since the calorie supply value includes 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 facilitate farmland consolidation and infrastructure improvement efforts to support business farmers.
Classical swine fever	Classical swine fever is an infectious disease caused by classical swine fever (CSF) virus for swine and wild boars. It develops symptoms such as fever, anorexia and prostration, featuring strong propagation and high fatality. The disease is still seen throughout the world including Asia. Japan eliminated the disease in 2007 before encountering its first epidemic in 26 years in September 2018. The disease infects swine and wild boars but not humans.
Codex Alimentarius Commission	The Codex Alimentarius Commission is an international intergovernmental organization created by the United Nations Food and Agriculture Organization (FAO) and the World Health Organization (WHO) in 1963 to secure the protection of consumer health and fair food trade. It develops the Codex Alimentarius. Japan joined the commission in 1966.
Community-based farm cooperatives	Farm cooperatives consist of farming households in certain regions that have developed relations through local communities or other geographical bases. Cooperative member households conduct joint agricultural production. These cooperatives' forms and operations vary depending on regional conditions. Their operations range from the aggregation of diverted paddy fields and the communal use of communally purchased machines to joint production and sales in which farming leaders play a central role.

Crop condition index	The index indicates rice crop conditions, taking the form of a percentage ratio of a (forecast) yield per 10 ares to a standard yield per 10 ares. The standard yield per 10 ares is a yield per 10 ares anticipated before annual planting, based on average-year meteorological conditions and disaster incidence, the recent advancement of cultivation technologies and the recent actual yield trend.
CSF	CSF stands for classical swine fever. For details, refer to classical swine fever.
D	
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 (paddy 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 puddling, and dry direct seeding where seeds are scattered into non-flooded paddies.
E	
Ecofeed	Ecofeed is feed that makes effective use of food residual, etc., representing a combination of ecological or economical and feed.
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 GATT).
Externalization of diet	Against the backdrop of increasing double-income and single-member households, population aging and diversified lifestyles, people have tended to depend on non-home cooking and meals. Amid this tendency, the food industry has provided home-meal replacements such as prepared food, ready-made dishes and boxed lunches and explored their markets. This trend is called the externalization of diet. → See "home meal replacement."
F	
Family business agreement	A family business agreement is a written arrangement that clarifies business plans, each family member's role, working conditions, etc., for a farming family based on talks between family members. This agreement clarifies the roles of farming family members including women and successors, allowing a farming family to become subject to the preferential treatment of farmer annuity insurance premiums and file joint applications for the certified farmer system.
Farmland concentration and intensification	Farmland concentration means owning or leasing farmland to expand farmland for utilization. Farmland intensification means exchanging farmland use rights to eliminate farmland dispersion and allow farming to be conducted continuously without difficulty.
FGAP	FGAP (Fukushima GAP) is a system developed by Fukushima Prefecture in conformity with MAFF's guideline on a common GAP (Good Agricultural Practices) base, providing details of radioactive material measures as the prefecture's original standard.
Food domestic production ratio	Food domestic production ratio is the percentage share of domestic production in food provided in the country. It is an index used for evaluating the situations of domestic production, reflecting the activities of the domestic livestock industry regardless of the origin of the feed, whether the feed is produced domestically or imported from overseas. The ratio is calculated including the portions domestically produced using imported feed in domestic production.
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, social 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 four 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 This indicator shows the amount of calories supplied from food by fully utilizing the potential production capacity of Japan such as agricultural resources, people engaged in farming, and agricultural technology. Based on the premise that 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 two patterns below. It also expresses the amount of calories which could be supplied that reflects the ratio of the total working hours of existing workforce to the working hours necessary for the production in each pattern (labor fill rate). (Pattern A) When rice and wheat are mainly cultivated by maximizing the calorie efficiency with consideration to nutritional balance (Pattern B) When potatoes are mainly cultivated by maximizing the calorie efficiency with consideration to nutritional balance
Food self-sufficiency ratio	This index indicates the percentage share of domestic production in the total supply of food in Japan. - Self-sufficiency ratio for individual items: The following formula is used to calculate the self-sufficiency ratio on a weight basis for individual items Food self-sufficiency ratio calculation formula $\text{Self-sufficiency ratio for individual items} = \frac{\text{Domestic production volume}}{\text{Supply for domestic consumption}}$ $= \frac{\text{Domestic production volume}}{\text{Domestic production volume + Import volume - Export volume} \pm \text{Fluctuations in inventory}}$ - 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: 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. In deriving the calorie supply, weight values for each item are converted to calories using the Standard Tables of Food Composition in Japan - 2015 - (Seventh Revised Edition), after which the calories of all items are totaled.

	- Total food self-sufficiency ratio on production value basis: Calculated by dividing the sum of the domestic production value of food by the total food supply value for domestic consumption. In deriving the monetary values, 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. - Feed self-sufficiency rate: This index indicates the percentage share of domestic feed (excluding feed produced with imported materials used) in feed supplied to livestock, calculated in terms of total digestible nutrients (TDN) based on the Standard Tables of Feed Composition in Japan (2009).
G	
GAP	Good Agricultural Practices (GAP) are management activities in the agricultural production process to ensure various components of sustainability including food safety, environmental conservation and worker safety.
Genetic resources	Genetic resources are materials from all living things including plants, animals, and microorganisms that have actual or potential value. For example, they include crops used as materials for breeding (including not only the latest varieties but also old varieties and those that are not clearly useful but considered potentially useful.)
Genome editing	A technique to efficiently modify the genes of a living form by, for example, cutting the target section of a genome using an enzyme that serves as a pair of "scissors".
GFSI	GFSI stands for Global Food Safety Initiative, referring to an organization of globally operating food companies for implementing various initiatives to improve food safety and enhance consumer confidence in food products. It was established in May 2000 as a subsidiary of the Consumer Goods Forum (CGF), an international organization of about 400 manufacturers, retailers and service providers from 70 countries.
GLOBALG.A.P.	GLOBALG.A.P. is a GAP certification program with third-party audit established by Germany's FoodPLUS GmbH. Its fruit and vegetables standard and aquaculture standard are GFSI-recognized. This program has been diffused mainly in Europe.
GNSS/GPS	GNSS stands for Global Navigation Satellite System, referring to a positioning system that uses satellites to accurately locate any position in the world. GPS stands for Global Positioning System as one of the GNSS systems.
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 from 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.
H	
HACCP	HACCP (Hazard Analysis and Critical Control Point) is a process management system in which food safety for each process is addressed through the analysis and control of biological, chemical and physical hazards by continually monitoring and recording to guarantee the CCPs in control.
Highly Pathogenic Avian Influenza (HPAI)	Highly Pathogenic Avian Influenza (HPAI) is a kind of Avian Influenza that is highly fatal to poultry. When poultry are infected with HPAI, they show general symptoms such as neurological, respiratory and digestive ones, and many of them die. In Japan, there has not been any case reported where humans were infected with HPAI through eating chicken eggs or meat.
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 home that are consumed at home, school, workplace, etc., without cooking. These meals are perishable.
I	
ICT	ICT stands for Information and Communication Technology, which is a collective term for technologies related to information and communication.
Idle farmland	An idled farmland meets either of the two items in Article 32, paragraph 1 of the Agricultural Land Act. The first item 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.
IoT	IoT stands for Internet of Things, meaning that various things in the world are connected through the Internet to exchange information for automatic recognition, automatic control, remote control, etc.
J	
JFS	The JFS standards are food safety management standards with third-party audit developed by the Japan Food Safety Management Association (JFSM). JFS was recognized by GFSI in October 2018.
JGAP/ASIAGAP	Both JGAP and ASIAGAP are GAP certification programs established by the Japan GAP Foundation with third-party audit. JGAP covers fruit and vegetables, grains, tea, and livestock, while ASIAGAP covers fruit and vegetables, grains and tea. ASIAGAP was recognized by GFSI in October 2018.
L	
Local consumption of local products	This is an initiative for agriculture, forestry or fishery products (limited to food products) produced in domestic regions to be consumed in those regions. The initiative contributes to improving the food self-sufficiency ratio and to promoting AFFrinnovation through farmers' markets and processing operations.
N	
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 corporations engaging in specified non-profit activities and are allowed to open bank accounts and lease office spaces under their respective organization titles.
O	
OIE	OIE stands for Office International des Epizooties in French, which is currently called the World Organisation for Animal Health. It is an intergovernmental organization founded in 1924 to improve animal health. As of the end of May 2019, the number of OIE member countries and regions stands at 182. Japan acceded to the OIE in 1930. OIE's activities include provision of technical support for animal health-related issues (e.g., prevention of animal diseases such as ASF, measures against drug resistance) and establishment of international standards on animal/livestock products trading and animal welfare.
R	
Replotted land	Replotted land is land deemed as land before readjustment or development (traditional land) under the allocation of replotted land for a project to readjust land or develop farmland to change farmland boundaries and shapes. The allocation of replotted land is an administrative action to fix new land after readjustment or development (replotted land) replacing land before readjustment or development (traditional land) and take some legal procedures to deem the replotted land as land before readjustment or development (traditional land).
Rural community	The rural community is a fundamental regional unit where households are connected by local and family ties for farming or utilization of farming water in some municipal localities. These communities have close relationships for a wide range of activities including maintenance and management of irrigation facilities, use of farming equipment, and marriages and funerals. They have developed many characteristic traditions and function as autonomous or administrative units.
S	
Sustainable development goals (SDGs)	Sustainable Development Goals (SDGs) are the entire international community's development goals for 2030, adopted unanimously at a United Nations Summit in September 2015. There are 17 SDGs including those for the eradication of famine and poverty, economic growth and employment, and climate change countermeasures. The SDGs are non-binding goals urging each country to take voluntary actions commensurate with its conditions. Japan created the SDGs Promotion Headquarters under a Cabinet decision in May 2016 to implement the SDGs. The headquarters decided on the SDGs Implementation

	Guideline spelling out Japan's vision and priorities for implementing the SDGs in December 2016 and the SDGs Action Plan 2018 including the direction and major initiatives for providing Japan's SDGs models in December 2017.
V	
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.
W	
"WASHOKU; traditional dietary cultures of the Japanese"	In December 2013, the United Nations Education, Scientific and Cultural Organization (UNESCO) registered "WASHOKU; traditional dietary cultures of the Japanese" as a UNESCO Intangible Cultural Heritage. "WASHOKU" is the Japanese diet practice based on the Japanese people's spirit of "respecting nature," featuring (1) various fresh ingredients and respect for their natural flavors, (2) a nutritional balance that supports healthy diets, (3) emphasis on the beauty of nature and seasonal changes in the presentation, and (4) deep ties to New Year's and other regular annual events.
WCS rice	WCS stands for whole crop silage, meaning a feed that is made by harvesting berries, stems and leaves integrally for lactic fermentation. WCS rice is produced for WCS for livestock, contributing to the effective utilization of rice paddies and the improvement of the feed self-sufficiency ratio.
WTO	The World Trade Organization (WTO) is an international organization established in January 1995 as a result of the Uruguay Round negotiations, which has dealt with the global rules of trade. The WTO is aimed at securing that trade flows as smoothly as possible by lowering trade barriers through negotiations among member governments. The WTO is a forum for governments to negotiate trade agreements and settle trade disputes. The headquarters is located in Geneva, Switzerland.

4. Multifunctional roles of agriculture, forestry and 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.
Watershed capabilities	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 by 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 change mitigation	Crops growing on cropland 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 CO_2 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 matter, 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 monitor 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 protect the national interest by preventing smuggling and illegal immigration.
Functions related to providing places for exchange	The marine industry can provide places for leisure such as marine recreation facilities and places to learn the importance of nature.