

Summary of the Basic Plan for Food, Agriculture and Rural Areas



To pass Japan's food and vigorous agriculture and rural areas on to the next generation

M a r c h 2 0 2 0

MAFF

Ministry of Agriculture,
Forestry and Fisheries

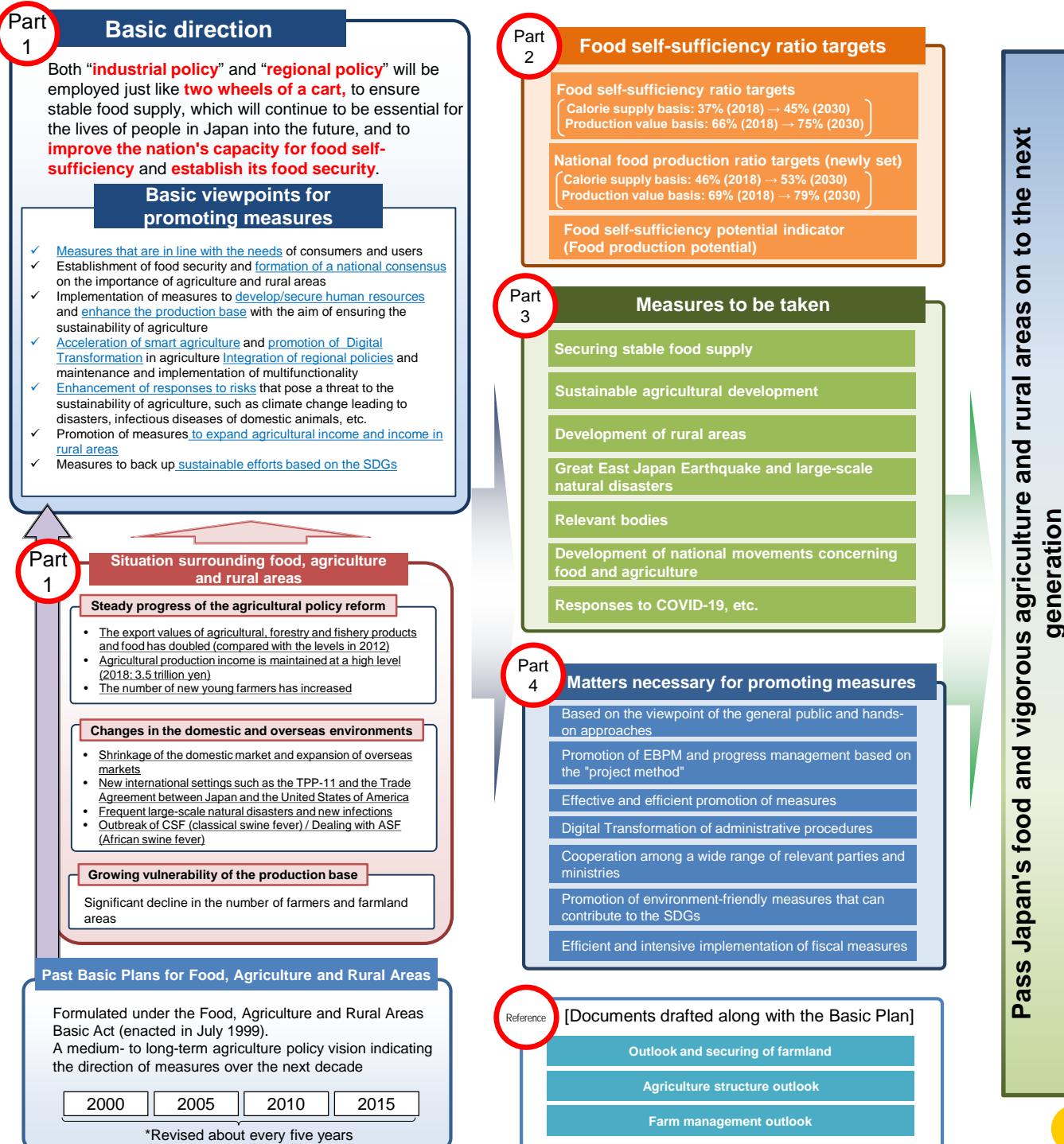
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What is the Basic Plan?

- Formulated under the Food, Agriculture and Rural Areas Basic Act, the Basic Plan for Food, Agriculture and Rural Areas is a medium- to long-term agriculture policy vision indicating the direction of measures to be taken over the next decade.
- The Basic Plan is a program for implementation of specific measures to realize the four fundamental principles of the Basic Act, which consist of the securing of stable food supply, the implementation of agriculture's multifunctional roles, sustainable agricultural development and the development of rural areas, and is set to be revised approximately every five years in order to be able to respond to changes in various circumstances surrounding food, agriculture and rural areas.

Structure of the new Basic Plan



Key points of the new Basic Plan

—A Basic Plan for Food, Agriculture and Rural Areas is developed based on the Food, Agriculture and Rural Areas

Key Points of the new Basic Plan

- Continuous promotion of the agricultural policy reform to make agriculture a growth sector
 - Agricultural production income
2.8 trillion yen (2014) → 3.5 trillion yen (2018)
 - New young farmers
18,800 farmers/year (average during 2009 to 2013)
→ 21,400 farmers/year (average during 2014 to 2018)
- Raising the level of farm management through enhancement of the production base of diverse farmers such as small- and medium-sized farms and family-operated farms
- Setting a target to achieve an export value of 5 trillion yen for agricultural, forestry and fishery products and food by 2030
 - Export value of agricultural, forestry and fishery products and food
611.7 billion yen (2014) → 912.1 billion yen (2019)
- "Integration of regional policies" by cooperating with relevant ministries and mobilizing measures for development of rural areas
- Formation of a national consensus through the development of new national movements concerning food and agriculture

Basic policy and food self-sufficiency ratio targets

[Basic direction of measures]

- Both "industrial policy" and "regional policy" will be employed just like two sides of the same coin to ensure stable food supply, which will continue to be essential for the lives of people in Japan into the future, and to improve the nation's capacity for food self-sufficiency and establish its food security.

[Food self-sufficiency ratio targets]

<Food self-sufficiency ratio targets>

Calorie supply basis: 37% (2018) → 45% (2030), production value basis: 66% (2018) → 75% (2030)

<National food production ratio: Newly set to evaluate the situation of food production in Japan without its feed self-sufficiency ratio reflected therein>

Calorie supply basis: 46% (2018) → 53% (2030), production value basis: 69% (2018) → 79% (2030)

<Food self-sufficiency potential indicator>

- This is an indicator to evaluate the potential food production capacity of Japan. An indicator that newly takes account of labor force and labor-saving agricultural technology as well as farmland areas is presented. Also, prospects for 2030 are newly presented.

Food, Agriculture and Rural Areas

Act about every five years with a vision for approximately the next 10 years, decided by the Cabinet, and reported to the Diet—

Measures to be taken

1. Securing stable food supply

- **Exploration of demand through the creation of new value**
 - Creation of new markets in line with changes in the food market, enhancement of the competitiveness of the food industry, and reduction of food loss and waste
- **Strategic exploration of the global market**
 - Setting a target to achieve an export value of 5 trillion yen (2030) for agricultural, forestry and fishery products and food
- **Deepening of the connection between consumers and food/agriculture**
 - Food education, local consumption of local produce, expansion of consumption of domestic agricultural products, and preservation/inheritance of the WASHOKU culture (Japanese traditional dietary culture)
- **Ensuring food safety and consumer confidence**
 - Risk assessment/management based on scientific knowledge, and ensuring consumer confidence through proper food labeling, etc.
- **Establishment of comprehensive food security with risks associated with food supply taken into consideration**
 - Risk analysis in preparation for unforeseeable events and consideration of responses, understanding and analysis of international food supply and demand, and enhancement of measures for animal and plant epidemic and phytosanitary prevention
- **Adapting to new international settings such as the TPP and taking strategic approach to international negotiations in the future**
 - Enhancement of the production bases on the basis of the "comprehensive TPP-related policy framework," and negotiations for export expansion with due consideration of sensitivity

2. Sustainable agricultural development

- **Development/securing of business farmers for realizing a strong and sustainable agricultural structure**
 - Acceleration of incorporation of farms, enhancement of the management base, business succession, and recruiting new farmers and assisting them in becoming firmly established
- **Active participation of diverse human resources and entities that support agricultural sites**
 - Diverse farmers such as small- and medium-sized/family businesses, and agricultural support service
- **Consolidation of farmland to business farmers, etc. and securing of farmland**
 - Substantiation of the **Farmers and Farmland Plan**, full operation of Public Corporations for Farmland Consolidation to Core Farmers through Renting and Subleasing, and **prevention of farmland dilapidation and clearing dilapidated farmland**
- **Promotion of initiatives for stabilization of agricultural management**
 - Steady promotion of revenue insurance, the Farming Income Stabilization Measures, etc.
- **Improvement of the agricultural production infrastructure so as to contribute to transforming agriculture into a growth industry and to building national resilience**
 - Expansion of farmland partitions, creation of multipurpose paddy fields and transformation of paddy fields into upland fields, sophistication of upland fields and lands under permanent crops, strategic preservation and management of farm irrigation facilities, and **disaster prevention/mitigation measures toward building the resilience** of agriculture and rural areas
- **Enhancement of the production base to deal with changes in the demand structure, etc., and streamlining of the distribution/processing structure**
 - Item-specific measures such as expanding the production of beef cattle, dairy and horticultural products, promotion of GAP, implementation of safety measures for farming, etc., and streamlining of the material, distribution and processing structures
- **Promotion of innovation in agricultural production/distribution sites**
 - Promotion of utilization of digital technology in agricultural sites such as for the acceleration of smart agriculture, and promotion of digitalization in the implementation of agricultural measures
- **Promotion of environmental policy including responses to climate change**
 - Development and diffusion of renewable energy and technologies that can address the issue of climate change, promotion of organic farming, and maintenance and enhancement of the natural cyclical function

3. Development of rural areas

- **Securing of income and employment opportunities by utilizing local resources**
 - Diverse styles of farm management such as multiple farming, addition of high added value to local resources, and regional economic circulation
- **Conditioning rural areas including hilly and mountainous areas to enable residents to continuously reside in such areas**
 - Creation of a vision for maintenance and enhancement of local community functions, implementation of agriculture's multifunctional roles through the Japanese-style direct payment system, and prevention of damage caused by wild animals
- **Creation of new movements and vigorous efforts that support rural areas**
 - Creation and expansion of region management organizations and concerned population, presentation of diverse lifestyles such as balancing agriculture and another type of work, and communication of the attractiveness of rice terrace areas
- **Creation of a framework through cooperation among relevant ministries for continuous implementation of the above measures**

4. Restoration/Reconstruction from the Great East Japan Earthquake and actions against large-scale natural disasters

- **Restoration/Reconstruction from the Great East Japan Earthquake**
 - Restoration/Reconstruction from the earthquake/tsunami disaster and the nuclear accident
- **Preparation for large-scale natural disasters**
 - Thorough implementation of **advance disaster prevention**, and development of farm management initiatives in preparation for disasters
- **Restoration from large-scale natural disasters**
 - Prompt understanding of damage and early restoration support for disaster-affected areas

5. Relevant bodies

- Agricultural cooperatives continue to implement self-reform efforts while also continuously playing the role of supporting the local industries and daily-life infrastructures of rural areas
- Effective and efficient fulfillment of functions and roles by hierarchical organizations of agricultural committees, agricultural mutual relief organizations, and land improvement districts

6. Formation of a national consensus on food and agriculture through implementation of national movements, etc.

- **Development of new national movements** focusing on the deepening of the connection between food and agriculture through **cooperation between public and private sectors** including consumers, food-related business operators, and producers' groups such as agricultural cooperatives

7. Responses to new infections including COVID-19

- **Stimulation of domestic demand** for domestic agricultural products, **securing of agriculture labor force**, agile implementation of measures for **business operators related to home-meal replacements, eating-out or processing**, such as switching to domestically produced ingredients and management improvement, and provision of information on food supply

Target Form of the Basic Plan for Food, Agriculture and Rural Areas (March 2020)

—To pass Japan's food and vigorous agriculture and rural areas on to the next generation—



Target Form of the Basic Plan for Food, Agriculture and Rural Areas (March 2020) (Securing Stable Food Supply)

While adapting to changing domestic and overseas situations in various ways, strive to expand demand on the basis of the new export target (5 trillion yen by 2030) and to establish Japan's food security by supplying safe and secure food in a stable manner.

Exploration of demand through the creation of new value

Initiatives for creation of new markets

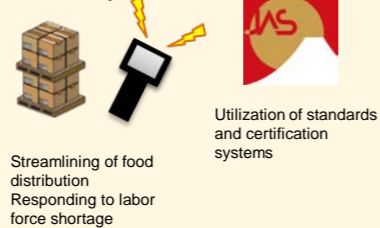
Responding to food-related market changes such as the health-oriented behavior of people and the aging of population



Creation of new value chains according to demand



Enhancement of the competitiveness of the food industry

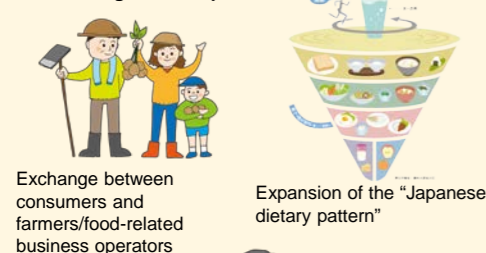


Responding to environmental issues



Deepening of the connection between consumers and food/agriculture

Promotion of food education and local consumption of local produce, and expansion of consumption of domestic agricultural products



Preservation and inheritance of the WASHOKU culture



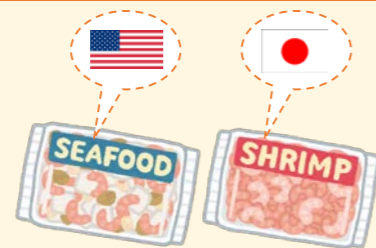
Strengthening of the relationship between consumers and producers



Ensuring food safety and consumer confidence taking international activities into consideration

Enhancement of efforts to ensure food safety based on scientific development, etc.

Securing of consumer confidence in food through enrichment of food labeling information



[Changes in the domestic situation]

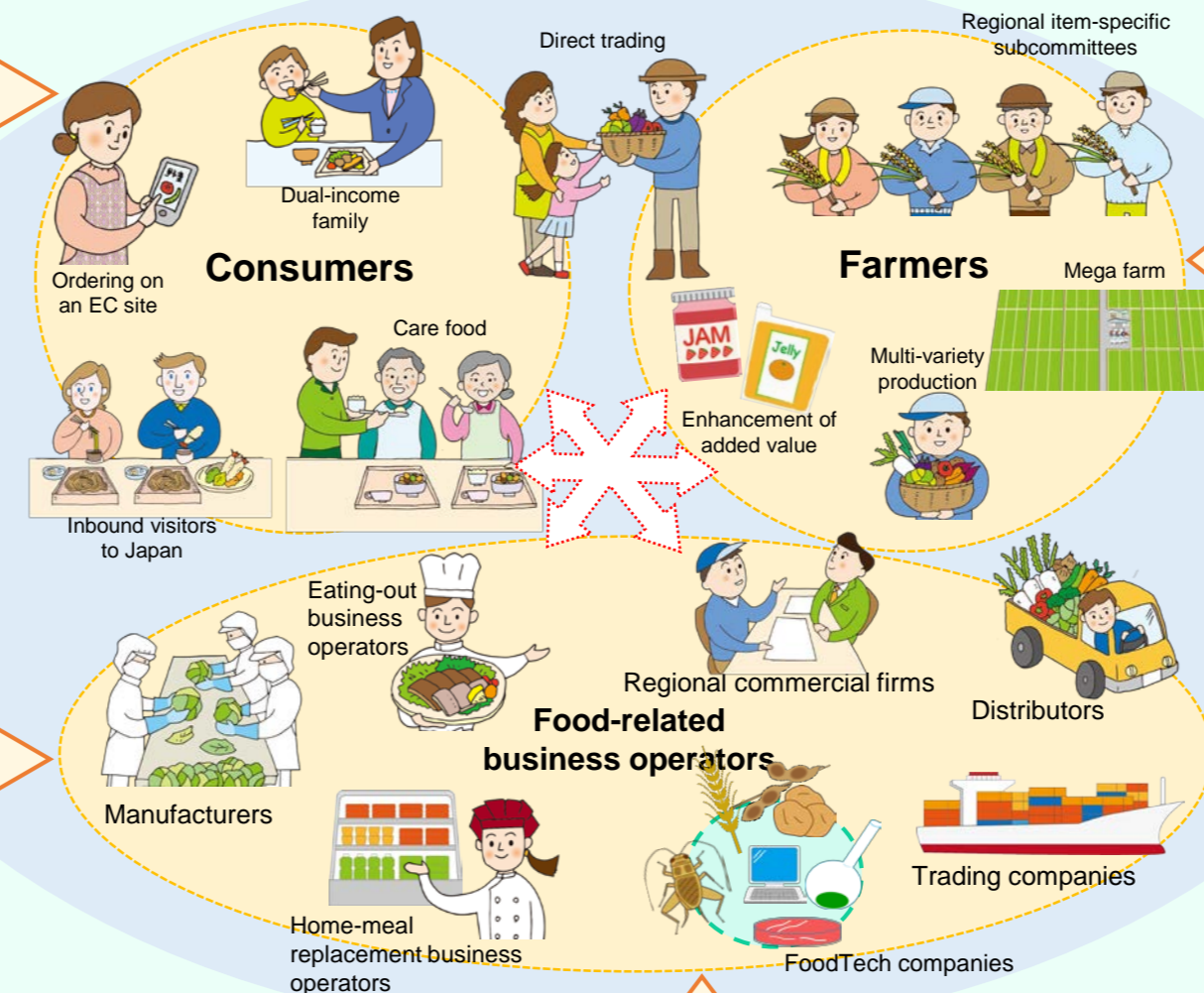
The population is aging and decreasing. Food expenditure for processed food is projected to increase.

Population	2000	2015	2030
130 million → 100 million (2019) → 100 million (2050)			
Composition ratio of food expenditure			
Fresh	33%	27%	23%
Processed	45%	52%	56%
Eating-out	22%	21%	20%

[Changes in overseas situations]

The population is increasing, and the global food and beverage market scale is projected to expand.

Population	2015	2030
7.7 billion → 9.7 billion (2017) → 9.7 billion (2050)		
Global food and beverage market scale		
	890 trillion yen	1,360 trillion yen



Strategic exploration of the global market

Promotion of the export of agricultural, forestry and fishery products and food

- Development of an export environment
 - Establishment of a control-tower organization for export promotion
 - Development of global production areas through the GFP



Establishment of commercial distribution to overseas destinations, encouragement of promotional activities



Communication of information on food connected with various stories targeting inbound visitors to Japan

Strengthening of promotional activities and supporting market development

Promotion of the overseas business expansion of the food industry



- Global food value chains
- Gaining overseas demand leading to an increase in producers' income

Protection and exploitation of intellectual property



- Promotion of the geographical indication (GI) protection system
- Enhancement of the protection of new fine plant varieties
- Enhancement of the protection of livestock genetic resources

Establishment of comprehensive food security with risks associated with food supply taken into consideration

Efforts to be made in normal times in preparation for unforeseeable events

- Analysis of risks that are expected to affect the supply of agricultural products, and consideration of measures against such risks
- Dissemination and raising awareness of the importance of stockpiling at home



Understanding and analysis of international food supply and demand

- Understanding of trends in the global supply and demand of grains, and communication of relevant information
- Investigation and analysis of risks of new infectious diseases



Securing of stable grain imports, etc.

Promotion of international cooperation

- Technical cooperation with developing countries in terms of agricultural production and food safety
- Enhancement of food security in East Asia



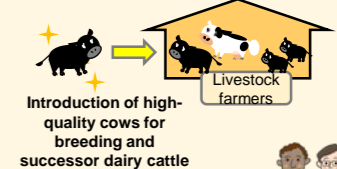
Enhancement of measures for animal and plant epidemic and phytosanitary prevention

- Enhancement of measures for animal and plant epidemic and phytosanitary prevention, addressing classical swine fever (CSF) and African swine fever (ASF)



Adapting to new international settings such as the TPP Strategic approach to international negotiations in the future

- Implementation of measures based on the comprehensive TPP-related policy framework in light of the TPP-11, the Japan-EU EPA, and the Trade Agreement between Japan and the United States of America



- Aiming at expanding export with due consideration given to the sensitivity of Japan's agricultural products, in future trade negotiations



Target Form of the Basic Plan for Food, Agriculture and Rural Areas (March 2020) (Sustainable Agricultural Development)

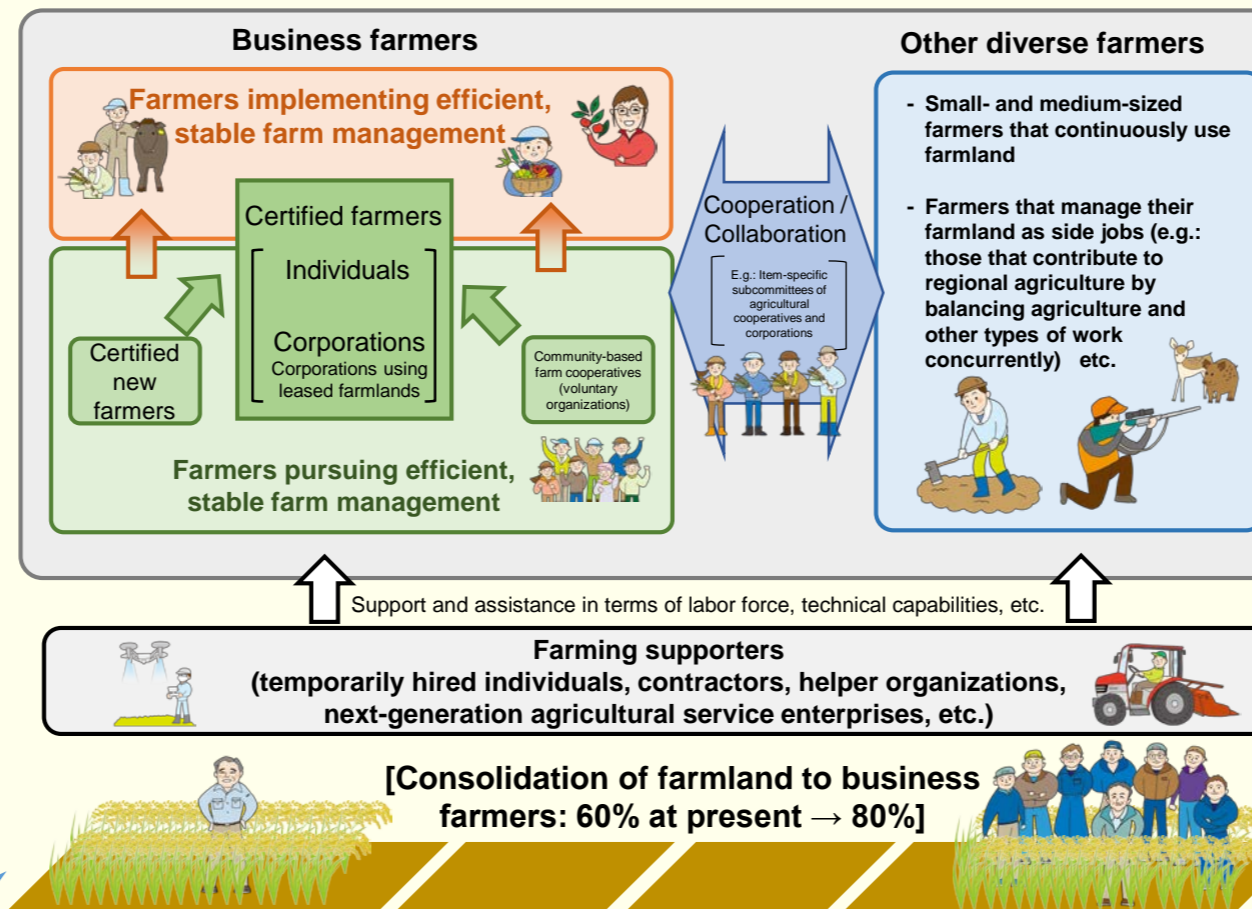
With the aim of ensuring the succession of the next generation, the development/securing of business farmers for realizing a strong and sustainable agricultural structure, and the consolidation of farmland will be further advanced. At the same time, the promotion of the active participation of diverse human resources that support their communities, the improvement of the agricultural production base, the utilization of advanced technology, and the implementation of environmental policy will be set forward.

Management Development/Securing of business farmers for realizing a strong and sustainable agricultural structure

- **Intensive support for business farmers**
Encourage business farmers to run their businesses on their own initiatives and by making original and creative efforts
- **Acceleration of incorporation of farms and enhancement of the management base**
Accelerate the incorporation of farm management, which is expected to be effective for management development, by making progress in dissemination, raising relevant awareness, and providing guidance
- **Smooth business succession by next-generation business farmers**
Promote systematic business succession to ensure that resources such as farmland are definitely used by next-generation farmers
- **Enrichment of agricultural education, recruitment of new farmers, and assisting such farmers in becoming firmly established**
 - Enrich the educational contents provided by agricultural education institutions
 - Promote the recruitment of new young farmers by preparing new farmer acceptance systems in communities
- **Development of an environment wherein women can fully reach their potential**
 - Promote the participation of women in regional agriculture
 - Develop an environment based on, for example, the "Nougyou-Joshi Project"
- **Cooperation between the agricultural sector and industrial sector**



Farmers supporting the community



Management Active participation of diverse human resources and entities that support agricultural sites

- **Diverse types of farmers supporting the community**
Important role in maintaining the regional community
- **Next-generation agricultural support services**
Utilize advanced technology such as drones, thereby contributing to the resolution of labor shortage and the enhancement of productivity
- **Implementation of the reform of working practices in agriculture in which diverse human resources can actively participate**

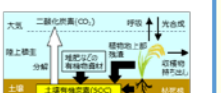


Management Promotion of initiatives for stabilization of agricultural management

- **Steady promotion of revenue insurance and the Farming Income Stabilization Measures**
- **Consideration of how comprehensive and effective safety-net measures should be**
Promote the digitalization of procedures, the simplification of application data, etc.

Production technology Promotion of environmental policy including responses to climate change

- **Promotion of mitigation/adaptation measures for climate change**
Promote renewable energy, the de-carbonization of production processes, and carbon sequestration/storage
- **Conservation and sustainable use of biodiversity**
Promote sustainable production and consumption and the visualization of conservation effects on biodiversity
- **Further promotion of organic farming and soil productivity improvement**
- **Responding to the issue of plastic waste in the field of agriculture**
- **Maintenance and enhancement of the natural cyclical function of agriculture**



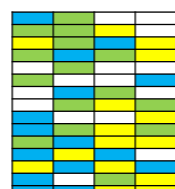
Production technology Promotion of innovation in agricultural production/distribution sites by utilizing information and communication technology, etc.

- **Utilization of digital technology in agricultural sites, for the acceleration of smart agriculture**
 - Promote the resolution of issues in each of the stages of verification, introduction and dissemination of smart agriculture technologies
- **Promotion of digitalization in the implementation of agricultural measures**
 - Develop a common online application service of the MAFF (eMAFF) to enable various administrative procedures to be completed online; directly provide and collect information to/from farmers, etc.; and consider and take other relevant action concerning the integrated management of farmland information based on digital maps
- **Promotion of innovation creation and technology development**
 - Promote research and development in line with the needs of agricultural sites and addressing various issues



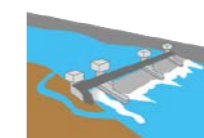
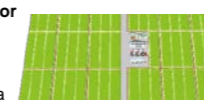
Farmland Consolidation of farmland to business farmers, etc. and securing of farmland

- **Substantiation of the Farmers and Farmland Plan**
Implement various measures and the inspection of regional agriculture in an integrated manner through the substantiation of the Farmers and Farmland Plan (with maps visualizing the actual condition of the community, community-supporting farmers discuss what farms that will use farmland in the future should be like)
- **Full operation of Public Corporations for Farmland Consolidation to Core Farmers through Renting and Subleasing**
Following the simplification of procedures and the unification of systems, enhance the implementation system
- **Strengthening of responses to farmland whose owner is unknown**
- **Prevention/Restoration of dilapidated farmland**
Effectively use the multifunctional payment system, the direct payment system to farmers in hilly and mountainous areas, etc.



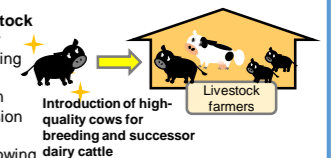
Farmland Improvement of agricultural infrastructure for the growth of agricultural industry and the building of national resilience

- **Improvement of production infrastructure for the growth of agricultural industry**
 - Promote the enlargement of farm blocks, the multi-purpose use of paddy fields and the upgrading of upland fields and fruit farms with a view to transforming agriculture into a growth industry.
- **Strategic preservation and management of farm irrigation facilities**
 - Promote the strategic preservation and management of farm irrigation facilities for extending their lifetime and reducing their life cycle cost
- **Disaster prevention/mitigation measures toward building the resilience of agriculture and rural areas**
 - Promote disaster prevention/mitigation measures toward building the resilience of agriculture and rural areas in order to appropriately respond to disasters that occur more frequently and cause more devastating damage today
- **Enhancement of the land improvement district system**



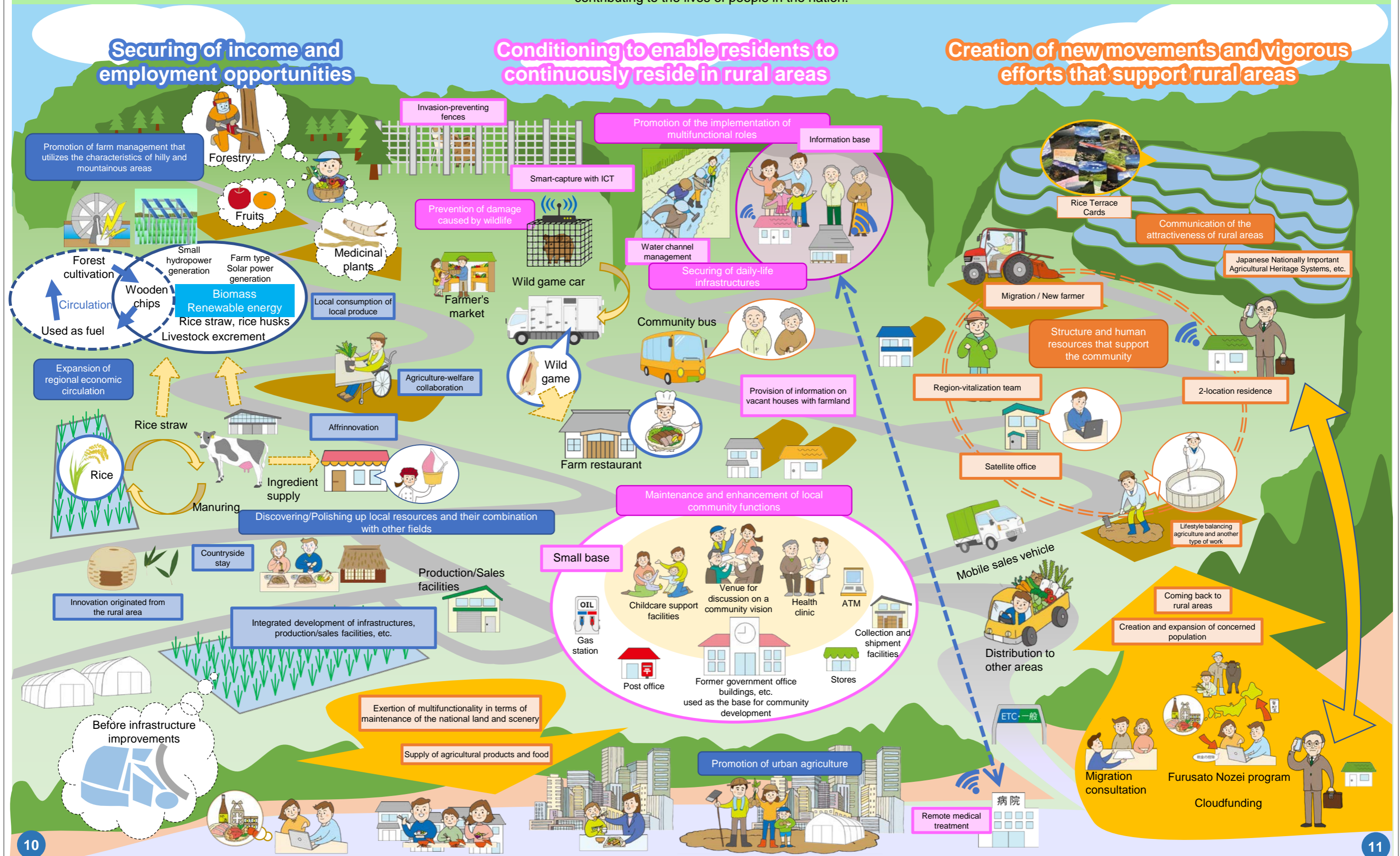
Production technology Enhancement of the production base to deal with changes in the demand structure, etc., and streamlining of the distribution/processing structure

- **Enhancement of the competitiveness of livestock**
 - Enhance the production base, for example by increasing the number of beef cows for breeding or conducting dairy management in a sustainable manner, to be able to handle an increase in domestic demand and the expansion of export
 - Improve the environment, for example, by allowing the utilization of livestock excrement for activities of soil productivity improvement
- **Enhancement of the production system for horticultural products, etc.**
 - Regarding vegetables for processing and manufacturing use, promote the establishment of integrated mechanization systems and the conversion into data-driven agriculture, among other matters, with the aim of replacing imports with domestically grown vegetables
 - Promote improvements in labor productivity through switching to fine items and varieties of fruits and the introduction of labor-saving tree forms, among other matters
- **Steady promotion of the rice policy reform and conversion into highly profitable crops, etc. in paddy fields**
 - Fully utilize paddy fields and promote stable transactions
 - Expand the production of wheat/barley and soybean based on demand, and promote conversion into highly profitable crops such as vegetables and fruits
- **Promotion of Good Agricultural Practices, and effective farming safety measures**
- **Supply of high-quality and affordable agricultural materials, and streamlining of the production, distribution and processing of agricultural products**



Target Form of the Basic Plan for Food, Agriculture and Rural Areas (March 2020) (Development of Rural Areas)

Relevant ministries, prefectures, municipalities and private sectors will work together on implementing measures in line with the 3 pillars of (1) Work (securing income and employment opportunities), (2) Living (conditioning rural areas to enable residents to continuously reside in the areas) and (3) Vitality (creating new movements and vigorous efforts that support rural areas), developing vigorous rural areas and thereby contributing to the lives of people in the nation.



Changes and issues in the situation surrounding food, agriculture and rural areas

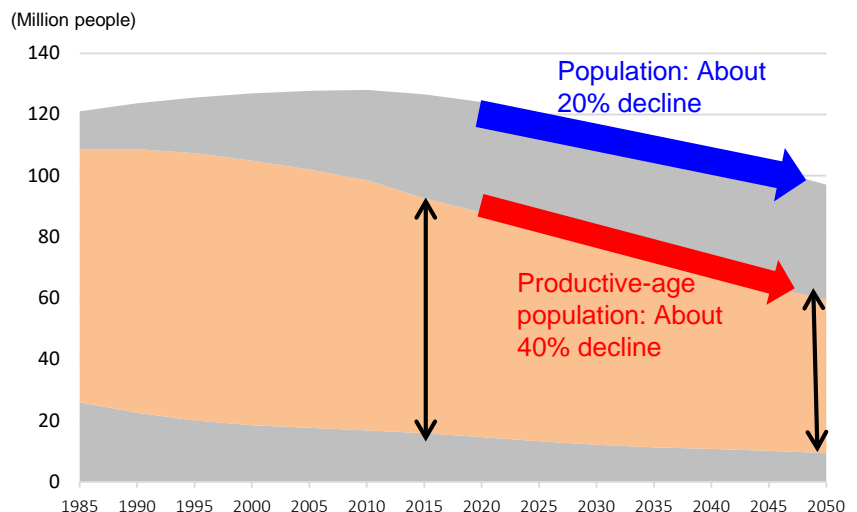
- While outcomes such as an increase in agricultural production income, the expanded export of agricultural, forestry and fishery products and food, and the recruitment of new young farmers have been achieved since the formulation of the previous Basic Plan, there are concerns that the production base may become vulnerable and local communities may decline in the face of issues including the shrinkage of the domestic market caused by population decline, new international settings such as the TPP, and the frequent occurrence of natural disasters and infectious diseases of domestic animals.
- Under these circumstances, it is important to enhance the production base and thereby improve the sustainability of agriculture and rural areas so as to be able to deal with various demands in Japan and abroad.

Changes in Japan's population and labor force

In Japan, its population is estimated to decline by approximately 20% by 2050 in comparison with the level in 2015 due to a full-fledged decline in the birthrate combined with a growing proportion of elderly people and population decline fully in progress.

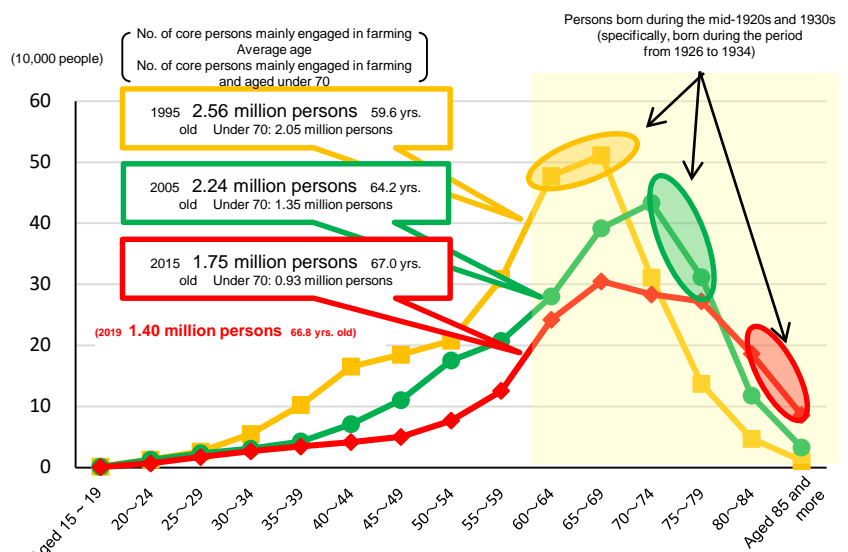
In particular, the proportion of its productive-age population serving as the workforce of the society is expected to fall by approximately 40% by 2050 in comparison with the level in 2015, indicating a significant reduction.

Figure 12-1 Estimated changes in Japan's population



Sources: Ministry of Internal Affairs and Communications (MIC), "Population Census"; National Institute of Population and Social Security Research, "Household Projections for Japan (Nationwide) (2018)"

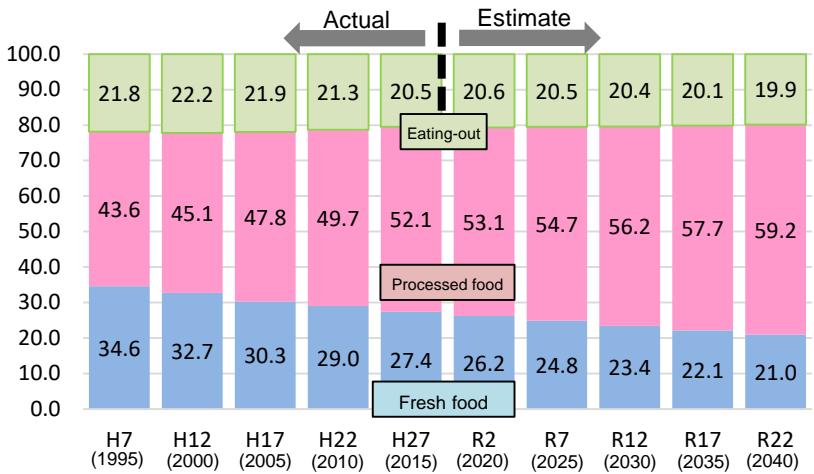
Figure 12-2 Changes in the age distribution of core persons mainly engaged in farming



Sources: MAFF, "Census of Agriculture and Forestry" (aggregate calculation after reclassification) and "Survey on Movement of Agricultural Structure"

In agricultural fields, core persons mainly engaged in farming, who support Japan's agriculture, are aging every year and the number of them is expected to decrease further in the future. Accordingly, there is a risk that it will be difficult to secure business farmers and that the sustainability of agriculture may be a concern in some areas.

Figure 13-1 Progress in the externalization of diet

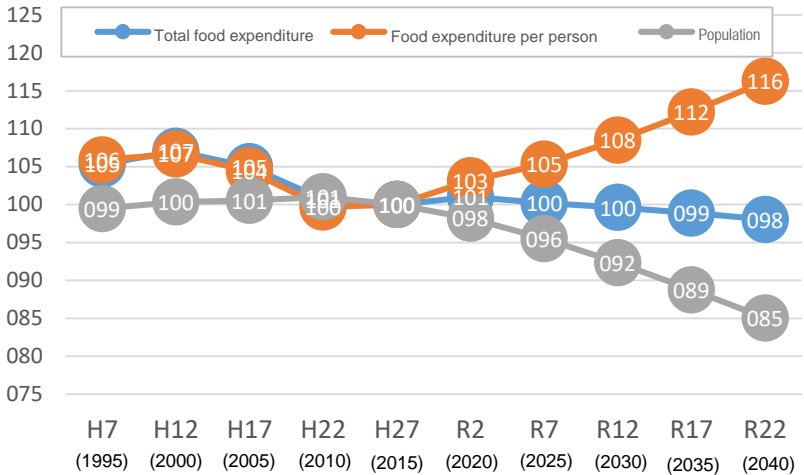


Notes: 1) Actual values calculated with reference to the Family Income and Expenditure Survey, the National Survey of Family Income and Expenditure, etc. are used up to 2015. For 2020 onward, estimates are used.
2) Fresh food means the total of rice, fresh seafood, fresh meat, milk, eggs, fresh vegetables and fresh fruits. Processed food means a group of items other than those categorized into fresh food or eating-out.

Source: Policy Research Institute, Ministry of Agriculture, Forestry and Fisheries (PRIMAFF), "Future Estimation of Food Consumption in Japan (2019 Ver.)" (August 2019)

Since the externalization of diet is projected to advance further with the increase of single-person households and dual-income households and incidental lifestyle changes, food demand is expected to shift from fresh food to processed food with high added value.

Figure 13-2 Estimation of the total food expenditure and food expenditure per person

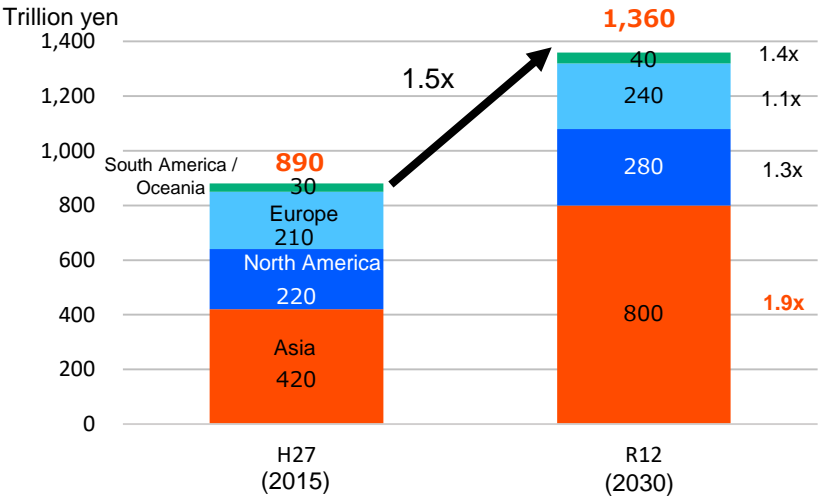


Source: PRIMAFF, "Future Estimation of Food Consumption in Japan (2019 Ver.)" (August 2019)

The food expenditure per person is expected to increase with the percentage of expenditure for processed food increasing. On the other hand, the advancement of population decline is likely to offset the growth of the food expenditure per person. Accordingly, the total food expenditure will remain roughly flat for the meantime and contract in the long run.

Prospects of the global food and beverage market scale

Figure 13-3 Prospects of the global food and beverage market scale



*The figures shown in the graph are rounded off.
Source: PRIMAFF, "Scale Estimation of the Global Food and Beverage Market" (March 2019)

The global food and beverage market scale is expected to expand to 1,360 trillion yen by 2030 (1.5 times more than the scale in 2015).

By region, the market scale in Asia is projected to expand 1.9 times from 420 trillion yen to 800 trillion yen as the growth of per capita GDP in the region is considerable.

Additionally, the TPP-11, the Japan-EU EPA, and trade agreements between Japan and the United States are set to create a massive market accounting for about 60% of the world's GDP. Accordingly, it is important to gain a share of the global food market while also dealing with the domestic market.

Population aging with a low birthrate and population decline are progressing in rural areas, particularly in hilly and mountainous areas, ahead of urban areas. On this basis, there is a risk that, in the future, there will not only be more areas where it is difficult to conduct regional joint activities and preservation and management activities, but there will also be areas where the maintenance of even daily-life infrastructures is difficult.

Additionally, it is predicted that the number of rural communities whose continued existence is at risk will increase fourfold or more in 30 years. Since 90% of such rural communities are located in hilly and mountainous areas, there is a concern about how the production base of agriculture will be affected by this trend.

Figure 14-1 Population changes and future prospects according to the classification of agriculture areas

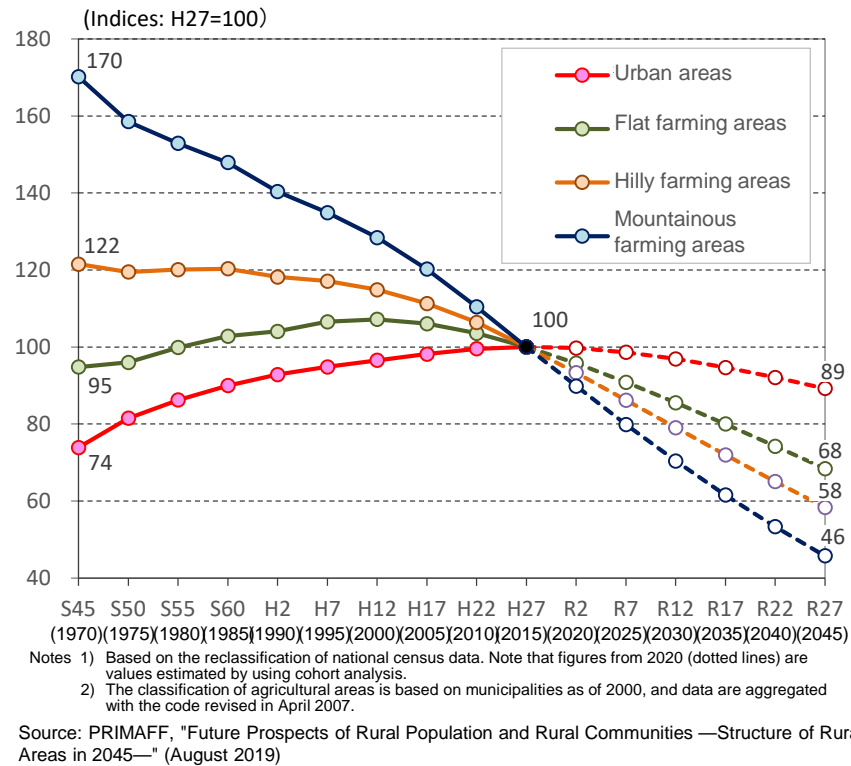
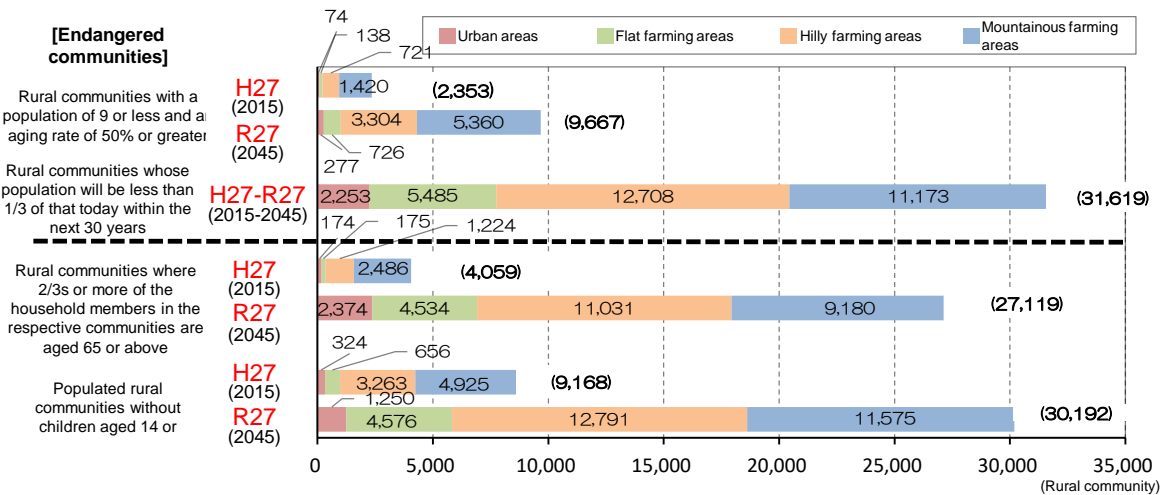


Figure 14-2 Changes in rural communities due to the progress of population decline and aging with a low birthrate (estimation results)



Source: PRIMAFF, "Future Prospects of Rural Population and Rural Communities —Structure of Rural Areas in 2045—" (August 2019)
Note: Based on rural community population by age estimated by using cohort analysis performed for each rural community.

Basic viewpoints for promoting measures

- Both "industrial policy" for developing agriculture into a growth sector and "regional policy" for promoting the maintenance and implementation of agriculture's and rural areas' multifunctional roles will be employed just like two wheels of a cart, thereby striving to ensure stable food supply into the future and to improve Japan's capacity for food self-sufficiency and establish food security.
- In so doing, measures will be implemented on the basis of the following viewpoints.

1. Promotion of measures that are in line with the needs of consumers and users

To deal with declining consumption incidental to changes in the domestic social structure and the progress of the externalization of diet, it is necessary to build production systems and value chains in line with changing needs. In the meanwhile, the development of new overseas sales channels and global production areas based on overseas regulations/demand need to be advanced in order to gain a share of the global food market that continues to expand and increase the income of farmers.

2. Establishment of food security and formation of a national consensus on the importance of agriculture and rural areas

For stable food supply, it is necessary to make efforts to increase domestic agricultural production as a basis and secure food by appropriately combining imports and stocks. For increasing domestic agricultural production, consumption-focused initiatives to encourage consumers to actively choose domestic agricultural products are essential, in addition to production-focused initiatives.

3. Implementation of measures to develop/secure human resources and enhance the production base with the aim of ensuring the sustainability of agriculture

In order to ensure the sustainability of agriculture, it is important to establish an agricultural structure that ensures that efficient and stable farm management constitutes a considerable portion of agricultural production. Furthermore, it is important to enhance the production base through promotion of the active participation of diverse human resources and entities that support agricultural sites

4. Acceleration of smart agriculture and promotion of Digital Transformation in agriculture

To address the aging of farmers and labor shortage in the future at the same time as transforming agriculture into a growing sector, it is essential to reform agriculture into a new form that creates and provides value which accurately addresses consumer needs through data-driven agricultural management (Digital Transformation in agriculture (Agriculture DX)).

5. Integration of regional policies and maintenance and implementation of multifunctionality

To maintain and pass rural areas on to the next generation, it is important for relevant ministries, local governments, business operators, etc. to mutually cooperate with each other with a view to effective and efficient use of national land and make efforts to "integrate regional policies."

6. Enhancement of responses to risks that pose a threat to the sustainability of agriculture, such as climate change leading to disasters, infectious diseases of domestic animals, etc.

In the future, an even greater weight will be placed on responses to risks that pose a threat to the sustainability of agriculture, including large-scale natural disasters, which have occurred frequently in recent years, infectious diseases of domestic animals such as CSF (classical swine fever), and also COVID-19.

7. Promotion of measures to expand agricultural income and income in rural areas

It continues to be important to increase agricultural income through raising the agricultural production value and reducing production costs and to increase relevant income in rural areas through means such as Affrinnovation and the promotion of innovation originated from rural areas.

8. Implementation of measures to back up sustainable efforts based on the SDGs

Even in the fields of food, agriculture and rural areas, it is necessary to tackle various economic/social/environmental issues in an integrated manner.

Part 2

Food self-sufficiency ratio targets

- Challenges to be overcome in securing stable food supply and promoting agricultural production that responds to changes in domestic and overseas demand are shown by item. Furthermore, as the levels that can be attained when such challenges are overcome, the total food self-sufficiency ratio targets for 2030 are set to 45% on a calorie supply basis and 75% on a production value basis.
- In addition, as an indicator to evaluate the situation of food production in Japan with activities in the livestock industry appropriately reflected in it irrespective of whether feed is domestically produced or imported, national food production ratio targets are newly set.

Trend of the total food self-sufficiency ratio

Japan's food self-sufficiency ratio was on a decline in the long term but has roughly stayed level in recent years.

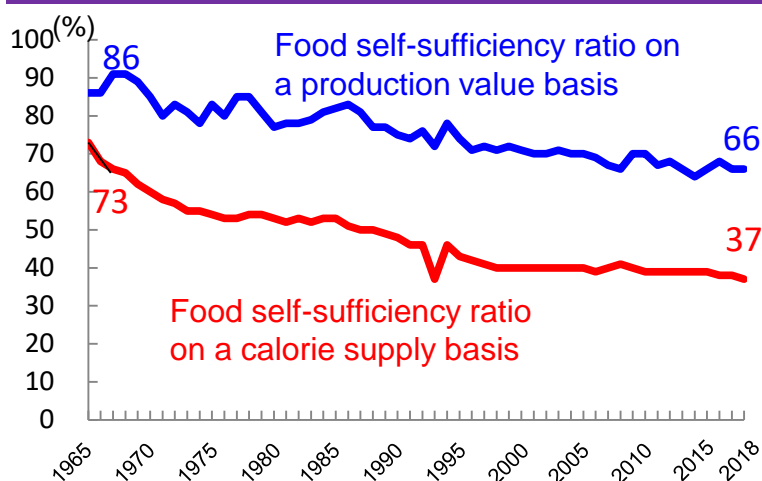
[Calorie supply basis]

- Focuses on energy (calorie) as it is a foundational nutritional value
- Evaluates the situation of food security

[Production value basis]

- Focuses on economic value
- More appropriately reflects production activities for vegetables, fruits, livestock products, etc. with high added value

Figure 17-1 Trend of the food self-sufficiency ratio



Total food self-sufficiency ratio targets

On the basis of the prospects of food consumption and production effort targets (Figure 17-1), food self-sufficiency ratio targets are set as the levels that can be attained when various challenges are overcome.

	FY2018 (base fiscal year)	FY2030 (target fiscal year)
Total food self-sufficiency ratio on a calorie supply basis	37%	45%
Total food self-sufficiency ratio on a production value basis	66%	75%

(Reference)

	FY2018 (base fiscal year)	FY2030 (target fiscal year)
Total farmland area	4.420 million ha (4.397 million ha in 2019)	4.14 million ha
Total planted area	4.048 million ha	4.31 million ha
Utilization rate of cultivated land	92%	104%

Targets of the national food production ratio that focuses on domestic production

	FY2018 (base fiscal year)	FY2030 (target fiscal year)
Feed self-sufficiency ratio	25%	34%
National food production ratio on a calorie supply basis	46%	53%
National food production ratio on a production value basis	69%	79%

In addition to the total food self-sufficiency ratio targets, national food production ratio targets are newly set as an indicator to evaluate the situation of food production in Japan with activities in the livestock industry appropriately reflected in it irrespective of whether feed is domestically produced or imported.

Prospects of food consumption and production effort targets

In order to achieve the food self-sufficiency ratio targets for FY2030, it is important that (i) in terms of food consumption, the connection between consumers and food and agriculture is deepened and efforts are made to expand the demand for domestic agricultural products in response to the externalization of diet and consumers' growing preference for convenient food, and that (ii) in terms of agricultural production, production and supply that meet changes in domestic and overseas demand are implemented in a systematic manner and, at the same time, the production base is enhanced. Based on these viewpoints, prospects of food consumption and production effort targets are set for each item.

(Examples)

Wheat/Soybean: Promotion of the development/introduction of new varieties with excellent disease resistance, etc., and promotion of large-scale areas and block rotation

Beef : Promotion of increasing the number of cows for breeding, productivity improvement and scale expansion which also cover small- and medium-sized/family businesses, expansion of demand for domestically produced beef through export promotion

Vegetables: Expansion of production of vegetables for processing and manufacturing use through formation of new production areas by utilizing paddy fields, and expansion of the daily vegetable consumption of adults (target: 350 g)

Figure 17-1 Prospects of food consumption and production effort targets for FY2030

Item	Prospects of food consumption				Production effort targets	
	Consumption per person per year (kg per person per year)		Supplies for domestic consumption (10,000 tons)		Production effort targets (10,000 tons)	
	FY2018	FY2030	FY2018	FY2030	FY2018	FY2030
Rice (excluding rice for flour and rice for feed)	54	50	799	714	775	723
Rice for flour	0.2	0.9	2.8	13	2.8	13
Rice for feed	-	-	43	70	43	70
Wheat	32	31	651	579	76	108
Barley / Naked barley	0.3	0.3	198	196	17	23
Soybean	6.7	6.4	356	336	21	34
Buckwheat	0.7	0.7	14	13	2.9	4.0
Sweet potato	3.8	4.0	84	85	80	86
Potato	17	17	336	330	226	239
Rapeseed	-	-	257	264	0.3	0.4
Vegetables	90	93	1,461	1,431	1,131	1,302
Fruits	36	36	743	707	283	308
Sugar beet <refined sugar equivalent>	<18>	<17>	<231>	<206>	361 <61>	368 <62>
Sugar cane <refined sugar equivalent>					120 <13>	153 <18>
Tea	0.7	0.7	8.6	7.9	8.6	9.9

Item	Prospects of food consumption				Production effort targets	
	Consumption per person per year (kg per person per year)		Supplies for domestic consumption (10,000 tons)		Production effort targets (10,000 tons)	
	FY2018	FY2030	FY2018	FY2030	FY2018	FY2030
Raw milk	96	107	1,243	1,302	728	780
Beef <carcass equivalent>	6.5	6.9	93 <133>	94 <134>	33 <48>	40 <57>
Pork <carcass equivalent>	13	13	185 <264>	179 <256>	90 <128>	92 <131>
Chicken	14	15	251	262	160	170
Hen egg	18	18	274	261	263	264
Feed and forage crop	-	-	435	519	350	519

Note: The figures for feed and forage crop are the total digestible nutrients(TDN) of quality roughage.

(Reference)

Item	Prospects of food consumption				Production effort targets	
	Consumption per person per year (kg per person per year)		Supplies for domestic consumption (10,000 tons)		Production effort targets (10,000 tons)	
	FY2018	FY2030	FY2018	FY2030	FY2018	FY2030
Fish and shellfish <for human consumption>	24 <24>	25 <25>	716 <569>	711 <553>	392 <335>	536 <474>
Seaweeds	0.9	0.9	14	13	9.3	9.8
Mushrooms	3.5	3.8	53	54	47	49

Note: The supplies for domestic consumption denote the amount obtained by multiplying the consumption per person per year by population and adding the amount lost during transportation from the production areas to consumers, etc.

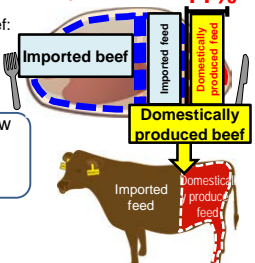
Food self-sufficiency ratio target (with the feed self-sufficiency ratio reflected)

Feed self-sufficiency ratio reflected: **11%**

Food self-sufficiency ratio for beef:
11% (calorie supply basis)
(2018)



It is possible to know how much can be really self-sufficient including feed.



Self-sufficiency ratio for domestically produced beef
27%

- The producible part can be precisely evaluated only with domestically produced feed.
- Production efforts for domestically produced feed are reflected.

➡ Evaluates the situation of food security of Japan

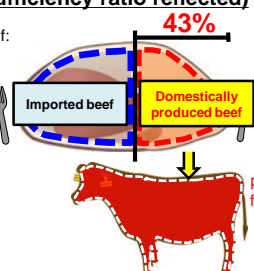
National food production ratio target [newly set] (without the feed self-sufficiency ratio reflected)

National food production ratio for beef:

43% (calorie supply basis)
(2018)



It is possible to know the capability of Japan's livestock industry.



National food production ratio for domestically produced beef
100%

- The efforts of livestock farms in increasing their amount of livestock and production according to demand are reflected.
- It matches the actual feeling that consumers who purchase domestically produced livestock products daily have.

➡ Takes account of the activities of the livestock industry and evaluates the situation of domestic production irrespective of whether feed is domestically produced or imported

➡ Strive to improve the "food self-sufficiency ratio that reflects the feed self-sufficiency ratio" while making efforts to improve both the "national food production ratio" and "feed self-sufficiency ratio"

Food self-sufficiency potential indicator (food production potential)

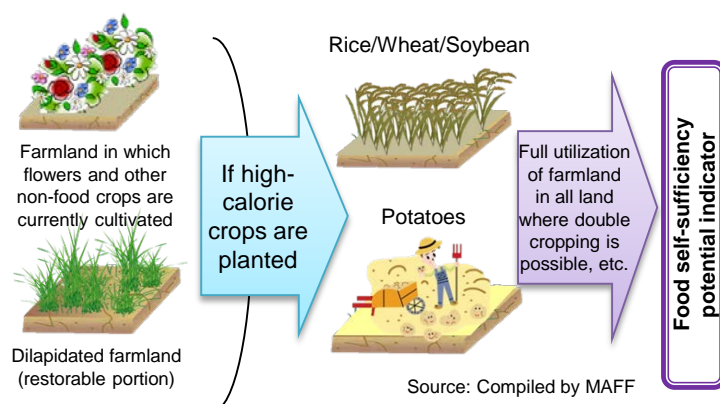
- The food self-sufficiency potential indicator, which indicates the food production potential of Japan, has been improved so that it takes into consideration agriculture labor force and labor-saving agricultural technology.
- Furthermore, with prospects for 2030 also presented, it has been designed to evaluate how the securing of farmland and agriculture labor force for the future and how yield improvement can contribute to improving the food self-sufficiency potential.

Concept of the food self-sufficiency potential indicator and its relationship with the food self-sufficiency ratio

In an unforeseeable event, it is necessary to secure the maximum food supply within Japan. Accordingly, it is important in normal times to understand the food production potential of agriculture, forestry and fisheries in Japan.

For that reason, the "food self-sufficiency potential indicator" has been set as an indicator to estimate "how much food can be produced by domestic production alone" (food production potential).

Figure 18-1 Concept of the "food self-sufficiency potential indicator"

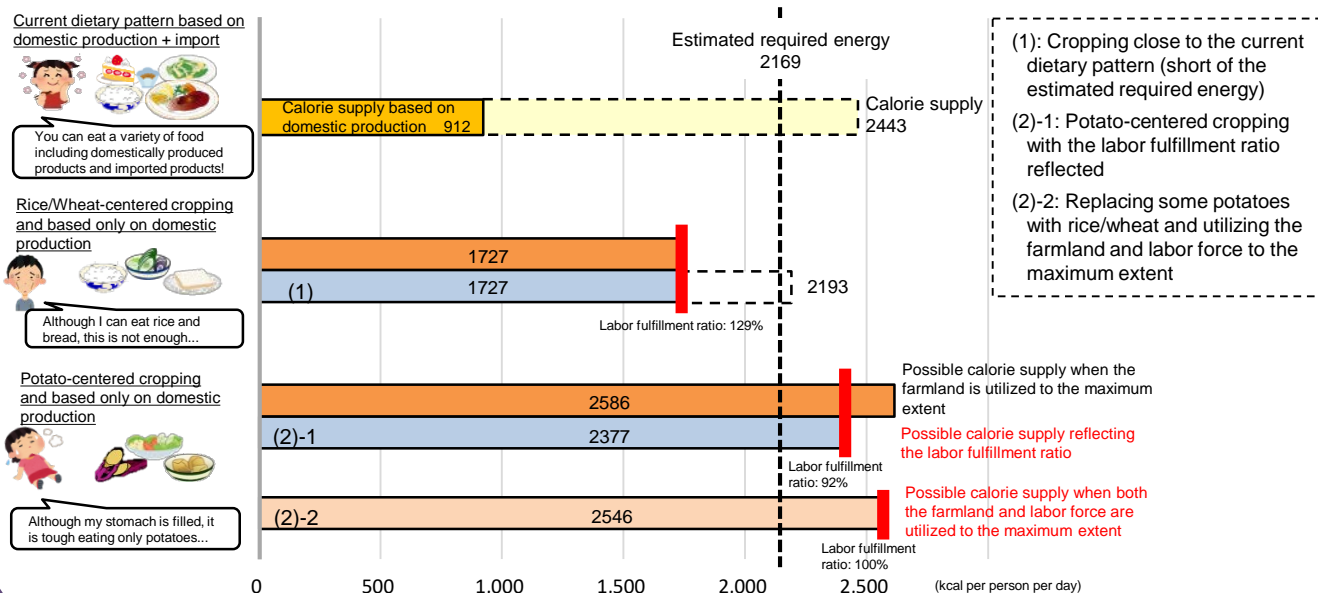


Current status of the "food self-sufficiency potential indicator"

The current food self-sufficiency potential indicator (FY2018) is below the Japanese average level of estimated required energy per person in the case of "rice/wheat-centered cropping," while it is above the same level in the case of "potato-centered cropping."

Since "potato-centered cropping" is short of labor force required for the cropping by 10%, a possible calorie supply that can be generated when part of the cropping is replaced with more labor-saving crops such as rice/wheat and both the farmland and labor force are utilized to the maximum extent is presented.

Figure 18-2 Concept of the "food self-sufficiency potential indicator"



Prospects of the “food self-sufficiency potential indicator” in the future (FY2030)

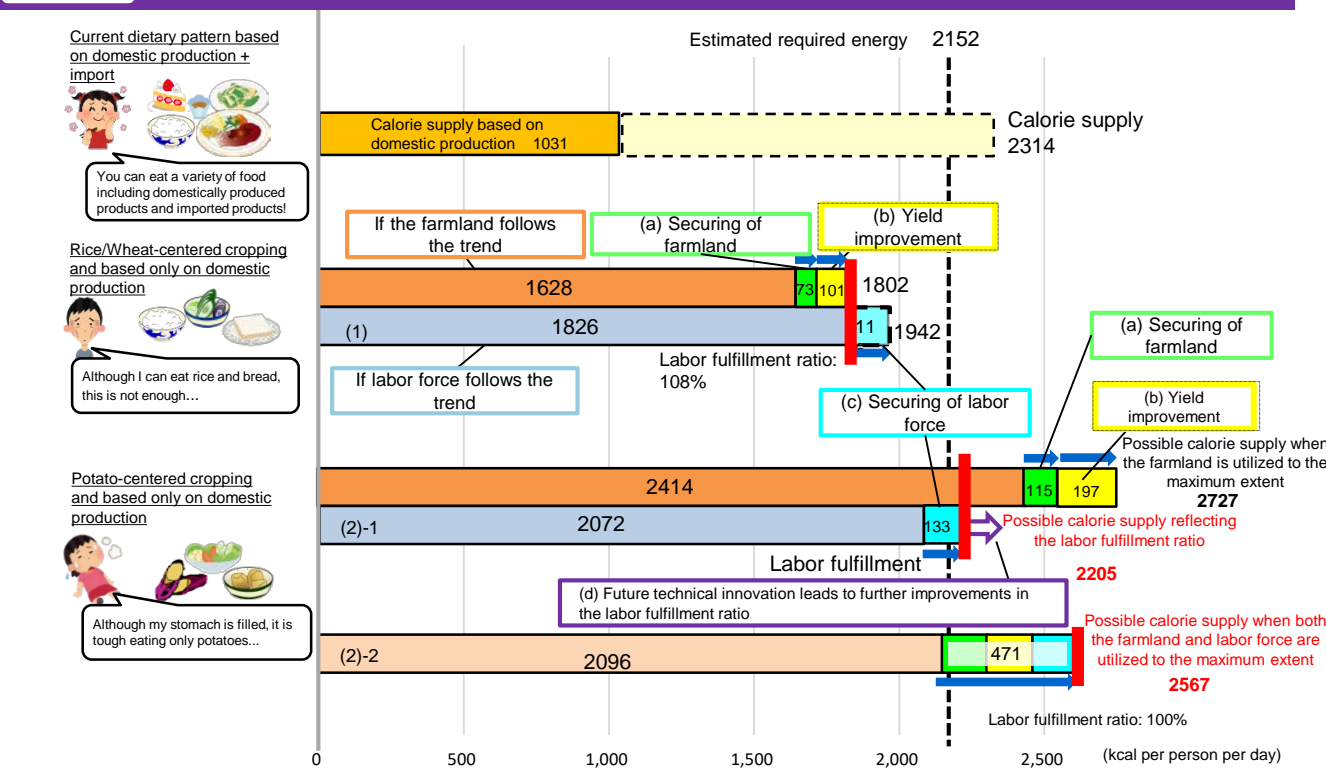
The new Basic Plan shows how the securing of farmland and agriculture labor force for the future and yield improvement contribute to an increase in the possible calorie supply per person per day, respectively.

With the advancement of (a) the securing of farmland and (b) yield improvement, the possible calorie supply for the case where the farmland is utilized to the maximum extent can be boosted up from the level for the case where "the farmland follows the current trend."

Furthermore, if (c) the securing of labor force is advanced, for example, with improvement in the retention rate of young newcomers, the possible calorie supply reflecting the labor fulfillment ratio can be pushed up from the level for the case where "labor force follows the current trend." In addition, technical innovation is advanced, the calorie supply can be further boosted up (d).

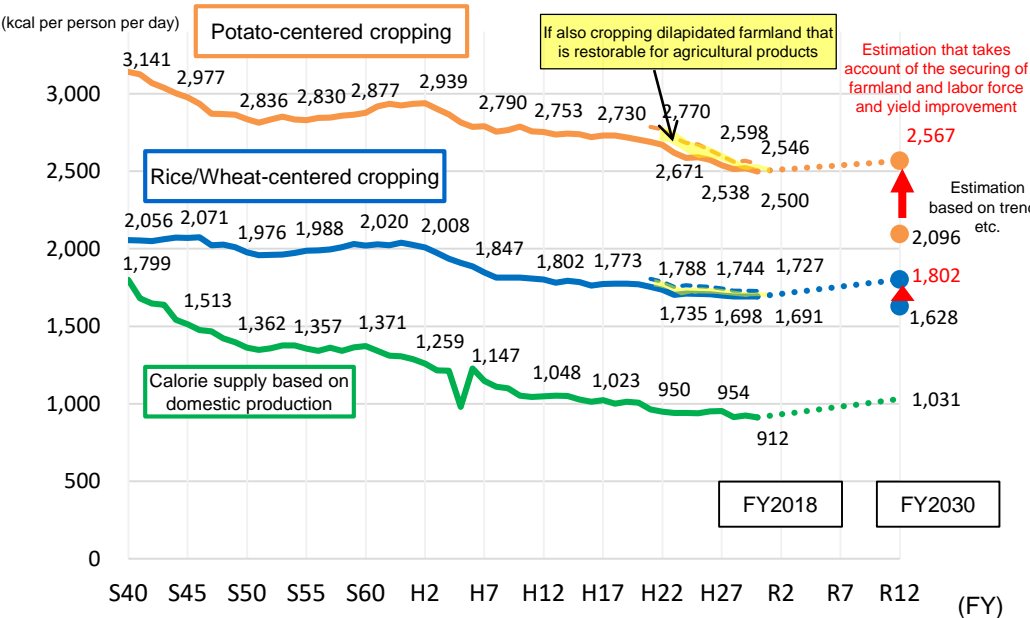
Thus, it is important to work on the food self-sufficiency potential indicator together with the securing of farmland and labor force, yield improvement and technical innovation as above.

Figure 19-1 Prospects of the “food self-sufficiency potential indicator” in FY2030



Trend of the “food self-sufficiency potential indicator”

Figure 19-2 Trend and prospects of the “food self-sufficiency potential indicator”



The food self-sufficiency potential indicator had been on a decline until FY2018 due to the declining area of farmland, sluggish yield growth, etc.

The estimation for FY2030 that takes account of the securing of farmland and labor force and yield improvement pushes up the possible calorie supplies of both rice/wheat-centered cropping and potato-centered cropping in comparison with those supplies according to estimation based on trends, etc.

Exploration of demand through the creation of new value

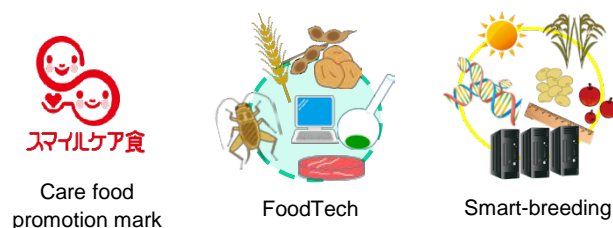
- Taking account of the progress of externalization of diet, growing preference for convenient food, health-oriented behavior, etc. due to aging population and lifestyle changes, the government will promote the creation of new value through cooperation and coordination among relevant parties while also stepping up responses to the diversification and sophistication of consumers' and users' needs.

Initiatives for creation of new markets

In order to respond to food-related market changes such as the health-oriented behavior of people and the aging of population, such initiatives for creation of new markets as those below will be promoted:

- Dissemination of care food
- Services to support health management through food
- Smart-breeding by utilizing big data, etc.
- FoodTech that combines food and advanced technology

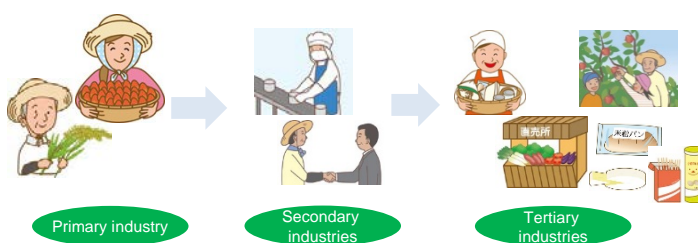
Figure 20-1 Initiatives for creation of new markets



Creation of new value chains according to demand

Initiatives for Affrinnovation so far will be further developed to promote the creation of businesses with high added value through active cooperation between agriculture and secondary industries such as the food processor industry and tertiary industries such as the tourism industry.

Figure 20-2 New development of Affrinnovation

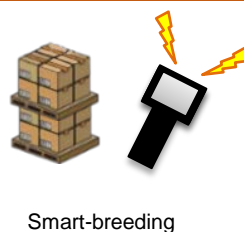


Enhancement of the competitiveness of the food industry

To enhance the competitiveness of the food industry, the following actions will be promoted:

- Streamlining in the entire supply chain
- Efforts to resolve labor shortage
- Promoting enactment and utilization of JAS and international standards that contribute, for example, to ensuring smooth transactions and the rationalization of consumers' choice

Figure 20-3 Streamlining of food distribution



Smart-breeding

Figure 20-4 Specific JAS Logo



"Specific JAS Logo" for differentiation and branding

Responses to environmental issues including food loss and waste

Initiatives for reduction of food loss and waste will be accelerated with the aim of attaining the target of halving business-related food loss and waste.

Furthermore, measures to deal with plastic waste in fields associated with the food industry will be strengthened.

Food-related business operators' actions for climate-related risk management will be promoted.

Figure 20-5 Responses to environmental issues



"Loss-non" logo of a national movement for reduction of food loss and waste



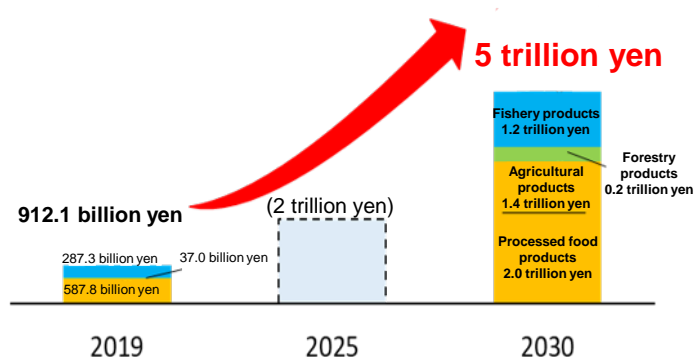
Action promotion mark for plastic waste generation control

Strategic exploration of the global market

- The entire government will promote the export of agricultural, forestry and fishery products and food with the aim of increasing the income of farmers.
- The government will work on promoting the overseas business expansion of the food industry and protecting and exploiting intellectual property, etc.

Promotion of the export of agricultural, forestry and fishery products and food

Figure 21-1 New export targets



The entire government will promote export by establishing of Headquarters for the Export of Agricultural, Forestry, and Fishery Products and Food within the MAFF as the control tower for export promotion and therethrough preparing execution plans and implementing progress management.

The government will develop an environment for addressing factors obstructing export and for expanding export and promote the creation of global production areas through the GFP (Global Farmers / Fishermen / Foresters / Food Manufacturers Project) and the strengthening of production bases that can contribute to the expansion of export according to the challenges that each item faces.

In addition, strategic promotion will be conducted through the Japan Food Product Overseas Promotion Center (JFOODO) in expanding the export of agricultural, forestry and fishery products and food produced in Japan.

Furthermore, the government will strategically promote not only the export of products but also efforts to meet overseas demand, such as the overseas business expansion of food-related industries (such as the food industry and agriculture) through, for example, the establishment of global food value chains by utilizing Japan's technology and know-how.

Figure 21-2 Promotion aimed at export expansion



Business negotiations at overseas trade exhibitions



Sales promotion for Bonsai plants

Protection and exploitation of intellectual property, etc.

Figure 21-3 Geographical indication protection system



With the aim of further raising awareness about the geographical indication (GI) protection system, the protection of Japan's GI products will be enhanced.

Additionally, since the current plant variety protection system is not able to place restrictions on taking new, high-quality varieties of plants developed in Japan out of the country, the government will work on developing an environment that ensures the enhancement of appropriate protection.

Moreover, efforts will be made to enhance the protection of the genetic resources of high-quality livestock.

Deepening of the connection between consumers and food/agriculture

- To deepen the connection between consumers and food/agriculture, the government will work on the promotion of food education and local consumption of local produce on the basis of changes in dietary patterns and dietary habits, the expansion of consumption of domestic agricultural products, the preservation/inheritance of the WASHOKU culture (Japanese traditional dietary culture), and the strengthening of the relationship between consumers and producers.

Promotion of food education and expansion of consumption of domestic agricultural products

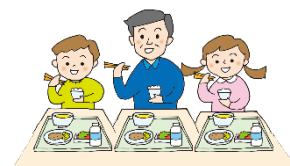
Efforts will be made to encourage exchanges with consumers and food-related business operators so that they actively select domestic agricultural products and to increase opportunities for consumers to know and experience Japanese food and agriculture.

The government will promote food education taking into consideration, among other factors, the diversification of dietary patterns and the characteristics of different generations, and also promote the expansion of consumption of domestic agricultural products through, for example, local production for local consumption.

Figure 22-1 Initiatives for deepening the connection between consumers and food/agriculture



Exchange between consumers and farmers/food-related business operators



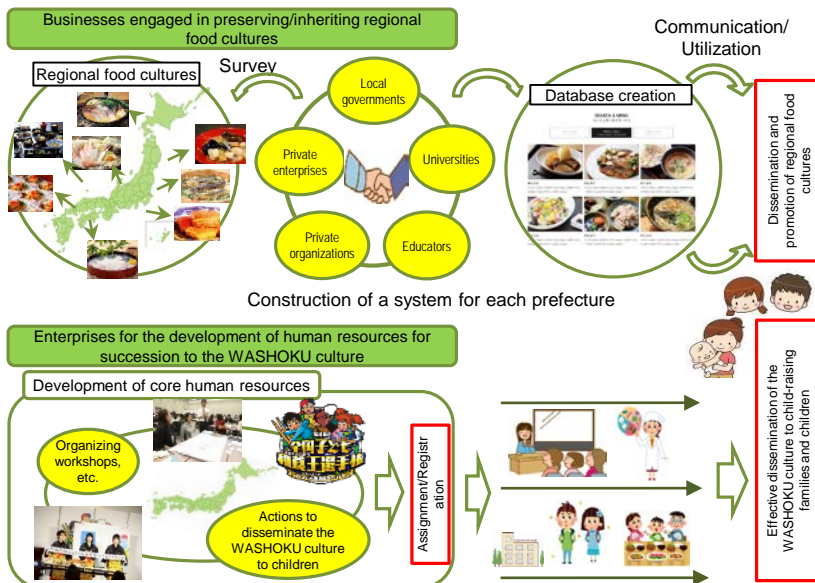
Use of local ingredients for school lunch and meals at institutions such as hospitals / Promotion of local consumption of local produce

Preservation and inheritance of the WASHOKU culture

For preservation and inheritance of the WASHOKU culture that is Japanese people's dietary habit based on the spirit of "respecting nature," the following actions will be implemented:

- Accumulation of scientific evidence regarding the usefulness of WASHOKU in terms of health
- Study of the local cuisines of each region and creation of a database of such local cuisines
- Development of core human resources for succession to the WASHOKU culture to the next generation
- Improvement in how WASHOKU is viewed (for example, the artistic quality of WASHOKU) to back up the export of agriculture, forestry and fisheries products, etc.

Figure 22-2 Preservation and inheritance of the WASHOKU culture



Strengthening of the relationship between consumers and producers

While food and agriculture have become further away from each other, as shown by the fact that the number of opportunities to cook at home have decreased, community supported agriculture (CSA), in which consumers and farmers are directly connected to each other and execute preliminary contracts for transactions involving agricultural products, has been implemented. Against this background, efforts to connect production areas and consumers through utilization of EC sites and SNSs will be made.

Figure 22-3 Strengthening of the relationship between consumers and producers



Japan Harvest
(Occasion of exchange between producers and consumers)



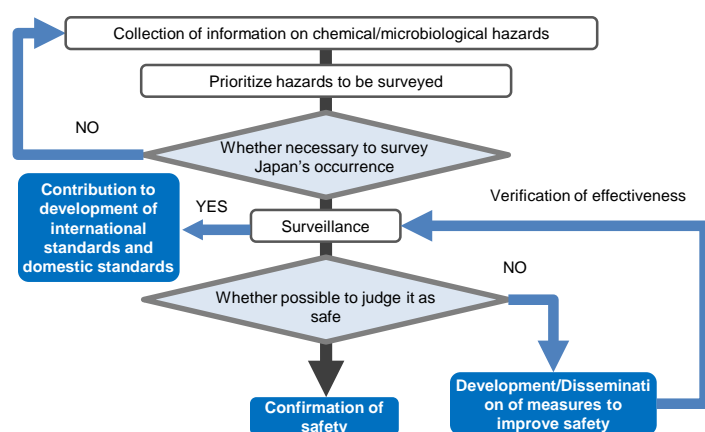
Use of EC sites

Ensuring food safety and consumer confidence taking international activities into consideration

- In order to ensure food safety and consumer confidence, the government will continue to steadily conduct risk assessment, risk management and risk communication based on sound science, consistent with internationally agreed frameworks and the principle “prevention is better than cure.”
- The government will work on ensuring consumer confidence in food through means such as enrichment and appropriate indication of food labeling information.

Enhancement of efforts to ensure food safety based on scientific development, etc.

Figure 23-1 Efforts to ensure food safety

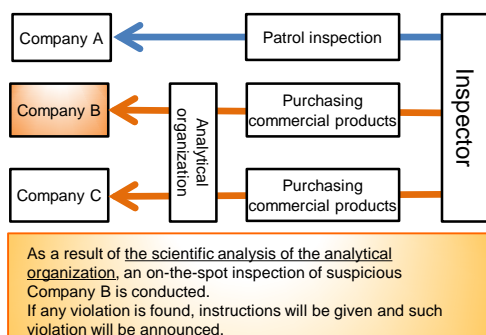


- Surveillance of the occurrence of hazards in foods
- Formulation of measures to improve safety in coordination with producers and food-related business operators
- Development of international standards and code of practice concerning food safety

In addition to implementing the above efforts, other necessary efforts for ensuring food safety in each stage of production, manufacturing and importing will be implemented.

Securing of consumer confidence in food through means such as enrichment and appropriate indication of food labeling information

Figure 23-2 Monitoring by using scientific analysis methods

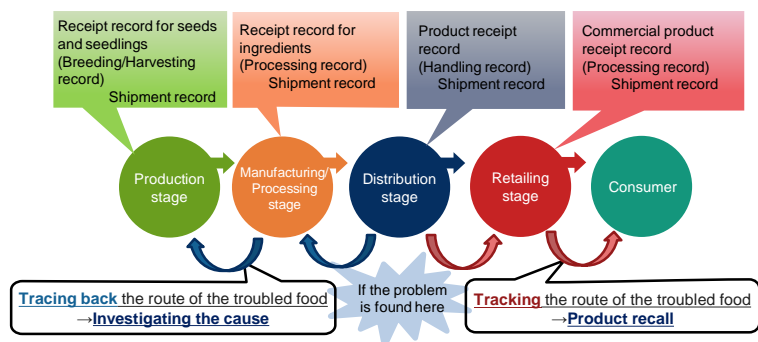


The government will implement effective and efficient monitoring by using scientific analysis methods such as DNA analysis and promote proper food labeling.

The government will disseminate the country of origin labeling system for ingredients of processed food by, for example, organizing seminars for food-related business operators.

With regard to the labeling of the origins of ingredients in the case of eating-out and home-meal replacements, the government will make efforts to develop an environment that can enable even small- and medium-sized business operators to implement the labeling smoothly.

Figure 23-3 Food traceability



Furthermore, the government will disseminate and raise public awareness of food traceability that enables a lot number to be identified and traced back to its record in the case where a problem such as a food-related accident occurs.

Establishment of comprehensive food security with risks associated with food supply taken into consideration

- In recent years, factors that potentially affect Japan's stable food supply have emerged, which include food demand growth accompanying global population growth and economic development, climate change, and infectious diseases of domestic animals.
- In preparation for unforeseeable events, the government will work on establishing comprehensive food security through, for example, analysis and assessment of the impact of risks even in normal times, consideration and revision of measures against such risks, securing stable grain imports, etc., and enhancement of measures against animal epidemics and for plant protection.

Efforts to be made in normal times in preparation for unforeseeable events

The government will analyze the impact, etc. of risks that potentially affect the supply of Japan's key agricultural, forestry and fishery products even in normal times and consider and implement measures to reduce such impact.

In order to enable prompt responses to unforeseeable events, simulations based on a scenario for each event and the verification of effectiveness of such simulations will be conducted, and further enhancements will be made.

Furthermore, the government will make efforts to develop understanding of food security through dissemination and raising awareness of the importance of stockpiling at home in preparation for large-scale disasters.

Figure 24-2 Example stockpile at home



Figure 24-1 Import situation of grains



Operations carried out for the export of corn in the United States

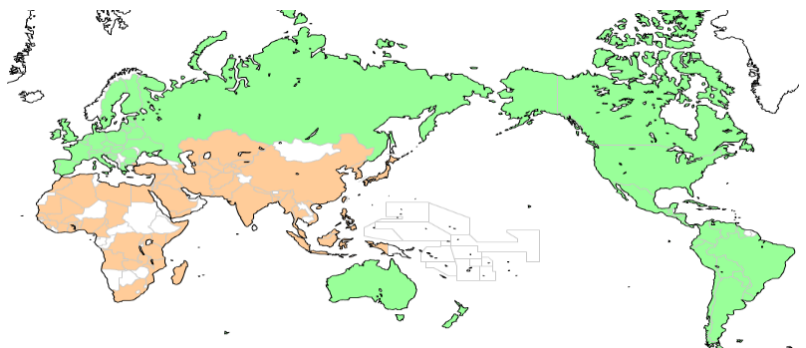
Understanding and analysis of international food supply and demand, securing stable grain imports, etc., and promotion of international cooperation

The government will examine the supply and demand situation of grains, etc., in the world, forecast their long-term supply and demand, and collect, analyze and communicate information concerning the logistics, infrastructure, etc. of importing countries.

In order to secure a stable supply of grains and other items for which Japan relies on imports from overseas, the government will maintain and strengthen Japan's good ties with importing countries and work on making stable and diversifying imports through collection, etc. of relevant information.

Moreover, the government will also promote international cooperation in tackling global issues such as starvation, poverty, malnutrition and climate change.

Figure 24-3 Prospects of the supply and demand of main crops by region



Note: The green parts mean the areas expected to have export surpluses in 2050, and the orange parts mean the areas expected to have import surpluses in the same year.

Figure 25-1 Measures against infectious diseases of domestic animals



Farm entry prevention fences
(Strengthening sanitary control over domesticated animals)



Oral vaccine against CSF for wild boars
(Measures for wild animals)



Quarantine detector dog working at an airport
(border control)

In order to prevent the entry of infectious diseases of domestic animals such as African swine fever (ASF) and classical swine fever (CSF) from overseas, the government will implement thorough border control to "prevent the intrusion of viruses" into Japan and, in case such intrusion occurs, implement thorough epidemic prevention in the country, such as strengthening sanitary control over domesticated animals in "preventing viruses from being carried into" farms.

With regard to plant pests, the government:

- implements border control to prevent their entry from overseas;
- is enhancing measures to prevent their occurrence and spread including timely and prompt control of pests that have occurred, and regulation on movement of plants; and
- is upgrading technology on pest control.

Part 3-1

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Adapting to new international settings such as the TPP and taking strategic approach to international negotiations in the future

- In line with the comprehensive TPP-related policy framework, the government will implement measures for enhancement of the production bases and for stable management and stable supply so as to firmly ensure sustainability.
- In future trade negotiations for agricultural products, the government will also engage in such negotiations with due consideration given to sensitivity and aim at securing negotiation results that lead to export expansion.

- Promotion of internationally competitive innovation of production areas



Development of bases for storage, processing, etc.

- Comprehensive project for strengthening the profitability of livestock farms and dairy farms

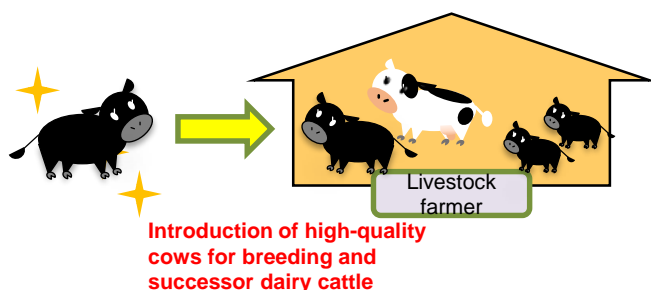
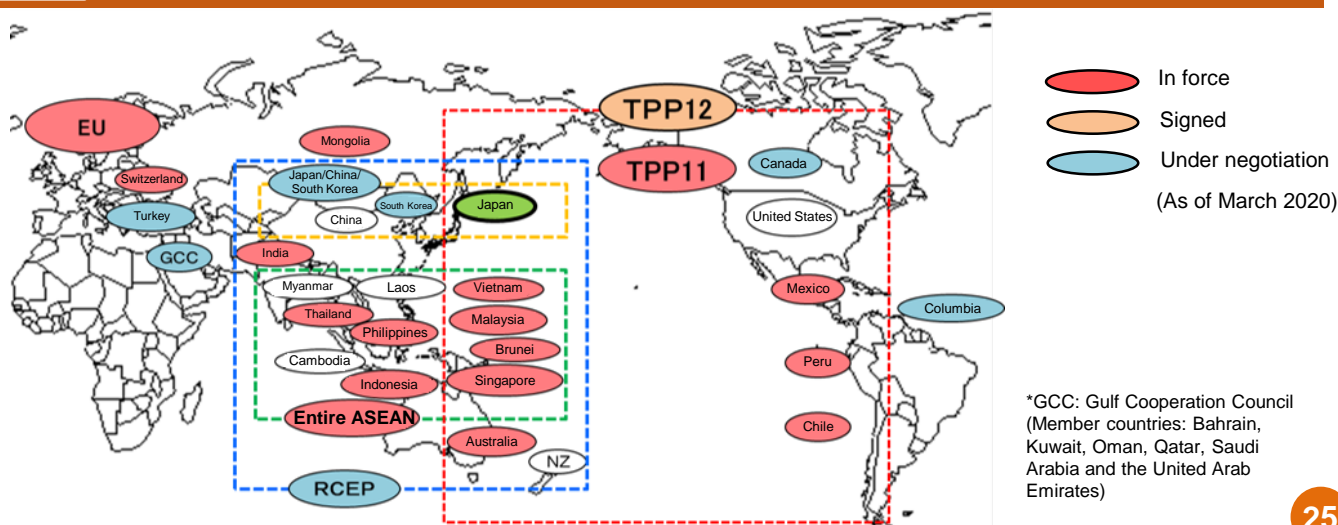


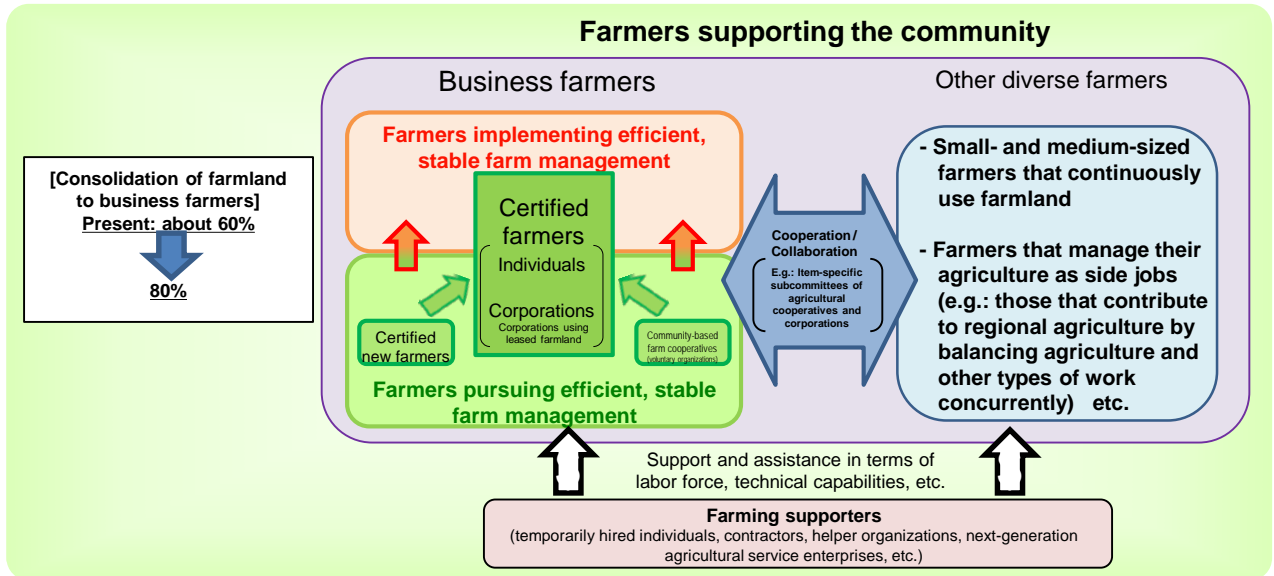
Figure 25-3 Current status of Economic Partnership Agreements



Development/Securing of business farmers for realizing a strong and sustainable agricultural structure

- The development/securing of business farmers will be advanced to enable the active participation of human resources with a business mind, irrespective of operation sizes or types of management such as family businesses or corporations.
- The government will work on enabling smooth business succession by business farmers of the next generation, enriching agricultural education, assisting new young farmers in becoming firmly established, developing an environment that enables women's active participation, and pushing forward the entry of companies into the agricultural sector by leasing farmland.

Figure 26-1 Desired agricultural structure

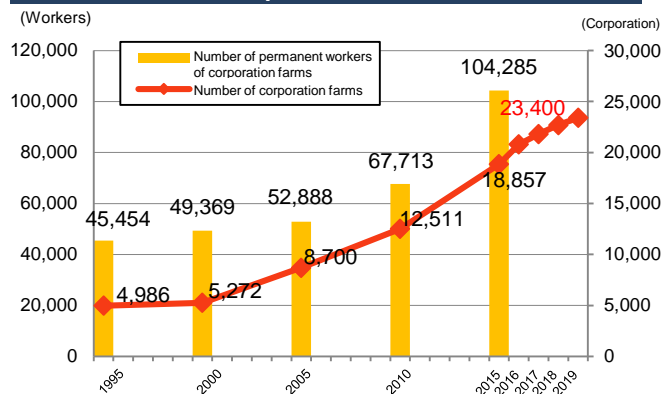


Backing up management development through the certified farmer system, incorporation, etc.

In order to ensure that business farmers can run their businesses on their own initiatives and by making original and creative efforts, the government will focus on farmland consolidation, taking Farming Income Stabilization Measures, capital subscription, loaning, and the provision of support in terms of tax.

Since the formation of corporations by farmers is expected to be effective in the development of business in forms such as the sophistication of business management and the securing of stable employment, the government will promote initiatives to push forward the acceleration of incorporation.

Figure 26-2 Changes in the number of corporation farms and permanent workers



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

Business succession, recruitment of new farmers, development/securing of human resources, etc.

For maintaining the sustainable development of agriculture, the government will advance the development of a system to support business succession so as to ensure that resources such as farmland are utilized by next-generation business farmers.

The government will communicate the attractiveness of agriculture to young people and enrich agricultural education in order to develop human resources who will choose agriculture as their profession in the future. In addition, it will promote practical recurrent education for a wide range of generations who wish to engage in farming. For new farmers from inside and outside the agricultural sector and for encouraging farmers to become firmly established, relevant organizations will cooperate with each other and enhance regional frameworks for accepting farmers.

Figure 27-1 Changes in female farmers

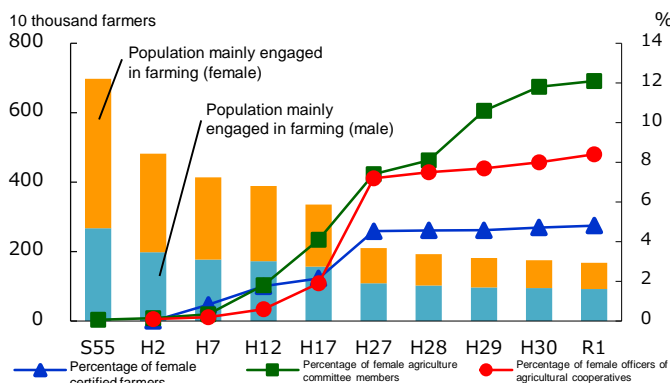
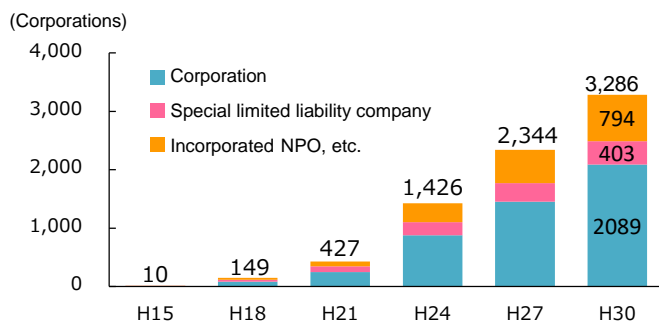


Figure 27-2 Changes in participating organizations



In recruiting human resources to agriculture and rural communities and also developing agriculture, the participation of women in agricultural management plays an important role. To promote the participation of women in the designing of policies for regional agriculture, the government will further promote women's engagement by developing female farmers into leaders of their communities and, at the same time, enhance cooperation with companies and educational institutions under the "Nougyou-Joshi Project" (campaign for female farmers to be more active in agricultural business through cooperation with various industries to utilize female farmers' knowledge and experiences) and promote regional activities to create an environment in which female farmers feel comfortable to conduct their activities.

The entry of companies into the agricultural sector will contribute to the development of regional agriculture through collaboration between the agricultural sector and industrial sector. In addition, such companies are expected to take care of farmland particularly in regions facing a shortage of business farmers. Accordingly, the government will continue to promote the entry of companies into the agricultural sector by leasing farmland mainly through Public Corporations for Farmland Consolidation to Core Farmers through Renting and Subleasing (Farmland Banks).

Part 3-2

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Active participation of diverse human resources and entities that support agricultural sites

- In order to secure regional agricultural production and necessary farmland and ensure their sustainability amid the current aging and decline of the number of farmers, it is important to promote cooperation and coordination in units of a production area and the active participation of diverse human resources and entities, in addition to the development and securing of business farmers.
- On this basis, the government will develop an environment that enables diverse human resources and entities to engage in agricultural production and support their communities.

Figure 27-3 Next-generation agricultural support services



In agricultural sites, diverse farmers such as small- and medium-sized farms and family-operated farms cooperate and collaborate with each other in units of a production area and thereby play important roles in the maintenance of their communities. On this basis, the government will work on enhancing the production base and also supporting such farms with both "industrial policy" and "regional policy."

To address issues such as labor shortage on production sites, the government will encourage the firm establishment of next-generation agricultural support services such as outsourced operations and sharing/leasing that use advanced technologies, including drones and automatic traveling farm machines, and harvesting operation in cooperation with food-related business operators.

Figure 27-4 Implementation of the reform of working practices in agricultural fields



To smoothly advance the securing of human resources on production sites, the government will implement the "reform of working practices" in agricultural fields, which covers the enhancement of management by managing working hours, standardizing operations and preparing manuals.

Consolidation of farmland to business farmers, etc. and securing of farmland

- The government will implement the substantiation of the Farmers and Farmland Plan through the full-capacity operation of Farmland Banks, thereby aiming at the acceleration of consolidation of farmland to business farmers.
- The government will strive to prevent farmland dilapidation and clear dilapidated farmland by supporting joint activities, implementing measures for the prevention of damage caused by wild animals, farmland consolidation, infrastructure improvement, etc.

Acceleration of consolidation of farmland to business farmers

The substantiation of the Farmers and Farmland Plan will be implemented by local farmers, coordinating organizations, such as local governments, agricultural committees, agricultural cooperatives, and land improvement districts, and Farmland Banks working together. In addition, the consolidation of farmland to business farmers will be accelerated by simplifying the procedures of the farmland mid-level management project and enhancing the implementation system following the integration and unification of systems.

In particular, the government will implement initiatives for field sites on the basis that farmland consolidation will be more important in the future from the aspects of the streamlining of farmland use, the promotion of smart agriculture, etc.

With regard to farmland whose owner is unknown, the government will consider necessary matters in cooperation with relevant ministries on the basis of the situation of deliberation on the revision of basic civil legislation, etc.

Figure 28-1 Implementation of the substantiation of the Farmers and Farmland Plan

1. Implementation of a questionnaire survey

A questionnaire survey pertaining to at least a majority of the cultivated land area in the survey target district will be conducted to find out about the ages of the farmers (cultivators or land owners) and whether they have successors among other matters.

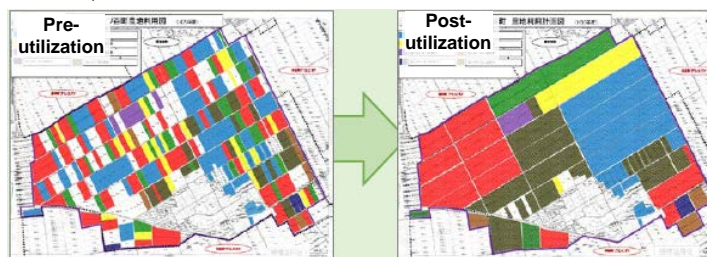
2. Understanding the current situation

The results of 1. will be mapped, and the area of farmland for which no successor is to be available in 5 to 10 years time will be "visualized." These data will be used at meetings.

3. Preparation of future policy for consolidation of farmland to core farmers

On the basis of 1. and 2. above, thorough discussions will be held among relevant parties such as farmers, local governments, agricultural committees, JAs, and land improvement districts to determine, in principle for each rural community, the desired form of core farmers in charge of use of farmland in 5 to 10 years time.

Case example where farmland consolidation was realized through the revision of the Farmers and Farmland Plan by the community, mainly the agricultural committee and Farmland Bank, and through utilization of the Farmland Bank (Hikone City, Shiga Prefecture)



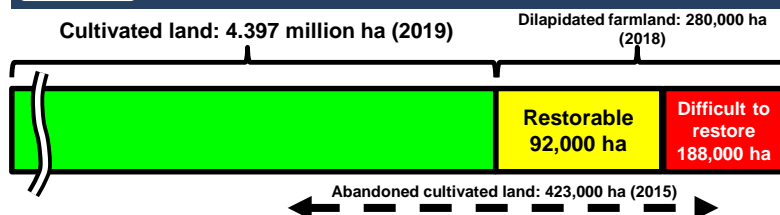
Promotion, etc. of measures to prevent farmland dilapidation and clear dilapidated farmland

The government will strategically implement measures to prevent farmland dilapidation and clear dilapidated farmland by, for example, encouraging discussions concerning the future use of farmland in areas and rural communities to which a multifunctional payment system or direct payment system to farmers in hilly and mountainous areas applies, supporting the joint activities of these areas and communities, reducing damage to field crops by taking measures for the prevention of damage caused by wild animals, promoting farmland consolidation under the farmland mid-level management project, and effectively improving infrastructure.

In addition, factors causing dilapidated farmland, areas vulnerable to dilapidation, and the status of resolution of dilapidation will be investigated/analyzed in detail.

The government will push forward initiatives for securing and effective use of fine farmland by appropriately operating the agricultural promotion area system and the farmland diversion permission system.

Figure 28-2 About farmland and dilapidated farmland



Source: Statistics Department, Minister's Secretariat, MAFF, "Statistics on Cultivated Land and Planted Area (2019)" and "2015 Census of Agriculture and Forestry"; and Rural Development Bureau, MAFF, "2018 Survey on the Status of Generation and Clearing of Dilapidated Farmland"

Notes: 1) Data of cultivated land include temporarily fallow land and unplanted land.
2) Abandoned cultivated land refers to land that was cultivated in the past but has not been planted for the past one year or more, and is not planned to be planted again in the next few years" (area subjectively derived by farmers, etc.).

- Dilapidated farmland	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
- Restorable dilapidated farmland	Dilapidated farmland that is expected to become usable for cultivation with conventional farming methods by restoring the land through stump pulling, soil preparation, farmland partition adjustment, soil dressing, etc.
- Dilapidated farmland that is expected to be difficult to restore	Dilapidated farmland which is equivalent to land that is extremely difficult to be physically conditioned to be restored into farmland, such as in the form of a forest, or is not equivalent to land that is continuously usable even if the land is restored into farmland in light of the conditions of the surrounding area

Promotion of initiatives for stabilization of agricultural management

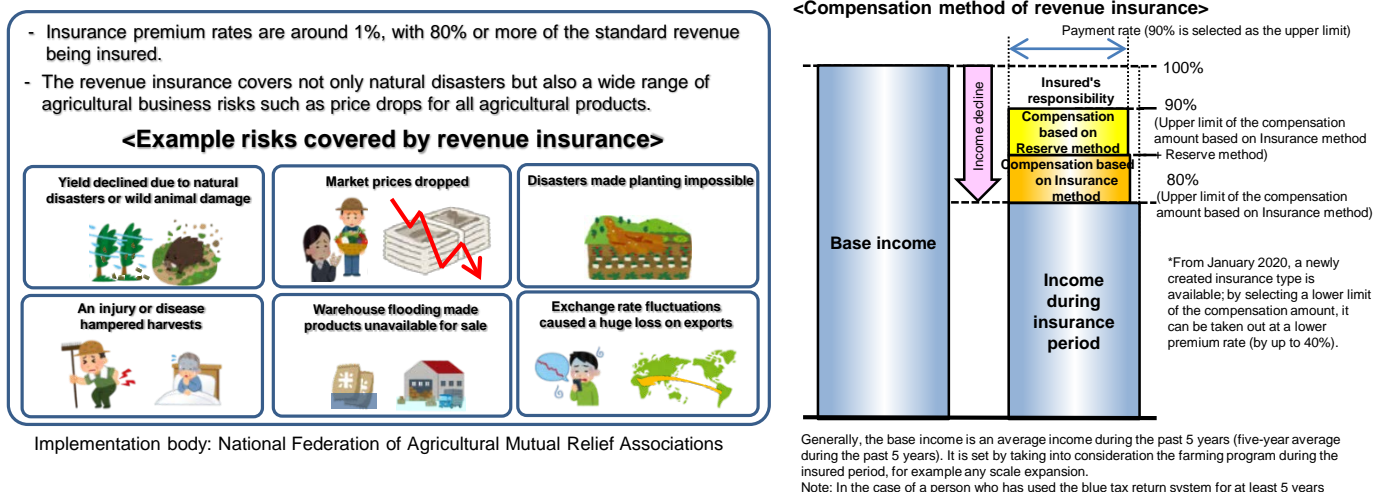
- The government will make efforts to disseminate and promote revenue insurance and expand its use, and steadily implement the Farming Income Stabilization Measures, etc.
- Furthermore, it will consider how comprehensive and effective safety-net measures should be. In addition, the digitalization of procedures, the simplification of application data, etc. will be promoted.

Steady promotion of revenue insurance and the Farming Income Stabilization Measures

Revenue insurance started from January, 2019. Covering all agricultural products, revenue insurance compensates farmers for income decline caused by various risks that cannot be avoid by their management efforts, including yield decrease resulting from a natural disaster and price decline.

In order to disseminate and promote revenue insurance, the government will build an implementation system in cooperation with agricultural mutual relief associations and other relevant organizations including administrative organs, agricultural cooperatives, and agricultural corporations associations, and push forward initiatives to promote insurance subscription.

Figure 29-1 Overview of revenue insurance



Consideration of how comprehensive and effective safety-net measures should be

Figure 29-2 Effectiveness of the digitalization of procedures

- Effectiveness of the digitalization of procedures

Business farmer (applicant)

- The burden of preparing paper documents is relieved by electronic application.
- The attachment of documents (a copy of the certificate) can be omitted by linking the system concerned with the certified farmer application system.



Regional council for the regeneration of agriculture

- The burden of distributing and collecting application forms, data input, etc. is relieved.
- By creating a national integrated database from the system that each council individually maintains, maintenance costs and other costs are reduced.
- The burden of re-inputting data after on-site checks is relieved.



National (Agricultural Administration Office, etc.)

- Operations from application to issuance are streamlined.
- The burden of assessment operations is relieved as the applicant's omissions and erroneous entries decrease.



Data utilization

- Useful data such as cropping area data can be used as agricultural information for multiple purposes (data coordination).

On the basis that the Agricultural Insurance Act provides that, among other relevant matters, how the system of revenue insurance should be is to be considered after about 4 years have passed since the Act came into force, relevant measures such as the Narashi measure (measure to mitigate the impact of reduced income in relation to rice and upland field crops) and the vegetable price stabilization system will be verified as a whole, and how comprehensive and effective safety-net measures should be will be considered in light of the needs of farmers, etc. On this basis, necessary measures are to be implemented around 2022.

In addition, the government will strive to improve convenience and reduce administrative burden for both applicants and the assessor by promoting the digitalization of procedures, simplifying application data, etc., and deliberating on improving the contact system for comprehensive safety nets and consolidating the contact points for such safety nets.

Improvement of the agricultural production infrastructure for the growth of agricultural industry and the building of national resilience

- In order to develop agricultural production industry, the government will promote the enlargement of farm blocks, the multi-purpose use of paddy fields and the upgrading of upland fields and fruit farms.
- The government will thoroughly promote the strategic preservation and management of farm irrigation facilities for extending their lifetime and reducing their life cycle cost.
- In order to appropriately respond to disasters that occur more frequently and cause more devastating damage today, the government will promote disaster prevention/mitigation measures toward building the resilience of agriculture and rural areas.

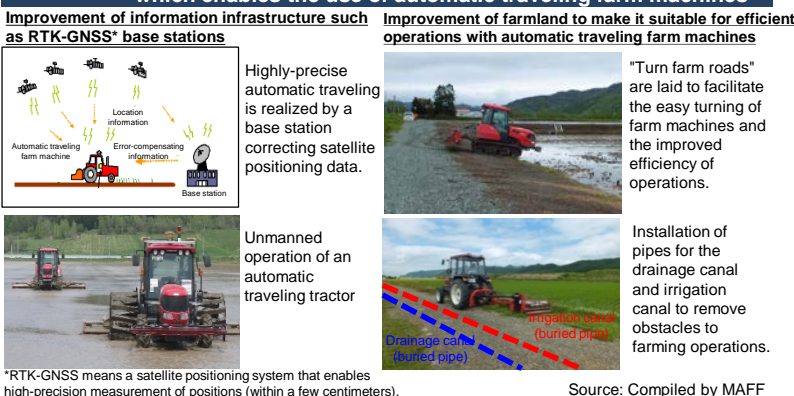
Improvement of the agricultural production infrastructure for the growth of agricultural industry

The government will promote the enlargement of farm blocks thereby making progress in the consolidation of farmland and the reduction of production cost.

Furthermore, in order to improve the profitability of production areas, the government will promote the creation of multipurpose paddy fields and the sophistication of upland fields, etc.

In addition, the improvement of agricultural production infrastructure, which enables use of automated farm machinery and ICT-based water management, is implemented, and infrastructure for telecommunication in rural areas is to be developed

Figure 30-1 Improvement of the agricultural production infrastructure, which enables the use of automatic traveling farm machines

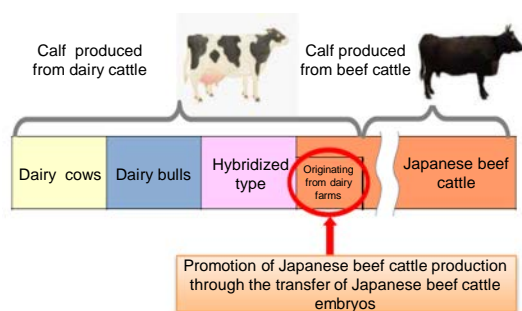


Enhancement of the production base to deal with changes in the demand structure, etc., and streamlining of the distribution/processing structure

- The government will ensure that the collective strength of diverse human resources including business farmers supplying domestic agricultural products and small- and medium-sized/ family-operated farms in light of the needs of consumers and users will be brought out, enhance the production base for each item, and promote improvement in labor safety, reduction in the costs of production materials, the streamlining, etc. of distribution and processing.

Enhancement of the competitiveness of the livestock industry by means such as expanding the production of beef cattle and dairy products, and enhancement of the production structure of horticulture products, etc. in response to new demand

Figure 31-1 Promotion of the embryo transfer of Japanese beef cattle



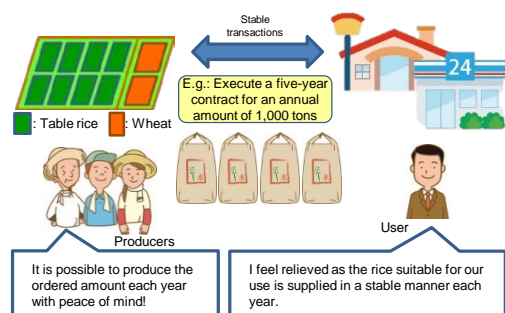
The government will push forward the enhancement of the production base of each item on the basis of the needs of consumers and users.

- Beef cattle: increase of beef cows for breeding, and expansion of the production of the embryos of Japanese beef cattle
- Dairy: increase of livestock and expansion of production in the entire region, and utilization of sex determination technology
- Vegetables: formation of production areas for vegetables for processing and manufacturing use by utilizing paddy fields, development of year-round supply systems, establishment of integrated mechanization systems, and conversion into data-driven agriculture
- Fruits: acceleration of switching to fine items and varieties, improvement of labor productivity through introduction of labor-saving tree forms, and development of new production areas by utilizing paddy fields, etc.
- Flowers: development and dissemination of varieties and technologies that respond to labor productivity improvement, creation of overseas demand and establishment of cropping systems that respond to such demand, and expansion of the use of flowers in daily life
- Tea: switching to Matcha, organic tea, etc. to meet overseas demand and diversified needs, and transplanting or newly planting varieties

Steady promotion of the rice policy reform and conversion into highly profitable crops, etc. in paddy fields

Figure 31-2 Demand-based production and sale, and stable transactions

- Demand-based production on the basis of producers' own management judgments and sales strategies, and stable transactions on the basis of multiple-year contracts, etc. are promoted.



With the rice consumption in Japan expected to decline in the future, the government will make efforts to facilitate the full utilization of paddy fields, ensure that the rice policy reform will be firmly established, and promote demand-based production/sale by producers and collectors on the basis of information provided by the national government, etc. Furthermore, the government will work on enhancing productivity by reducing production costs, realizing stable transactions based on preharvest contracts and multi-year contracts, communicating information focusing on the functionality of rice, absorbing new demand including that arising from inbound tourism, and developing production areas that can meet the quality, quantity, etc. that overseas markets demand.

For wheat, barley and soybean whose demand has been increasing, the government will launch a "wheat, barley and soybean production increase project," enhance its cooperation with the food industry in meeting the quantity, quality and price that users demand, and also make efforts to, among other matters, reduce costs by encouraging cropping to be conducted in consolidated agricultural fields or agricultural fields as complexes.

Furthermore, the government will advance the transformation of paddy fields into upland fields, the creation of multipurpose paddy fields, and the introduction of machines/facilities in a planned and integrated manner, thereby promoting conversion into highly profitable crops such as vegetables and fruits in relation to the use of paddy fields.

Promotion of GAP and implementation of effective farming safety measures

Figure 31-3 Implementation of farming safety measures



Risk chart organizing measures based on accident investigations in an easy-to-understand manner
URL for training purposes: https://nitenoki.or.jp/risksite/anzenkakunin_y.html
URL for corporations: https://nitenoki.or.jp/risksite/anzenkakunin_t.html

In order to ensure international-level GAP (Good Agricultural Practices) to be implemented in almost all production areas by 2030, the government is promoting the establishment of the method of instruction, to introduce GAP to production areas, and to develop the content of GAP at agricultural education institutions.

Furthermore, since the fatal accident rate in agriculture tends to be higher than those in other industries, the government will take stock of the situation in which accidents occur during agricultural operations and utilize the results of relevant investigations and analyses for comprehensively promoting farming safety measures according to the actual situation of each region, which include encouraging the thorough implementation of necessary safety measures when a high-risk operation is to be conducted.

Supply of high-quality and affordable agricultural materials and streamlining of the distribution and processing of agricultural products

In order to ensure the supply of high-quality and affordable agricultural materials and the streamlining of the distribution and processing of agricultural products, the government will implement, among other matters, the review of regulations and standards, the facilitation of business restructuring and new entry, and the visualization of the prices of agricultural materials and agricultural product distribution.

Promotion of innovation in agricultural production/distribution sites by utilizing information communication technology, etc.

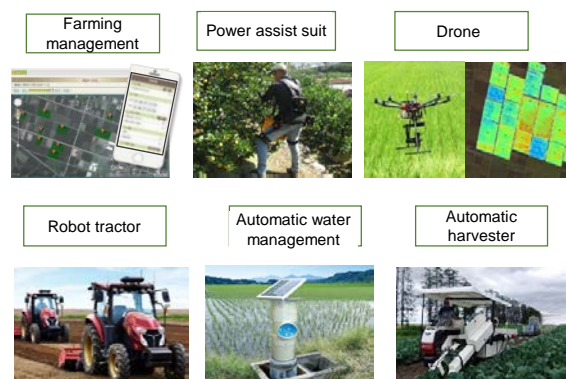
- The government will intensively implement measures to accelerate the transformation of agriculture into a form that creates and provides value that precisely address consumer needs by conducting data-driven agricultural management with digital technology (FaaS: Farming as a Service).
- The on-site implementation of smart agriculture with advanced technology applied thereto will be promoted.
- Research and development in various forms that are in line with the needs of agricultural sites will be promoted.

Promotion of utilization of digital technology in agricultural sites, such as for the acceleration of smart agriculture

Efforts will be made to resolve issues in each of the stages of verification, introduction and dissemination of smart agriculture technologies according to the situation surrounding the inheritance of skilled farmers' techniques and the regional characteristics of hilly and mountainous areas, etc.

Furthermore, the government will launch a "smart agriculture project" to consider and implement measures necessary for making progress in the on-site implementation of smart agriculture, in order to create new agricultural support services that use the means of sharing or leasing, develop farmland's infrastructure for smart agriculture, coordinate data by utilizing an agricultural data collaboration platform, etc., and address institutional issues, etc. according to technological development.

Figure 32-1 Examples of smart agriculture technologies



Promotion of digitalization in the implementation of agricultural measures

The government will develop a common online application service of the MAFF (eMAFF) to enable various administrative procedures involving the MAFF to be completed online; directly provide and collect information to/from farmers, etc; and consider and carry out the integrated management of farmland information based on digital maps and the effective utilization methods of such information.

The government will compile various projects utilizing digital technologies into "Agriculture DX Program" (tentative name), flexibly carry it out while adding/adjusting projects in line with the advancement of digital technologies, and thereby aim at converting the agriculture structure into the one in which farmers manage and expand their business, taking advantage of digital technologies and making the most of their abilities.

Figure 32-2 Digital Transformation in agriculture



Promotion of innovation creation and technology development

The government will promote the concept of open innovation that unifies industrial, academic and public sectors and agricultural production sites, in order to promote research and development for addressing various issues associated with on-site needs, for resolving global-scale issues such as global warming, and for creation of new industries.

Figure 32-3 R&D examples



Development of an advanced milking system that can be used in stall barns



Development of fertilization technology, etc. to reduce the poor germination of pear seeds due to global warming



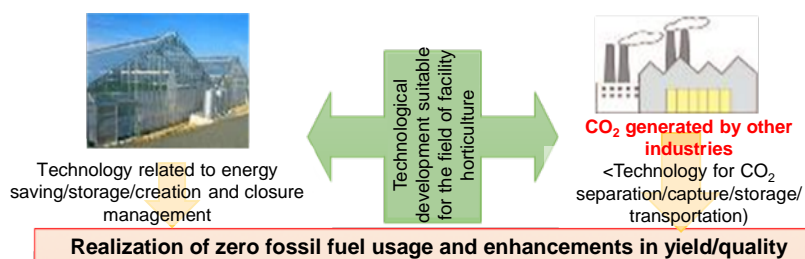
Development of ingredient production technology including high-performance veterinary drugs using silkworms

Promotion of environmental policy including responses to climate change

- The government will promote efforts to reduce the emission of greenhouse gases in the agriculture, forestry and fisheries sector and efforts concerning greenhouse gas sinks in farmland.
- Furthermore, the government will promote environmental policy in the field of agriculture, covering the preservation and utilization of biodiversity, the further promotion of organic farming, the implementation of activities for soil productivity improvement, and responses to the issue of plastic waste in the field of agriculture.

Promotion of mitigation/adaptation measures for climate change

Figure 33-1 Reduction of the emission of greenhouse gases



Efforts toward firmly achieving the target of greenhouse gas emission reduction will be enhanced, which include the application of biogas that effectively utilizes livestock excrement, the introduction of highly energy-efficient installations and equipment for facility horticulture, and the full utilization of renewable energy.

Preservation and utilization of biodiversity, further promotion of organic farming, and implementation of activities for soil productivity improvement

Figure 33-2 Promotion of organic farming

- Efforts toward the development of a stable supply system according to the expanded demand for organic food in Japan and abroad



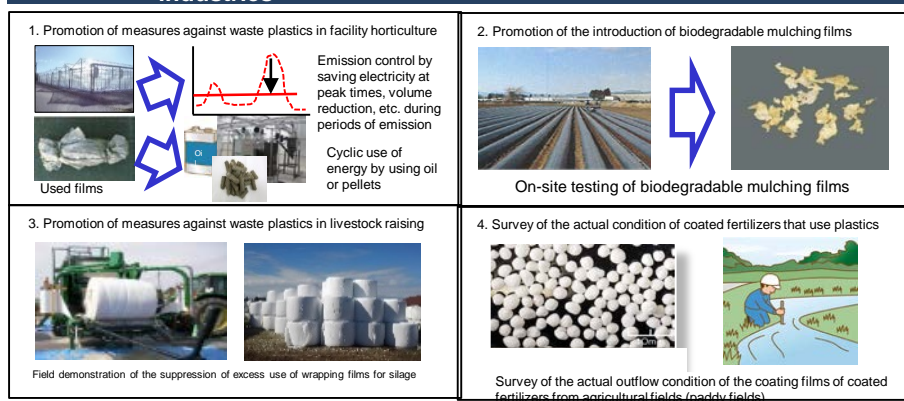
Environment-creation type agriculture will be promoted from the aspect of the preservation of biodiversity.

The expansion of production and of the domestic share of organic foods will be promoted with a view to expanding organic farming.

[Under organic farming]	23,500 ha	(2017)	→	63,000 ha	(2030)
[Number of organic farmers]	11,800 persons	(2009)	→	36,000 persons	(2030)
[Domestic share of organic foods]	60%	(2017)	→	84%	(2030)
[Proportion of consumers who consume organic food once a week or more]	17.5%	(2017)	→	25%	(2030)

Responses to the issue of plastic waste in the field of agriculture

Figure 33-3 Measures against plastic waste in the agricultural and livestock industries



Efforts will be promoted in order to address the issue of plastic waste in the field of agriculture, including the thorough ensuring of collection and appropriate processing of waste plastics and the promotion of cyclic use of such plastics, and the expansion of use of biodegradable mulching films and mid- to long-term extensible films for emission control.

[Proper processing]

- Increase the rate of recycle including thermal recovery

[Emission control]

- Reduce the emission of plastics in facility horticulture
- Increase the annual amount of biodegradable mulching films used
- Reduce the emission of waste plastics in the field of livestock

[Outflow prevention]

- Suppress the outflow of microplastics originated from coated fertilizers into the sea

Securing of income and employment opportunities by utilizing local resources

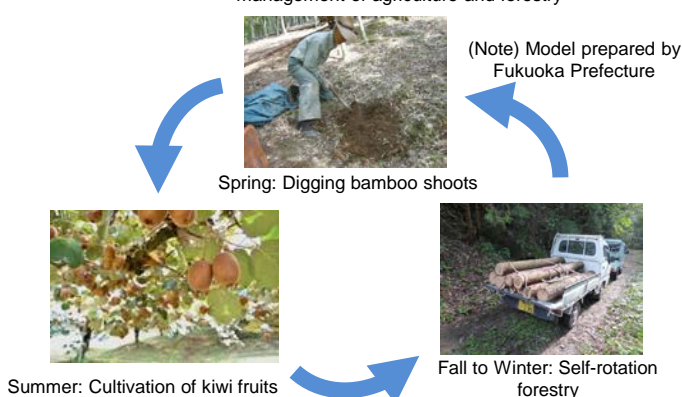
- The government will promote diverse styles of farm management such as multiple farming that utilizes the characteristics of hilly and mountainous areas, etc.
- The creation of new value by utilizing diverse local resources such as Nouhaku (countryside stay) and the use of wild game will be promoted.
- Efforts will be made to expand regional economic circulation through, among other matters, the introduction of renewable energy.
- Urban agriculture with diverse functions will be promoted.

Promotion of diverse styles of farm management such as multiple farming that utilizes the characteristics of hilly and mountainous areas, etc.

The government will promote the introduction of crops that take advantage of local characteristics and technology that responds to on-site needs while remedying disadvantages associated with production conditions by using the direct payment system to farmers in hilly and mountainous areas on the basis of the characteristics of relevant hilly and mountainous areas, and present multiple farming models to secure income by combining diverse business types including the cultivation of crops such as rice, vegetables and fruits, livestock raising and forestry.

Figure 34-1 Image of multiple farming in hilly and mountainous areas

Example model of management stabilization through multiple management of agriculture and forestry



Securing of income and employment opportunities by discovering/polishing up local resources, combining other fields, etc.

By developing an environment where diverse human resources can find it easy to embark on new business by utilizing local resources, the government will promote "innovation originated from rural areas," which is an action to combine the local resources of rural areas and other fields.

The government will promote Affrinnovation that creates new added value by launching new business such as the management of farm restaurants.

Figure 34-2 Image of innovation originated from rural areas

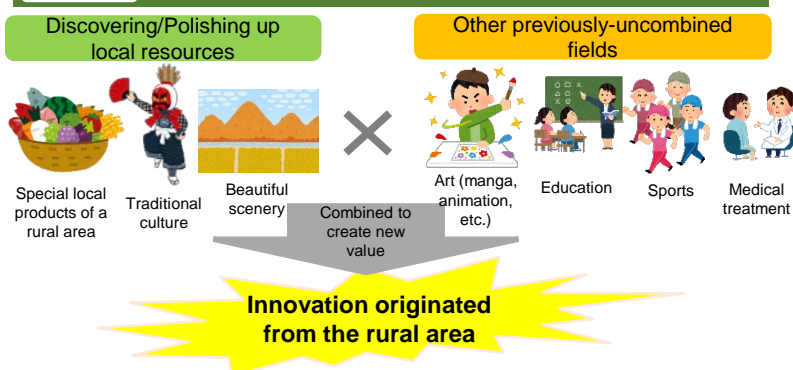


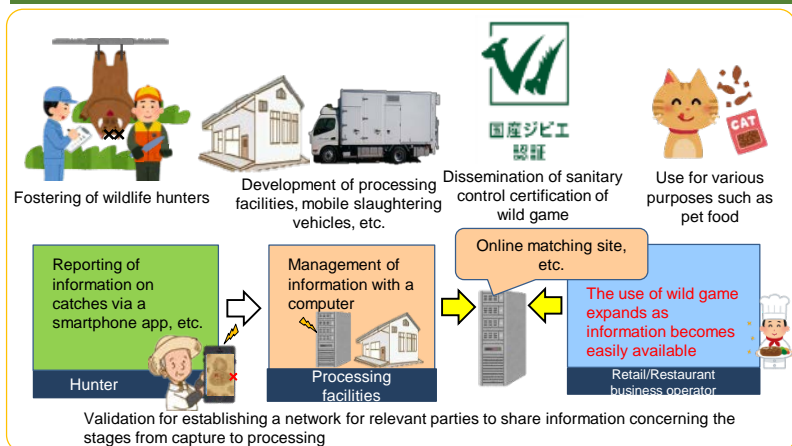
Figure 34-3 Nouhaku content and meeting demand from inbound tourism by utilizing local resources

Attracting demand based on inbound tourism, which increases exchanges between urban areas and rural areas, will be promoted by creating regions with systems to implement Nouhaku as sustainable business.

Experience/Exchange programs for which local resources are utilized will be enriched, accepting environments that allow users to receive services without stress will be developed, accommodation facilities based on farmhouse accommodations, old residences, etc. will be developed, and experts will be dispatched to rural areas to provide guidance, etc.

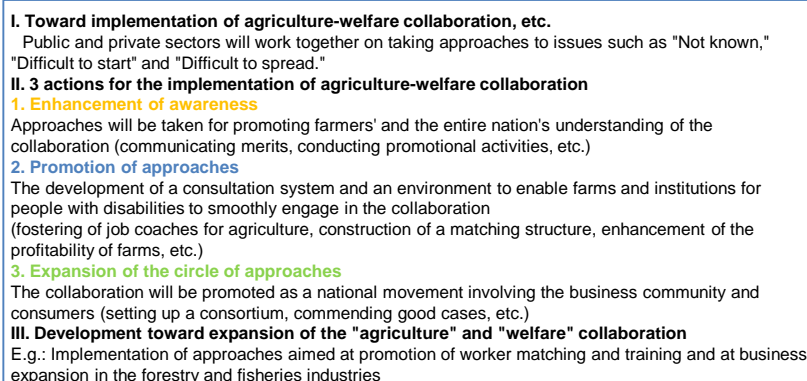


Figure 35-1 Measures to expand the use of wild game



In addition to making efforts for countermeasures against damage caused by wildlife, the government will, in order to transform captured wildlife into local resources that can generate income for rural areas, promote the development of human resources with capturing/transporting skills suitable for wild game purposes, the development of processing facilities, mobile slaughtering vehicles, etc., the ensuring of safety of wild game, the dissemination of sanitary control certification of wild game, the use of wild game for various purposes such as pet food, and the establishment of a network for relevant parties to share information concerning the stages from capture to processing.

Figure 35-2 Overview of the implementation vision of agriculture-welfare collaboration, etc.

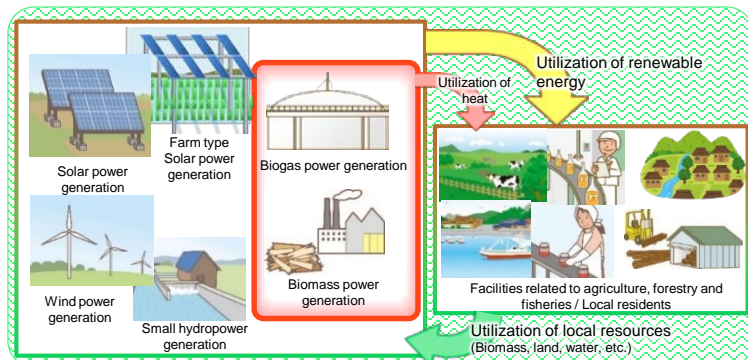


In order to further implement the agriculture-welfare collaboration, the government will promote the expansion of the circle of approaches through, for example, the enhancement of awareness by communicating the merits of the agriculture-welfare collaboration, the promotion of approaches by developing a work-friendly environment, experts, etc., the establishment of a consortium that relevant parties of various sectors join, and the dissemination of good cases.

Furthermore, approaches concerning elderly people and people struggling financially will be implemented in addition to promoting approaches for forestry-welfare collaboration and fishery-welfare collaboration.

Expansion of regional economic circulation

Figure 35-3 Rural areas' and rural communities' utilization of renewable energy within their areas



The government will promote the introduction and regional utilization of renewable energy such as biomass power generation and small hydropower generation and implement technological development, dissemination, etc. for the commercialization of production and sale of new biomass products.

Furthermore, the government will promote the local consumption of agricultural and livestock products through the use of such products for meals at institutions such as schools and hospitals in the area and through the provision and sale of such products at farm stands, etc.

Efforts toward achieving the SDGs in rural areas will be disseminated.

Promotion of urban agriculture with diverse functions

Figure 35-4 Distinctive approaches that utilize the merits of urban agriculture



Urban agriculture has diverse functions; it does not only supply fresh agricultural products but also fills a role in providing sites for agricultural experience and fostering urban residents' understanding of agriculture.

In order for urban agriculture to fulfill such diverse functions, the government will promote such approaches as the maintenance and development of agricultural management, the local consumption of local produce on the basis of locational conditions, agricultural work experience, exchange activities, etc.

Conditioning rural areas including hilly and mountainous areas to enable residents to continuously reside in such areas

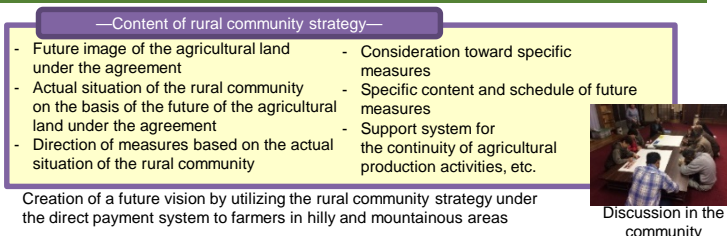
- Efforts will be made to maintain and enhance local community functions, for example, by supporting the creation of a local vision and promoting the formation of a "small base."
- The implementation of agriculture's multifunctional roles will be promoted through the Japanese agricultural direct payment system.
- The government will work on securing daily-life infrastructures such as communication infrastructure and radically enhancing measures for the prevention of damage caused by wild animals.

Maintenance and enhancement of local community functions

The government will support the clarification of the future image of a rural community and the creation of a vision for its activity plan, etc., in both of which its people of all generations participate in order to maintain the community.

Aiming at spreading the formation of a "small hubs," the government will consider ways to provide support in making agricultural product sale facilities multifunctional in terms of community development and tourism and in using such facilities as a base for community vitalization.

Figure 36-1 Support in the creation of a local vision

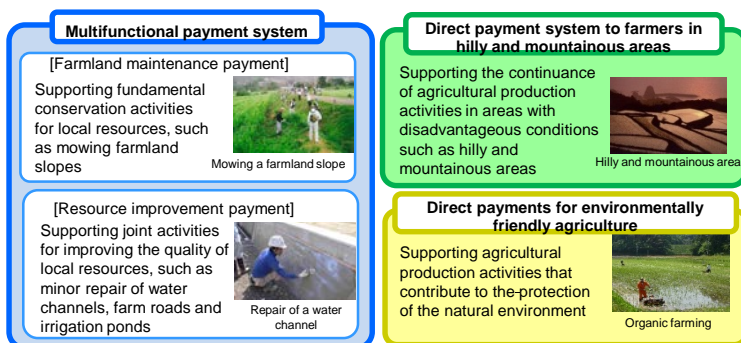


Promotion of the implementation of agriculture's multifunctional roles

The government will promote the broadening of activity organizations' areas of activities, the securing of human resources and the adoption of labor-saving agricultural technology, while also making efforts to enhance the cooperation among the multifunctional payment system, the direct payment system to farmers in hilly and mountainous areas, and the direct payments for environmentally friendly agriculture.

With regard to the direct payment system to farmers in hilly and mountainous areas, in the face of transition to the 5th stage of action, the government will revise the subsidy return measure and provide support in the creation of rural community strategy, the enhancement of the community management functions of rural communities, and the implementation of promotional activities, etc. in rice terrace areas.

Figure 36-2 Outline of the Japanese agricultural direct payment system



Securing of daily-life infrastructures, etc.

The government will support the formulation of an activity plan relating to cross-sectoral efforts toward the consolidation of settled living conditions.

The government will implement approaches such as ensuring smooth acquisition of information on "vacant houses with farmland" and developing information communication environments.

The comprehensive development of agricultural production infrastructure and the integrated development of facilities that contribute to promoting rural areas will be implemented.

Figure 36-3 Formulation of a comprehensive plan for enhancement of settled living conditions



Improving the settlement environment in rural areas to ensure that local residents settle down

Promotion of countermeasures for the prevention of damage caused by wildlife, etc.

Relevant ministries will cooperate with each other to drastically strengthen countermeasures for the prevention of damage caused by wildlife by strategically combining various measures.

In addition to the improvement of the environment, for example, by installing invasion-preventing fences, efforts will be made to enhance capture activities, which include the development, dissemination, etc. of technologies such as ICT, drone technology, etc. for efficient smart-capture.

Figure 36-4 Comprehensive countermeasures for the prevention of damage caused by wildlife

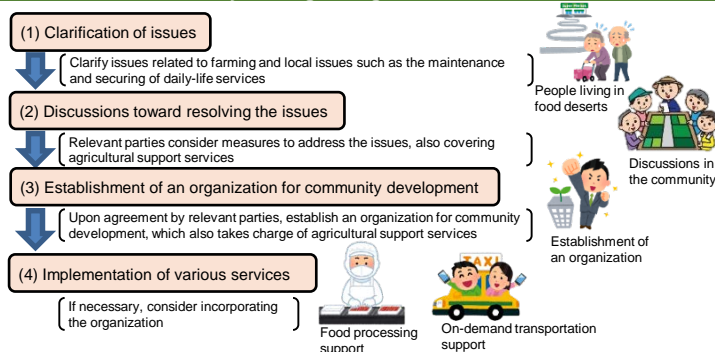


Creation of new movements and vigorous efforts that support rural areas

- The government will implement the development of systems and human resources that support their communities through provision of support for the activities of community-managed organizations, development of human resources for the communities, expansion of concerned population, etc.
- The attractiveness of rice terrace areas will be communicated through realization of diverse lifestyles such as balancing agriculture and another type of work and through promotion of rice terrace areas.
- Through efforts associated with Globally Important Agricultural Heritage Systems, etc., the government will promote the nation's understanding of agriculture's multifunctional roles.

Development of a structure and human resources that support their communities

Figure 37-1 Flow of forming agreement toward the start-up of a community-managed organization



The government will promote the establishment of region management organizations, such as community-managed organizations, that work on resolving local issues and also provide assistance in the development of systems and human resources that support their communities, for example, by promoting learning opportunities contributing to the resolution of issues and community vitalization.

Through utilization of various opportunities such as farming experience, countryside stays and the Furusato Nozei program (tax payment to your hometown) to create and expand the concerned population, and through the deepening of relationships between such people and communities, efforts will be made to expand the range of human resources that support communities.

Communication of the attractiveness of rural areas

Figure 37-2 Initiatives for a lifestyle balancing agriculture and another type of work



The government will indicate measures and its ways of support for realization of diverse lifestyles such as a lifestyle balancing agriculture and another type of work and so-called dual-life (life based on 2 locations).

Relevant ministries will, in cooperation with each other, comprehensively support approaches for regional development with rice terraces as the core for such approaches, which include tourism taking advantage of the beautiful scenery of rice terraces and exchanges with urban residents through the rice terrace ownership system. Furthermore, the attractiveness of rice terraces will be actively promoted from new aspects, such as the use of Rice Terrace Cards.

Promotion of the nation's understanding of agriculture's multifunctional roles, etc.

Figure 37-3 Approaches for raising the nation's awareness about agricultural heritage systems



The government will make efforts to raise the nation's understanding of agriculture's multifunctional roles through engagement in efforts associated with Globally Important Agricultural Heritage Systems (GIAHS), Japanese Nationally Important Agricultural Heritage Systems (J-NIAHS), and World Heritage Irrigation Structures and through selection of, and provision of information on, good cases in which efforts are made to vitalize the community and increase income by bringing out the potential of the rural area.

Creation of a framework through cooperation among relevant ministries for continuous implementation of the "3 pillars"

For measures in line with the "3 pillars," the MAFF, playing the central role and together with prefectures, municipalities, relevant ministries and private sectors, will personally visit actual sites to understand them, investigate and analyze the details observed, and, on the basis thereof, construct a framework for continuous implementation of actions to resolve issues.

In addition, parties related to regional development, such as relevant ministries, prefectures, municipalities and private business operators, will work together and comprehensively implement approaches associated with the "3 pillars," including the development of prefectures' and municipalities' personnel who will take charge of measures for regional development.

Restoration/Reconstruction from the Great East Japan Earthquake and actions against large-scale natural disasters

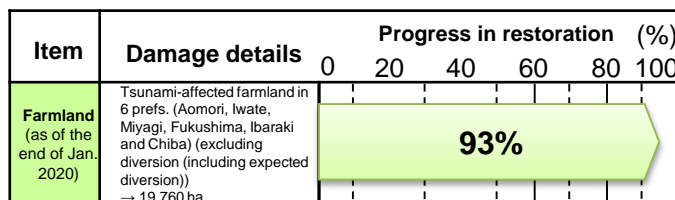
- Restoration/Reconstruction from the Great East Japan Earthquake will be firmly advanced continuously.
- In order to minimize damage amid the frequent occurrence of large-scale disasters in recent years, the government will thoroughly implement advance disaster prevention, develop farm management initiatives in preparation for disasters nationwide, and enhance disaster prevention/mitigation measures and the disaster response system toward building the resilience of agriculture and rural areas.
- In addition, for ensuring restoration from large-scale natural disasters, the streamlining of disaster assessment and the provision of farming restart support will be promoted.

Restoration/Reconstruction from the Great East Japan Earthquake

The restoration/reconstruction of areas affected by the Great East Japan Earthquake will continuously and firmly be carried out with the aim of completing the development of farmland, etc.

In order to secure the safety of food, the government will continue to implement radioactive substance inspection for agricultural products before their shipment. For the resumption of farming in the 12 areas affected by the nuclear accident, the government will support a series of actions, for example, necessary for the maintenance and management of decontaminated farmland, etc. or the conversion of farmland for a new type of farming.

Figure 38-1 Restoration situation of farmland affected by a tsunami disaster (size of area in which farming can be restarted)

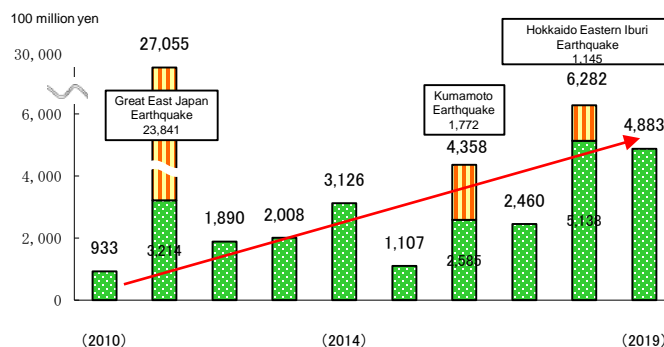


Preparation for and restoration from large-scale natural disasters

The government will advance technological development, etc. associated with advance disaster prevention in order to minimize damage caused by large-scale natural disasters and contribute to prompt farming resumption. Furthermore, farm management initiatives in preparation for disasters will be implemented nationwide, and enhancements will be made to disaster prevention/mitigation measures, the initial response system, and stable food supply preparations in case of unforeseeable events.

In order to support early farming resumption for farmers affected by natural disasters such as earthquakes and heavy rain, the government will support production areas in the early restoration of farmland and agricultural facilities, the switching of crops as triggered by disasters, scale expansion, the expansion of farmland partitions, etc., and support farming resumption based on new approaches such as the testing of smart agriculture.

Figure 38-2 Disasters in recent years and amounts of damage to agriculture, forestry and fisheries



Measures for relevant bodies

- Since organizations in connection with food, agriculture or rural areas play important roles in stable agricultural management, stable food supply, agriculture's performance of its multifunctional roles, etc., it is important to enable each of such organizations to effectively and efficiently fulfill its functions and roles.

Hierarchical organizations of agricultural cooperatives

In order to ensure hierarchical organizations of agricultural cooperatives continue and strengthen their efforts to increase the income of farmers in years to come, the government will encourage them to continue to implement self-reform efforts to enhance the soundness of their businesses and to ensure their business sustainability while continuing to play their role of supporting the industries and daily-life infrastructures of rural areas.

Hierarchical organizations of agricultural committees

The optimization of farmland utilization, such as the consolidation of farmland to business farmers, will be further promoted through the on-site activities, etc. of agricultural committee members and Farmland Utilization Optimization Promotion Commissioners.

Agricultural mutual relief organizations

With agricultural mutual relief associations playing a central role, agricultural insurance will be widely promoted in regions in cooperation with administrative organs, relevant organizations, experts outside the field of agriculture, etc.

Land improvement districts

The merger of land improvement districts or establishment of unified land improvement districts will be promoted in order to handle structural changes in agriculture/rural areas, respond to smart agriculture and enhance the management system of land improvement districts, for example, by reducing administrative costs.

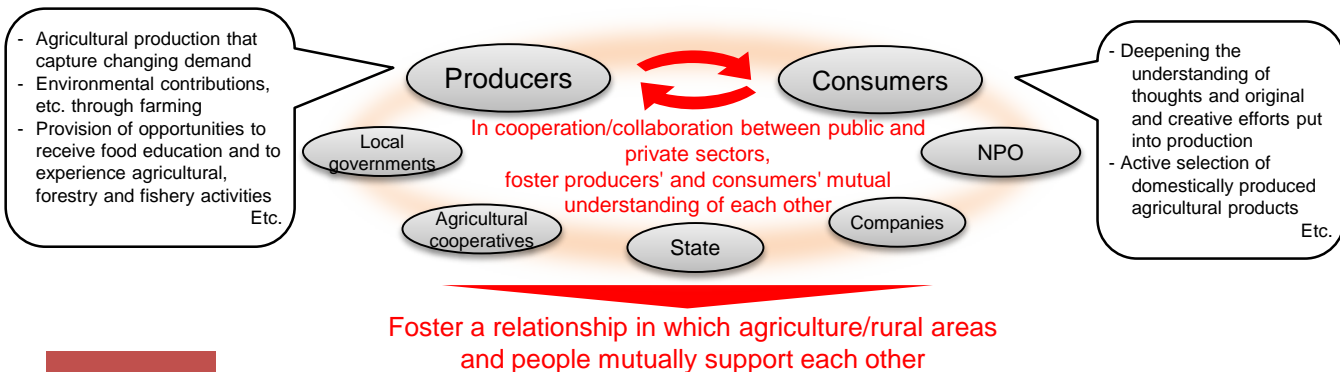
Part 3-6

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Measures for the formation of a national consensus through the development of national movements concerning food and agriculture, etc.

- Public and private sectors including consumers, food-related business operators and producers' groups, such as agricultural cooperatives, will, through cooperation with each other, develop new national movements focusing on the deepening of the connection between food and agriculture.
- It is important for the entire nation, by fostering its people's understanding of agriculture and rural areas that support Japan's food and environment, to share the awareness that agriculture is the foundation of the state, improve the food self-sufficiency ratio and thereby establish food security.

Figure 39-1 Deepening of the connection between food and agriculture through cooperation between public and private sectors



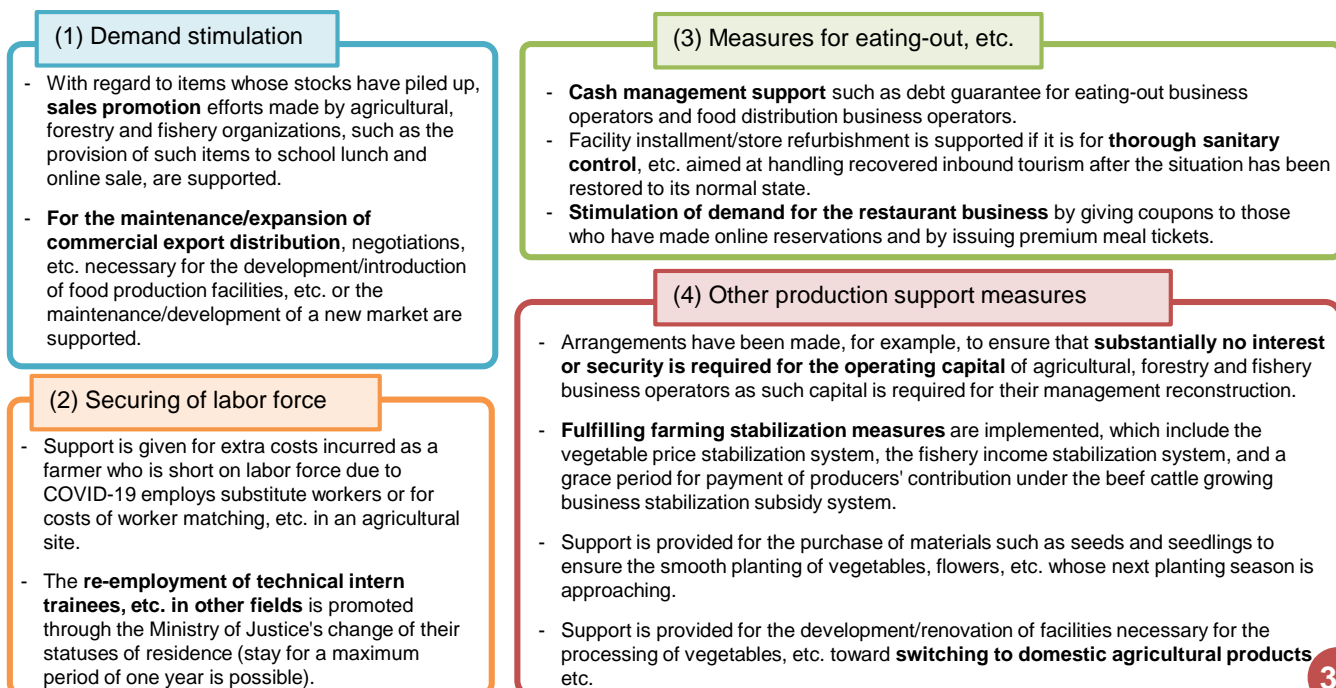
Part 3-7

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Responses to new infections including COVID-19

- Due to COVID-19 and the consequent worsening of the economic environment, Japan's agriculture, forestry, fisheries and food industry is facing serious issues such as demand decline and labor shortage.
- The government will flexibly and promptly stimulate domestic demand for domestic agricultural products, maintain the commercial export distribution, secure agriculture labor force, and implement measures for business operators related to home-meal replacements, eating-out or processing, such as switching to domestically produced ingredients and management improvement. Furthermore, the government will provide easy-to-understand information on the food supply situation.

Figure 39-2 Measures against COVID-19



Part 4

Matters necessary for comprehensively and systematically implementing measures

1. Implementation of measures that are in line with the viewpoint of the general public and the actual situation of rural communities

In Japan, various forms of agriculture are operated by taking advantage of the characteristics of different rural areas. Types of farm management are also diversified, ranging from family business to corporate management and from small- and medium-scale business to large-scale business. On the basis of hands-on approaches, efforts will be made to implement measures that are in line with the actual situation of rural communities.

2. EBPM, progress management of measures and implementation of evaluation

For the planning and designing of measures, evidence-based policymaking (EBPM) will be implemented. Also, the substantiation of measures will be advanced while implementing progress management by employing the "project" method.

3. Effective and efficient system for promoting measures

In reviewing measures and introducing new ones, efforts will be made to understand individuals on site by employing easy-to-understand expressions. In order to effectively and efficiently make responses even in the situation where the decreasing number of personnel of local governments is a concern, efforts will be made to enrich functions that connect farming sites and agricultural policy.

4. Implementation of the Digital Transformation of public administration

Administrative work involved in agricultural policy, administrative procedures, etc. require its digital transformation to be advanced, and for that reason, efforts will be made to develop an environment for such transformation.

5. Implementation of measures through the participation of various people concerned and cooperation among relevant ministries

Since measures concerning food, agriculture and rural areas are related to a wide range of fields connected with the lives of people and the economic society, measures will be comprehensively and systematically implemented based on an appropriate division of roles among the national and local governments, farmers, consumers, business operators, and relevant organizations.

6. Development of environment-friendly measures that can contribute to the SDGs

As the fields of food, agriculture and rural areas grounded on natural capital and the environment play a significant role in comprehensively improving the environment, economics and society that the SDGs aim at achieving, measures will be implemented for the fields ahead of other industries to contribute to the attainment of the SDGs.

7. Efficient and intensive implementation of fiscal measures

For the implementation of measures each year, measures will be constantly checked and reviewed to ensure steady improvements in business outcomes.

Drafted along with the Basic Plan

Reference

Outlook and securing of farmland

- In order to secure stable food supply and bring out multifunctionality of farmland, it is necessary to continue to secure farmland necessary for agricultural production as a base of domestic agriculture.
- Therefore, the prospects of farmland areas are estimated with consideration given to the trend and the effects of measures related to the preventing farmland dilapidation and clearing dilapidated farmland.

The total farmland area as in 2019

4.397 million ha

The trend ^(*)	Increase/Decrease in farmland up to FY2030	The effects of measures	Increase/Decrease in farmland up to FY2030
Farmland diversion	-160,000ha	Preventing farmland dilapidation	+170,000 ha
Occurrence of dilapidated farmland	-320,000ha	Clearing dilapidated farmland	+50,000 ha

Total farmland area as of 2030 if trend^(*) continues into the future3.92 million ha
(Based on the trend^(*))

^(*) The figures based on the trend are estimates on the assumption that the farmland diversion and the occurrence of dilapidated farmland would continue at the same level and also that no measure would be taken.

The total farmland area secured as of 2030

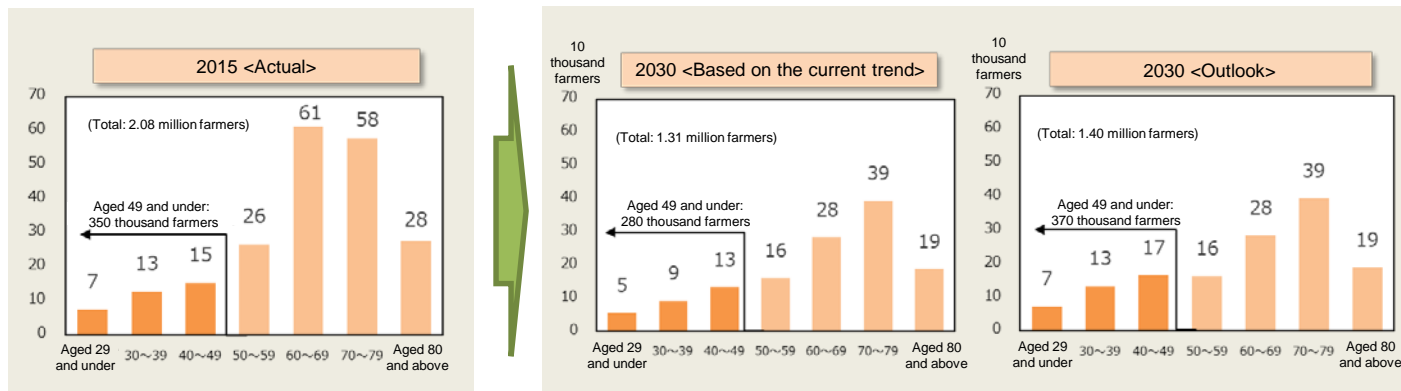
4.14 million ha

Reference

Agriculture structure outlook

- This outlook describes the desired form of agricultural structure and the prospects of agriculture labor force as a vision for promoting the development/securing of business farmers, the consolidation of farmland to business farmers, and other activities under the Food, Agriculture and Rural Areas Basic Act. (For the desired form of agricultural structure, see Figure 1 on p. 26.)

If the trend up to 2015 continues, the number of farmers is expected to decline to 1.31 million farmers by 2030 and, among them, the number of farmers aged under 50 is expected to fall to 280,000 by 2030 (if following the current trend). Based on the premise that new young (under 50 years old) farmers are recruited from inside and outside the agricultural sector, the unbalanced age distribution will be corrected, and the number of farmers aged under 50 will be 370,000 farmers by 2030 (outlook).

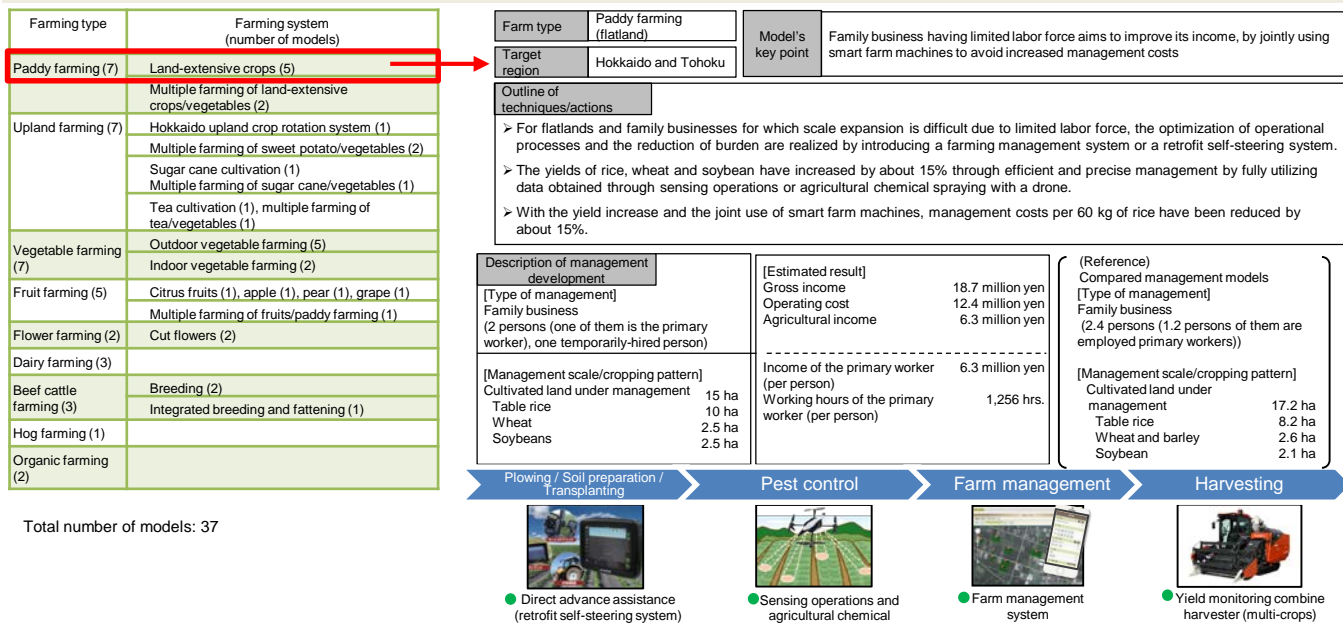


Drafted along with the Basic Plan

Reference

Farm management outlook

- This outlook indicates highly efficient and productive agriculture management models with new technology, aiming at realizing an income level equivalent to the levels for other industries by main farm management type and region, in order for diverse business farmers including family businesses to be able to maintain and develop the agriculture of their communities.
- Furthermore, this outlook also shows examples of new lifestyles and community efforts that can contribute to the maintenance of farmland and the vitalization of communities, which can be applied even where the scale of farmland is rather small.



Total number of models: 37

The above is an example of paddy farming management. Other example cases can be viewed at the following URL (Japanese version only).

(https://www.maff.go.jp/j/keikaku/k_aratana/attach/pdf/index-18.pdf)

Note: The above details are based on an estimation and do not necessarily show the actual condition.

● Commercialized by 2019 ● Commercialized by 2022 ● Commercialized by 2025

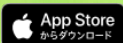
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Basic Plan for Food, Agriculture
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