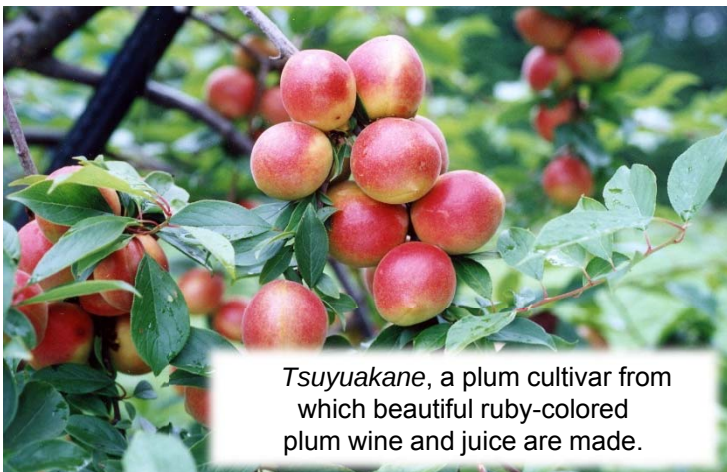


FY2016

Summary of the Annual Report on Food, Agriculture and Rural Areas in Japan



Tsuyuakane, a plum cultivar from which beautiful ruby-colored plum wine and juice are made.



Students of a weekend agricultural school in the Tokyo area learning farming techniques



Elementary school students from urban areas experiencing rice planting in a rural area for a school trip



"Shishimai Frit"
using boar legs and *maitake* mushroom
(Grand Prize in Gibier Food Competition)

Ministry of Agriculture, Forestry and Fisheries

May 2017

- Numbers in figures and tables are rounded in principle and may not add up to the total.
- Maps in this report may not necessarily indicate Japan's territories comprehensively.

<Contents>

FY2016 Annual Report on Food, Agriculture and Rural Areas in Japan

Special Topic 1	The Policy Package for Enhancing Competitiveness of Japan's Agriculture	...	1
Special Topic 2	Fluctuating agriculture in Japan: From 2015 Census of Agriculture and Forestry	...	5

Chapter 1

Efforts for Securing Stable Food Supply

Topics	Providing "Made in Japan" products which are trusted around the world - The 2020 Tokyo Olympic and Paralympic Games will be a big step -	...	9
1	Objectives and present situation of Basic Plan for Food, Agriculture and Rural Areas	...	10
2	Strategic exploration of global market	...	11
3	Global food supply and demand, and efforts for establishing food security	...	12
4	Food consumption trends and promotion of Shokuiku (food and nutrition education)	...	13
5	Ensuring food safety and consumer confidence	...	13
6	Trends of food industry	...	15
7	Exploring new demand for agriculture, forestry and fisheries products and food	...	15

Chapter 2

Efforts for Creating Strong Agricultural Structure

Topics	Improving productivity by applying innovative AI, IoT and robot technologies	...	16
1	Promoting structural reform of agriculture	...	17
2	Developing and conserving agricultural production infrastructure	...	19
3	Production trends for major farm and livestock products	...	19
4	Promoting technological innovation on production/distribution field	...	22
5	Promotion of environmental policy such as responses to climate change	...	23
6	Agriculture-related organizations supporting agriculture	...	23

Chapter 3

Taking Advantage of Local Resources to Promote and Vitalize Rural Areas

Topics	Bringing a brighter future for the agriculture in hilly and mountainous areas: a new challenge using local "treasures"	...	24
1	New trend of visit to rural areas toward regional empowerment	...	25
2	Maintaining and demonstrating multifunctional roles of agriculture and rural areas	...	25
3	Responding to wildlife damage	...	26
4	Proactive utilization of local resources	...	26
5	Promotion of urban agriculture	...	27
6	Coordination between agriculture and various other field	...	27

Chapter 4

Restoration/Reconstruction from Large-scale Natural Disasters

Topics	Natural disasters that left ravages of destruction: efforts that contributed to early restoration	...	28
1	Restoration/Reconstruction from natural disasters (Kumamoto Earthquakes, etc.) occurred in FY 2016	...	29
2	Restoration/Reconstruction from the Great East Japan Earthquake	...	31

Summary of FY2017 Measures for Food, Agriculture and Rural Areas	...	32
---	-----	----

Special Topic 1

To improve agriculture in Japan: The Policy Package for Enhancing Competitiveness of Japan's Agriculture

In November 2016, government formulated the Policy Package for Enhancing Competitiveness of Japan's agriculture. This is to develop an environment which allows farmers to take free business actions, and at the same time, to solve the structural problems, which farmers cannot solve by their own efforts. The program is aiming to promote agriculture as further growth industry.

In the future, the government will develop legal systems, improve operations of the related systems to the program, and provide support for the voluntary efforts of private businesses to realize these reforms.



About the Policy Package for Enhancing Competitiveness of Japan's agriculture

- It is probable that the domestic food market will shrink due to the aging and decreasing population. On the other hand, the world food market is expected to expand as the world population and economy grows.
- Under these circumstances, it is necessary to strengthen the competitiveness of agriculture and capture the domestic and foreign demands in order to realize the sustainable development of agriculture and promotion of rural areas in Japan.
- The government has provided support for farmers' efforts including farmland concentration and intensification, export of agricultural products and the primary producers' diversification into processing and distribution (AFFrinnovation). At the same time, it is also necessary for the government to develop an environment where farmers can take free business actions and solve structural problems that are unable to be solved by themselves.
- For this reason, the government formulated "The Policy Package for Enhancing Competitiveness of Japan's agriculture" that incorporates the direction of new agricultural administration reforms including the reduction of farming input costs, structural reforms of distribution and processing of agricultural products, introduction of the revenue insurance system, revision of the land improvement system, reform of dairy, etc.

13 reforms incorporated in the program

1. Reducing costs of farming inputs
2. Structural reform of distribution and processing
3. Development of manpower
4. Development of strategic export system
5. Indication of country of origin of ingredients
6. Study of introduction of check-off program
7. Introduction of revenue insurance system
8. Revision of land improvement system
9. Improvement of employment structure in farm villages
10. Promotion of feed rice
11. Reinforcement of production structure for beef cattle and dairy farming
12. Steady management of the compound feed price stabilization system
13. Reforming of raw milk distribution system



Reducing costs of farming inputs and structural reforms of distribution and processing of agricultural products

Issues concerning farming input costs

- The proportion of the sum of fertilizers and manure cost, agricultural chemicals cost and agricultural implements cost to the production cost of rice per 10a is 30% to 40%. It is necessary to reduce production material costs in order to increase agricultural income.
- However, the production materials industry has a structure with high production costs due to unreasonable regulations not based on the latest scientific knowledge, an excessive number of makers and brands, and inappropriate competitions caused by oligopoly.
- There is also inadequate information on prices, quality, etc. when purchasing production materials. Therefore, it is difficult for farmers to choose who to purchase materials from to benefit them.

Industrial structure and laws and regulations on production materials

Agricultural chemicals

- With the advance of science, new safety evaluation methods for agricultural chemicals have been introduced in many other countries.
- In Japan, to implement a system for the prompt supply of safe and high quality agricultural chemicals, it is necessary to review the agricultural chemicals registration system.

Farm machinery

- The sales of three major models in Japan are monopolized by four companies, accounting for 97% of the total. This structure in which the principle of market mechanism does not work results in higher costs.
- Each farming pattern requires various types of farm machinery and it is necessary to develop innovative technology using Information and Communication Technology (ICT), etc.

Fertilizer

- Small scale businesses make up 93% of all fertilizer manufacturers. The production of major manufacturers per description is also small, less than about 5% of that of Korea, which results in higher costs.

Compound feeds

- The operation rate of factories is less than half of that of Korea. The production per description is also small, less than about a third of that of Korea, which results in higher costs.

	Production and export status	Industrial structure, etc.	Laws and regulations, etc.
Agricultural chemicals	[Active ingredient] Domestic production About 60,000 t Export About 30,000 t [Formulation] Domestic production About 220,000 t Export About 15,000 t (FY 2014)	- Number of producers: 169 - Active ingredients used for production of formulation in Japan are mainly supplied by some 10 producers (domestic(*) and multinational) that are capable to develop new agricultural chemicals. * Companies in Japan are more capable of developing new agricultural chemicals than those in Europe and the US.	Agricultural chemicals registration system Laws and regulations in Japan are almost the same as those in the US and the EU. There are, however, differences in the implementation (e.g. registration for crop group, management of composition). - The percentage of generic pesticides to the total agricultural chemical shipment is 5%. Pest control standards, etc. - Additional tests are often necessary to add to the pest control standards in each prefecture or the pest control history of agricultural cooperatives.
Farm Machinery	Domestic shipment About 280 billion yen Export amount About 250 billion yen (FY 2015)	Lack of competitiveness due to monopoly - Shipment by four domestic leading companies accounts for 80%, which is a fixed share. - The four domestic leading companies monopolize import by forming a network. - Only 3% of the three major machinery models are imported.	Agricultural Mechanization Promotion Act The requirement for subsidized projects and financial support is to pass an evaluation (optional) based on laws.
Fertilizer	Domestic production About 3 million t Export About 700,000 t (FY 2012)	Low productivity due to the excessive supplying structure - The number of manufacturers increased and factories are scattered throughout Japan. - Production of a small quantity of products in many descriptions.	Standard levels of fertilization, etc. - The standard level of fertilization in each prefecture is subdivided and a description is designated based on the cultivation history developed by agricultural cooperatives. - Half the number of descriptions listed on the pre-order form of agricultural cooperatives is the original description managed by one agricultural cooperative only.
Compound Feeds	Production 23.08 million t Export Almost none (FY 2014)	Low productivity due to the excessive supplying structure - There are many manufacturers and factories are scattered throughout Japan. - Production of a small quantity of products in many descriptions.	

Issues concerning distribution and processing of agricultural products

- The more businesses that are involved in the distribution process, the higher the distribution costs of agricultural products become.
- Therefore, it is necessary to streamline intermediate distribution systems such as wholesale markets, etc. and expand direct sales routes from farmers and agricultural organizations to consumers.
- There is also inadequate information on sales through farmer's markets, on-line sales and wholesale markets. Therefore, it is difficult for farmers and agricultural organizations to choose sales methods that would benefit them and operate their businesses.

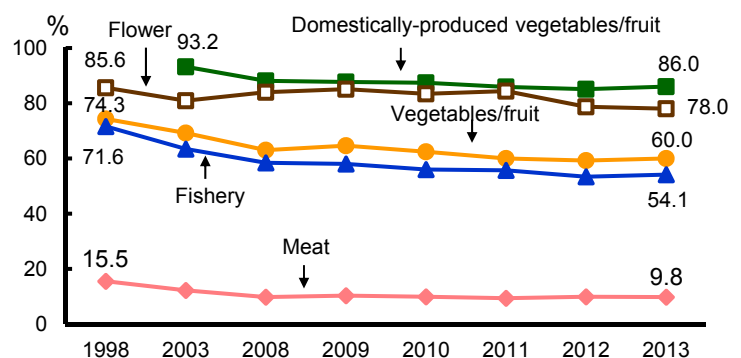
Intermediate marketing

- Wholesale markets contribute to the smooth distribution of fresh food, etc. As diverse marketing styles advance, the rate of going through a wholesale market is declining.
- In the rice wholesalers industry, the demand for rice as a staple food is decreasing and around 20 to 40% of the wholesale businesses suffer a deficit every year. It is difficult to propose sales methods based on the needs of the market and consumers.

Retail

- Producers are unable to reproduce high quality agricultural products if they are only in a price cutting competition. This will then make it difficult for retailers to continuously stock high quality agricultural products, leading to the impoverishment of both producers and retailers.

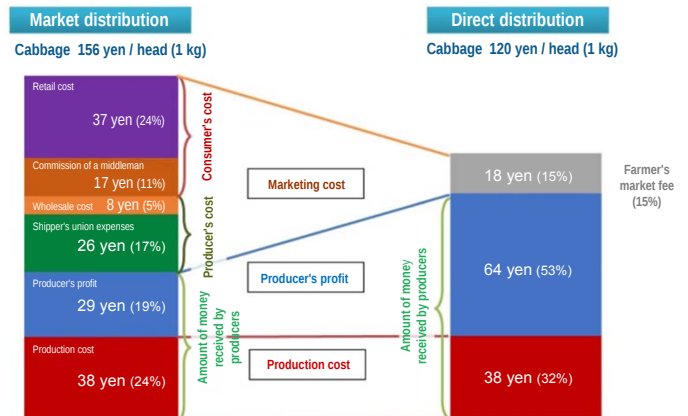
The rate of going through a wholesale market (on a weight basis, estimate)



Diversification of marketing routes

- Efforts for direct sales including sales in farmer's markets and on-line are being made as the AFFrinnovation and the use of ICT is advanced, but further promotion is necessary. As the percentage of money received by producers is higher in a direct sales distribution than that in a market distribution, and shipment operations are carried out by producers themselves, producers are able to grasp the preferences of consumers directly.
- It is important to increase the added value of products and income of farmers by using non-standard agricultural products as process materials.

Difference in amount of money received by producers by marketing style of agricultural products.

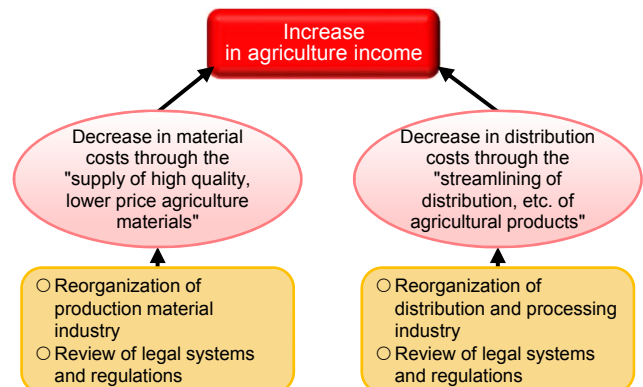


Addressing issues concerning material prices and distribution and processing of agricultural products

Development of legal systems

- In order to address issues concerning material prices and distribution and processing of agricultural products and enhancing competitiveness of agriculture, it is necessary to reform measures and regulations on the distribution of materials and agricultural products, and promote the voluntary reorganization of the industry by businesses.
- In order to support government responsibilities and measures to be taken by the government as well as efforts for the business reorganization and entering into new businesses through business's voluntary decisions, the bill for Agricultural Competitiveness Enhancement Support setting measures, such as the subscription from the Agriculture, Forestry and Fisheries Fund Corporation for Innovation Value-Chain and Expansion Japan was submitted to the Diet.

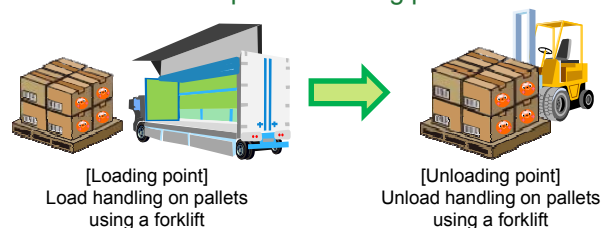
Purpose of the bill for the Agricultural Competitiveness Enhancement Support



Improving transparency of information and distribution efficiency

- Using know-how of the private sector, a website will be developed in which farmers can view information and compare and choose where to buy materials from and distribution routes of agricultural products in a way that benefits them.
- Reducing distribution costs by promoting modal shift to joint delivery and railway transport using pallet transportation and ICT

Transportation using pallets



Reviewing the method of purchasing production materials and selling agricultural products through the National Federation of Agricultural Cooperative Associations (ZEN-NOH).

- The shares of ZEN-NOH in production material distribution are about 50% in fertilizer, about 40% in agricultural chemicals and about 30% in compound feeds. The shares of ZEN-NOH in agricultural distribution are about 30% both in rice and vegetables/fruits.
- In order to transform the organization so that it maximizes the benefits of joint purchase from the viewpoint of actual farmers and strengthens the sales system of agricultural products, ZEN-NOH is working toward the reform of the organization.

Share of ZEN-NOH in production material distribution, etc.

	Share
Fertilizer	About 50%
Agricultural chemicals	About 40%
Compound feeds	About 30%

	Share
Rice	About 30%
Vegetable and fruit	About 30%



Direction of the reform for other items

Reforming raw milk distribution system

- It is extremely important for agricultural cooperatives and the Federation of Agricultural Cooperative Associations (FACA), which are designated in the raw milk producer group, to improve efficiency and continue to use the function appropriately.
Besides this, in order to increase producers income with inventive ideas under the environment in which they can freely choose where to ship their products, it is necessary to expand the scope of businesses covered by the subsidy to manufacturing milk producers, and secure the stable supply of dairy products depending on the supply and demand status (submitting the bill to the Diet).

Development of strategic export system

- Promoting measures based on the "Strategy to Strengthen Export Capabilities of the Agricultural, Forestry and Fisheries Industries" in order to achieve the goal of 1 trillion yen export by 2019. A new organization which is in charge of promotion as a whole country will be established.
- Expanding the scope of establishing the JAS standards in order to strengthen international competitiveness in agriculture, forestry and fisheries industry (submitting the bill to the Diet).

Study of introduction of check-off program

- Legal force is given to the check-off (to collect contributions from producers and use them for sales promotion, etc.) system when it meets certain requirements in a desired industry.

Revision of land improvement system

- Establishing a land improvement program in which farmers are not expected to pay costs for the farmland rented by the Farmland Intermediary Management Institutions in order to accelerate farmland concentration and intensification to core farmers through renting and subleasing (submitting the bill to the Diet).

Promotion of feed rice

- Promote reducing the production cost by introducing high-yielding feed rice and adding value of livestock products by cooperation between crop farmers and livestock farmers.

Development of manpower

- The "agricultural management seminar" will be launched in each prefecture for farmers to improve their management skills while engaging farming.
- Providing support for engagement in farming including corporate employment.
- Considering to introduce a scheme to utilize foreign human resources, which is separate from the Technical Intern Training Program.

Introduction of country of origin of ingredients

- To ensure that consumers have the opportunity to choose food, the heaviest ingredient of all processed foods will be required to label the country of origin, in descending order by weight as a general rule. The new labeling system will also be set in consideration of its feasibility.

Introduction of revenue insurance system

- An income insurance system, which can provide a comprehensive service to the entire income of an agricultural business owner regardless of product category, will be established as a safety net for agricultural business owners who work on their management development based on a free management decision (submitting the bill to the Diet).

Improvement of employment structure in farm villages

- Expanding the scope of new industry types whose introduction is promoted in rural areas in order to secure employment in rural areas (submitting the bill to the Diet).

Reinforcement of production structure for beef cattle and dairy farming Steady management of the compound feed price stabilization system

- Promotion of increase in the number of breeding cattle, securing the number of descendant dairy cattle for beef, increase in productivity and the production of self-supplied feed, etc.



Development of legal systems to implement the Agricultural Competitiveness Enhancement Program

- The following 8 bills have been submitted to the Diet in order to carry out the reforms in the program.

- [1] Bill for the Agricultural Competitiveness Enhancement Support
- [2] Bill for the repeal of the Agricultural Mechanization Promotion Act
- [3] Bill for the repeal of the Main Crop Seed Act
- [4] Bill for the partial amendment of the Land Improvement Act
- [5] Bill for the partial amendment of the Act for the Promotion of Industry in Rural Areas

- [6] Bill for the partial amendment of the Act on Standardization and Proper Quality Labeling of Agricultural and Forestry Products and the Act on the Food and Agricultural Materials Inspection Center
- [7] Bill for the partial amendment of the Act on the Stability of Livestock Farming and the Act on the Agriculture & Livestock Industries Corporation, Independent Administrative Agency
- [8] Bill for the partial amendment of the Act on Compensation for Agricultural Loss

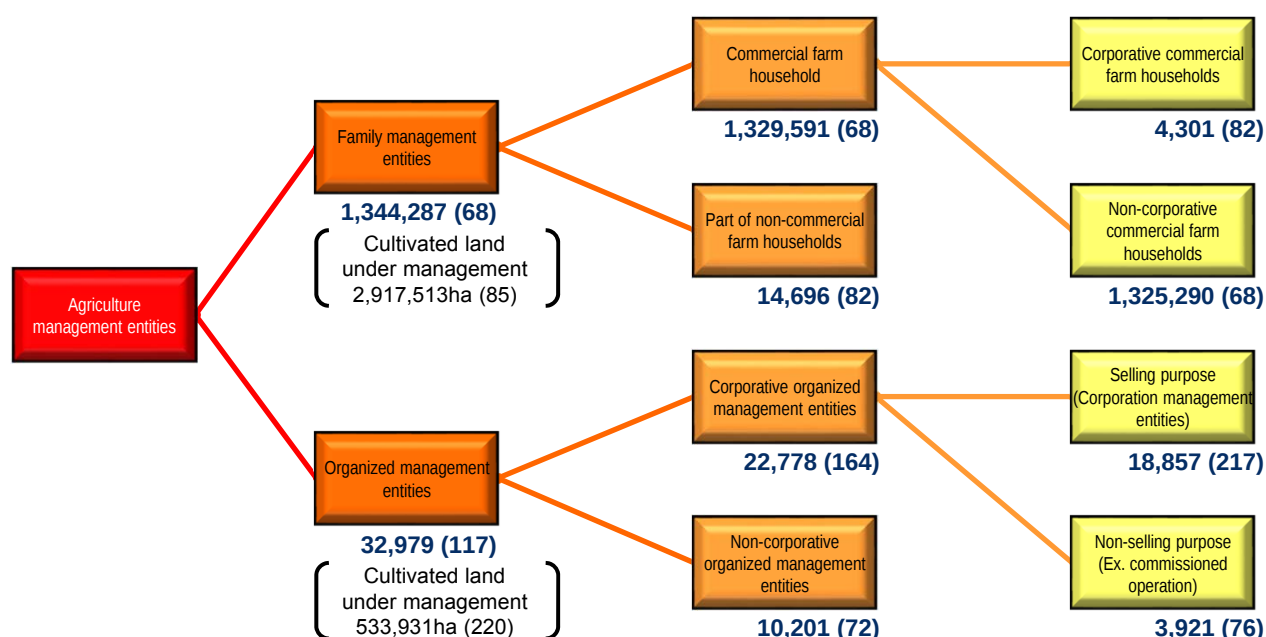
Special Topic 2

Fluctuating agriculture in Japan: From 2015 Census of Agriculture and Forestry

In the past decade, farmers born during the mid-1920s and 1930s, who have supported agriculture have retired, while agriculture has changed as a result of various efforts made by enthusiastic farmers. This part reveals the state of agriculture during these years through the analysis of management structure from the quinquennial complete survey, the Census of Agriculture and Forestry, and the trend and direction of related measures.

It also views the state of agriculture which has changed on a municipality level and introduces agriculture in municipalities with large agricultural productions and their characteristic efforts.

Breakdown of agriculture management entities from the 2015 Census of Agriculture and Forestry



Note: Figures are the number of management entities in 2015. Figures in brackets are the index number set as 2005 = 100.

Trends of agriculture management entities

Management status of agriculture management entities

- The number of commercial farm households decreased by 32% in 10 years (from 1.96 million to 1.33 million). In the past five years, however, the number increased in the classes with sales value of agricultural products of more than 50 million yen.
- A high percentage of commercial farm households ship their agricultural products with No.1 sales to agricultural cooperatives mainly for commissioned sales. However, they tend to spread the shipment destinations of agricultural products with No.1 sales to retailers other than agricultural cooperatives as the sales value of agricultural products will increase. Larger sales lot of agricultural products will promote direct transactions with food processors and food service industries (figure on right).
- The higher percentage of commercial farm households which sell products directly to consumers use self-owned farm stands or on-line sales as the amount of sales become larger (figure on right).

Percentage of shipment destinations of
agricultural products with No.1 sales
(2015 Commercial farm households)

(Unit: %)

Sales of agricultural products Scale	Agricultural cooperatives	Shipper's unions other than agricultural cooperatives	Wholesale markets	Retailers	Food processors, food service industry	Direct sales to consumers	Other
Less than 3 million	67.0	8.2	4.4	5.1	1.3	9.5	4.4
3 - 7 million	64.6	9.6	11.9	3.3	1.5	7.6	1.5
7 - 15 million	64.6	9.8	12.9	3.1	1.6	6.4	1.6
15 - 30 million	67.7	11.0	11.2	3.1	1.4	4.0	1.7
30 - 50 million	71.7	10.7	9.2	2.8	1.7	2.3	1.6
50 - 100 million	67.5	13.4	9.6	3.3	2.9	1.4	1.9
100 - 300 million	56.6	16.8	13.3	5.1	4.8	0.6	2.8
300 - 500 million	45.7	18.9	20.0	5.1	5.7	1.1	3.4
More than 500 million	44.0	16.0	24.0	4.0	4.0	4.0	4.0

Percentage of direct sales to consumers by sales method
(2015 Commercial farm households)

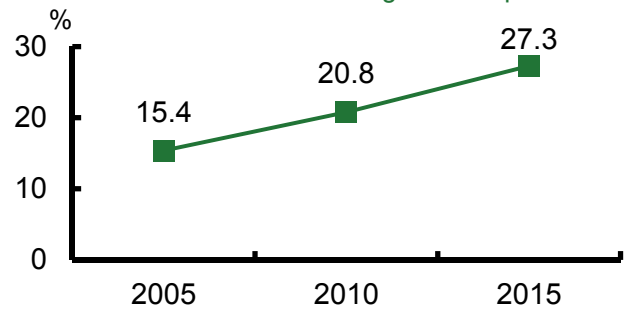
(Unit: %)

Sales of agricultural products Scale	Direct sales to consumers			
	Self-owned Farm stand	Other Farm stand	Online	Other methods
Less than 3 million	16.0	40.5	1.9	47.7
3 - 7 million	27.7	55.1	4.8	27.6
7 - 15 million	31.7	54.9	6.9	26.4
15 - 30 million	33.3	54.3	10.0	25.5
30 - 100 million	35.1	54.1	14.1	25.1
More than 100 million	42.0	47.3	23.2	23.7

*Multiple answers

- The number of corporation management entities increased by 220% in 10 years (from 8,700 to 18,857). The share of corporation management entities in the total sales value of agricultural products increased significantly from 15% to 27%, strengthening their presence in agricultural production (figure on right).
- Training and recruitment of farmers are promoted through measures such as informing the lease method of agricultural land and the development of a promotion system to establish new corporations with participation of external experts.

Share of corporation management entities in the total sales value of agricultural products

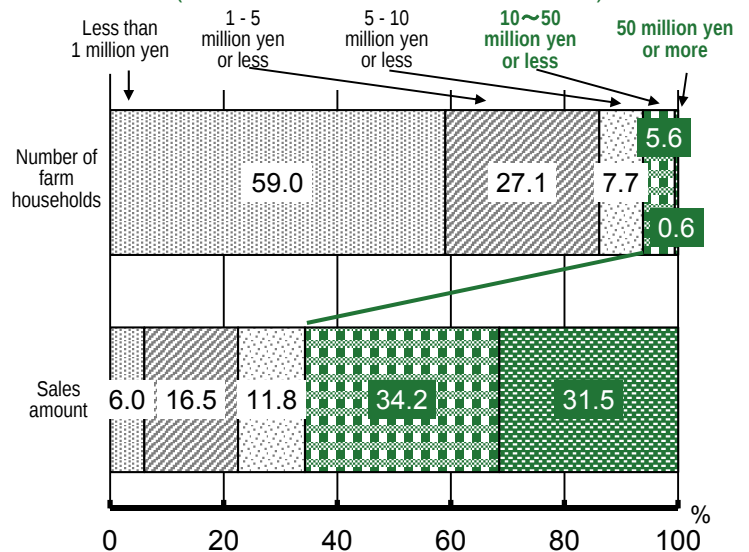


Efforts toward related businesses of agricultural production

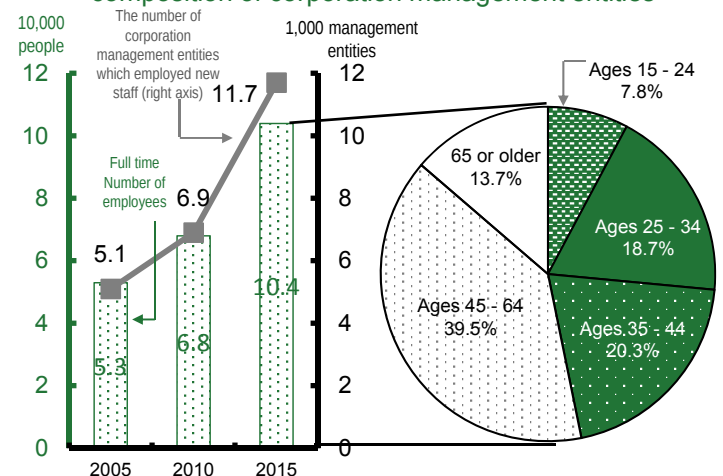
- Commercial farm households with sales of more than 10 million yen in related business of agricultural production have only a 6% share in the number of farm households (1,880/30,123). On the contrary, their share in sales is 66% (97.3 billion yen/148.1 billion yen), more than half of the total, increasing the percentage of commercial farm households with high sales (figure on right).
- Corporation management entities with sales of more than 10 million yen in related business of agricultural production remained only at a 36% share in the number of entities (1,547/4,250). On the contrary, their share in sales is 97% (274.4 billion yen/282.1 billion yen), accounting for the majority. This shows that a few management entities with high sales are engaged in related businesses.
- Sales are promoted through measures such as the development of efforts in the entire community based on the AFFrinnovation strategy and the establishment of AFFrinnovation businesses through the subscription and financing of Agriculture, Forestry and Fisheries Fund Corporation for Innovation Value-chain and Expansion Japan.

Share in the sales of related businesses of agricultural production.

(2015 Commercial farm households)



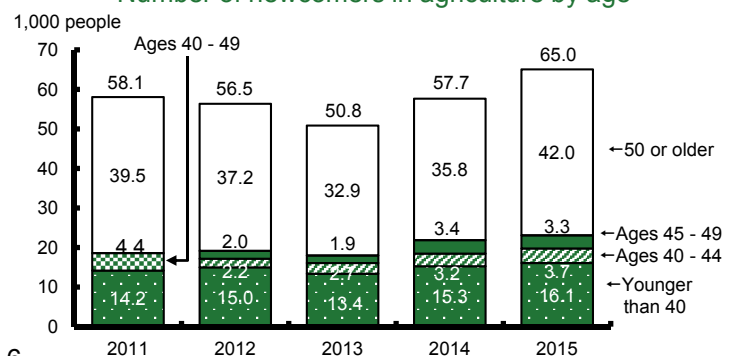
The number of full-time employees and age composition of corporation management entities



Agricultural labor force

- The number of core persons mainly engaged in farming in commercial farm households decreased by 22% in 10 years (from 2.24 million to 1.75 million). On the other hand, the number of full-time employees in farming increased by 60% (from 61,094 to 99,393), showing an advance in the shift of labor force from household members to employees. The number of full-time employees in corporation management farm doubled (from 52,888 to 104,285), and 47% of full-time employees are aged 44 or younger, playing a significant role as a working platform for young farmers (figure on right).
- The number of newcomers in agriculture surpassed 60,000 for the first time in 6 years, an increased of 13% compared to the previous year (65,030). Among them, the number of those aged 49 or younger was 23,030, the largest since 2007 when the survey in this age group started (figure on right). Many new self-employed farmers are engaged in rice cultivation, while more new employed farmers are engaged in domestic livestock or vegetables.
- Securing the number of young newcomers in agriculture is promoted through measures such as the use of the program for the investment in next generation human resources in agriculture (farming grant for young farmers before 2016) and the agriculture employment program, establishment of a full-time counseling service for those who wish to engage in farming, and the provision of farming workshops in agricultural corporations.

Number of newcomers in agriculture by age

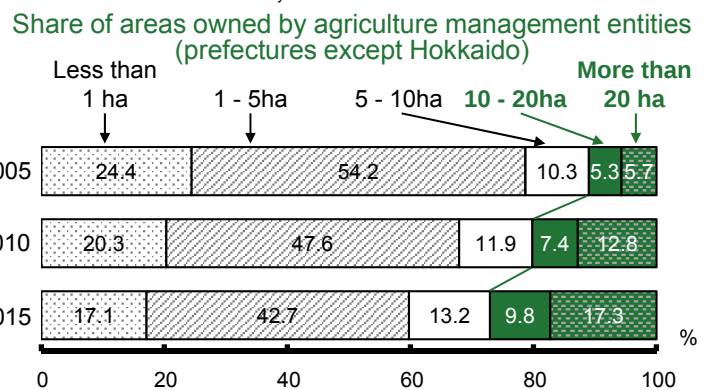
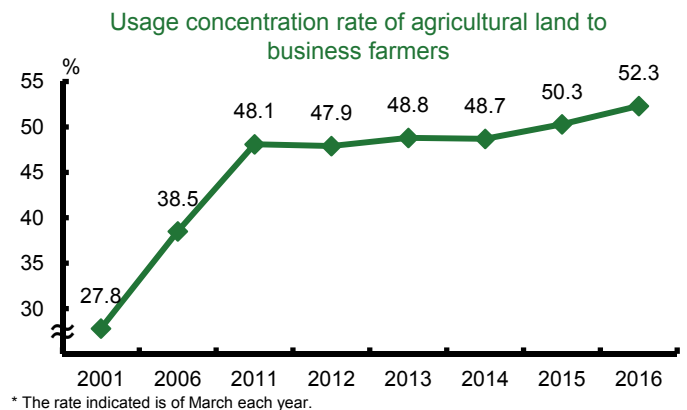




Trends in agricultural land

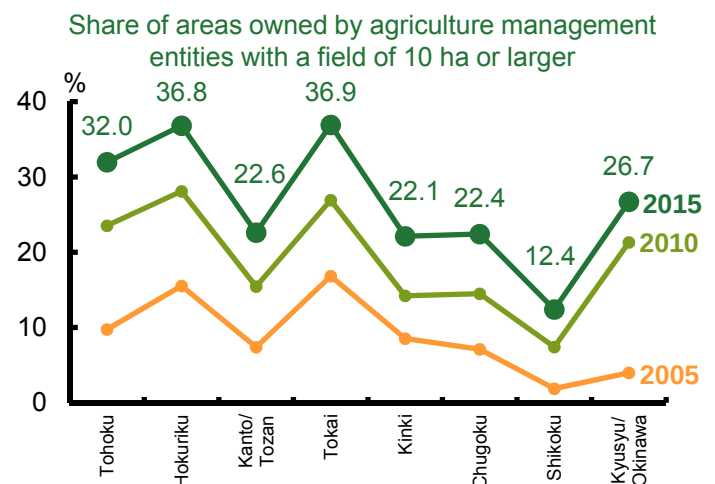
Usage concentration to farmers

- The usage concentration rate of agricultural land to business farmers increased between 2001 and 2011 and then stagnated. It started to increase again from 2014 and the usage concentration of agricultural land is steadily increasing through the development of the Farmland Intermediary Management Institutions (figure on right).
- The percentage of areas with 10 ha or larger land owned by agriculture management entities excluding those in Hokkaido increased from 11% to 27% in 10 years (figure on right). It is necessary to continue to concentrate farmland to farmers.
- The share of areas owned by corporation management entities increased from 2.5% to 7.2% in 10 years, strengthening their presence in agricultural land use.
- Measures include the acceleration of consolidation in farmland use to business farmers by prefectural governments through the regular reviews of personnel and farmland plans and the use of Farmland Intermediary Management Institutions and the All Japan Farmland Navigator.



Usage accumulation by region in each prefecture (except Hokkaido)

- Share of areas owned by agriculture management entities with a field of 10 ha or larger is high because of the establishment, etc. of community-based farm cooperatives in the Tohoku and Hokuriku regions and the increase in the number of large-scale corporation farms in the Tokai region. Paddy fields in these three regions have been parceled into larger blocks and the development of requirements for usage accumulation plays an important role.
- Measures include the acceleration of the development of requirements in which farmers can take agricultural land more easily through coordination with the Farmland Intermediary Management Institutions and the larger parcellation of agricultural land and its multipurpose use.



Trends in the management structure of paddy farming

- The number of commercial farm households in paddy farming decreased by 35% in 10 years (from 1.73 million to 1.13 million). In Hokkaido, the number of households with a 15 ha or larger paddy field is increasing (3,702 to 4,599) and those with a 5 ha or larger paddy field is increasing (31,798 to 42,806) in other prefectures, showing the growing scale in paddy farming (figure on right).
- The number of corporation management entities has tripled in 10 years (from 3,154 to 10,062 entities). The increase rate is higher in larger areas.

The number of commercial farm households in paddy farming

Area of cultivated land under management Area size	Hokkaido				Other prefectures			
	2005	2010	2015	Rate of change (2005-2015)	2005	2010	2015	Rate of change (2005-2015)
Total	28,466	22,710	18,811	-33.9	1,706,114	1,393,878	1,107,843	-35.1
Less than 1ha	3,089	2,574	1,806	-41.5	1,166,393	940,362	719,603	-38.3
1-5ha	9,396	6,597	5,122	-45.5	507,923	415,905	345,434	-32.0
5-10ha	7,892	5,472	4,359	-44.8	24,913	27,842	29,994	20.4
10-15ha	4,387	3,607	2,925	-33.3	4,188	5,845	7,180	71.4
More than 15ha	3,702	4,460	4,599	24.2	2,697	3,924	5,632	108.8

* Commercial farm households in paddy farming refer to commercial farm households who own the paddy farms

The state after 5 years of single-farming (rice cultivation)

(Unit: Management entity)

- Looking at the state of management of 772,785 management entities in 2015, which were single farming (rice cultivation) in 2010, the number of those who changed to multiple farming was 38,749. The percentage of entities shifting to multiple farming is higher in those with a larger cultivated land under management. This shows that there is a trend of trying to increase income by shifting to multiple farming.

	Number of management entities that were single-farming in 2010	Total status in 2015 (1)	Continued agriculture management entities	Single-farming (rice)	Single-farming (others)	Multiple-farming (2)	[2]/[1] (%)	No sales	Other than agriculture management entities
Total	772,785	739,040	601,624	507,961	8,443	38,749	5.2	46,471	137,416
Less than 1ha	435,758	416,725	317,562	258,912	5,028	15,869	3.8	37,753	99,163
1 - 5	305,791	292,841	255,913	225,673	3,083	18,723	6.4	8,434	36,928
5 - 10	18,995	18,103	17,136	14,583	214	2,156	11.9	183	967
10 - 20	7,858	7,424	7,162	5,885	72	1,141	15.4	64	262
More than 20ha	4,383	3,947	3,851	2,908	46	860	21.8	37	96



Agricultural output and municipal efforts

Trends in total agricultural output

- The total agricultural output has been declining after its peak of 11,700 billion yen in 1984 but increased to 8,800 billion yen in 2015, a 400 billion yen increase from the previous year due to the increase in the price of agricultural products. The agricultural income produced increased to 3,300 billion yen, a 500 billion yen increase from the previous year, reaching 3,000 billion yen for the first time in 8 years.

Agricultural output by municipality and municipal efforts

- The Ministry of Agriculture, Forestry and Fisheries (MAFF) re-published estimated agricultural output of municipalities in 2014 for the first time in 8 years to support the planning of agricultural measures by local governments.

- In 2015, the majority of the top 20 municipalities are those which set vegetables and livestock production as No.1 sectors (figure on right).

More than half of the total area in 8 cities is in hilly and mountainous areas. In spite of having many disadvantaged regions, they maintain high outputs mainly in livestock and fruit farming.

Moreover, the average age (63.7) of core persons mainly engaged in farming in these municipalities is younger than the national average (67.0). This shows that young farmers play a significant role in agricultural production in these areas compared to the nationwide production.

- Tahara City of Aichi prefecture is ranked No.1 and the city maintains high output in flowers and vegetables by introducing new technology and new varieties as well as implementing mutual training among farmers.
- Kanoya City of Kagoshima prefecture is ranked No.11 and the city maintains the production structure for beef cattle through large breeding farms centered in the division management system implemented by agricultural organizations.

Top 20 municipalities in agricultural output (2015)

Ranking	Municipality		Agricultural output (100 million yen)	No.1 sector		Percentage of hilly and mountainous areas in total area (%)	Average age of core persons mainly engaged in farming
1	Aichi	Tahara City	820.4	Flowers	313.2	0.0	59.8
2	Ibaraki	Hokota City	720.3	Vegetables	395.7	0.0	59.4
3	Miyazaki	Miyakonojo City	719.7	Pigs	195.4	66.1	66.8
4	Niigata	Niigata City	572.1	Rice	284.2	4.5	65.6
5	Hokkaido	Betsukai Town	570.6	Dairy cattle	547.6	0.0	50.9
6	Chiba	Asahi City	548.0	Vegetables	195.7	1.1	61.3
7	Shizuoka	Hamamatsu City	510.4	Fruits	163.9	67.0	68.3
8	Kumamoto	Kumamoto City	461.0	Vegetables	257.5	5.9	62.4
9	Aomori	Hirosaki City	435.8	Fruits	373.4	53.7	62.9
10	Aichi	Toyohashi City	413.4	Vegetables	205.4	16.3	63.9
11	Kagoshima	Kanoya City	400.8	Beef cattle	127.7	50.8	66.6
12	Gunma	Maebashi City	391.1	Pigs	95.3	38.1	68.0
13	Kagoshima	Minamikyushu City	389.2	Hen eggs	106.3	25.8	61.8
14	Kumamoto	Kikuchi City	384.8	Beef cattle	102.6	72.2	64.3
15	Miyazaki	Miyazaki City	383.8	Vegetables	207.3	56.0	63.0
16	Chiba	Katori City	379.2	Vegetables	85.0	0.0	66.7
17	Kagoshima	Shibushi City	371.2	Pigs	146.5	69.5	64.5
18	Kumamoto	Yatsushiro City	370.6	Vegetables	269.5	80.9	60.0
19	Ibaraki	Omitama City	354.0	Hen eggs	167.1	0.0	65.3
20	Saitama	Fukaya City	349.3	Vegetables	207.0	0.0	65.4

Source: MAFF, Agricultural Output by Municipality (Estimate), Census of Agriculture and Forestry

Topics

Providing "Made in Japan" products which are trusted around the world - The 2020 Tokyo Olympic and Paralympic Games will be a big step -

The 2020 Tokyo Olympic and Paralympic Games will be a golden opportunity to transmit the appeal of Japanese food and food culture to foreign visitors. The GAP efforts in agricultural production has been accelerated toward the provision of high quality and safe Japanese food materials in the games. Setting the slogan "the establishment of the trust of the world in 'Made in Japan' products" for the 2020 Tokyo Olympic Games to further expand exports.

Procurement standards for agricultural and livestock products

- Since the London Olympic and Paralympic Games in 2012, the idea of "sustainability" is adopted in the management of the games. In the 2020 Tokyo Olympic and Paralympic Games, procurement standards which take sustainability into account will be formulated, which will be applied to agriculture, livestock and fishery products for food and beverage service provided by the organizing committee in the Olympic and Paralympic village.
- The GAP certification is approved as a means to show that agriculture and livestock products meet the requirements. Furthermore, organic farming and livestock products as well as products made through the independent efforts to increase engagement of persons with disabilities in the production are promoted. Domestic products are chosen as a priority out of products which meet the requirements.

Efforts for the supply of agricultural and livestock products

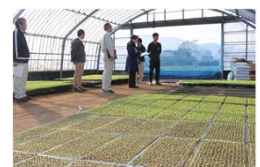
- A brochure for farmers explaining in detail the advantages of acquiring a GAP certification and various characteristics of GAP has been developed to promote the acquisition of the certificate.
- The acquisition of an international-standard GAP (JGAP Advance, GLOBAL G.A.P.) by farmers for agricultural products is supported.
- For livestock products, GAP for livestock production (Japanese version) started operation in 2017. Support is provided for the acquisition of an international-standard GAP (Japanese version of GAP for livestock production, GLOBAL G.A.P.) and the development of the GAP acquisition challenge system in which farmers make efforts toward the acquisition of the certification.

Divisions of agricultural cooperatives have acquired the GLOBAL G.A.P. certificate with a view of expanding sales routes (Fukuoka).

Looking ahead to the 2020 Tokyo Olympic and Paralympic Games, the members of the JA Kurume Salad Group in Kurume City, Fukuoka have acquired the GLOBAL G.A.P. group certificate in February 2017.

All the members have conducted study sessions together, which was a big incentive to the acquisition.

Ikedo, Chairman of the group said, "We have reviewed many points in hygiene which we thought we were satisfying. It revealed our awareness, pride and attitude that show everyone involved is working with international standards."

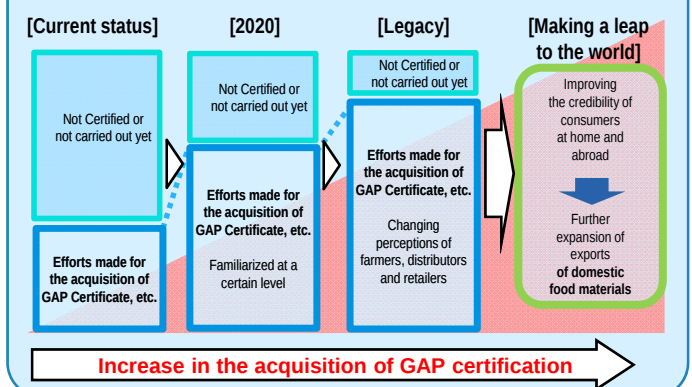


Inspection of GLOBAL G.A.P.

Establishing the trust of the world and further expand exports.

- It is necessary to generalize the acquisition of international-standard GAP in order to make Japan's agricultural and livestock products recognized around the world. By seeing 2020 Tokyo Olympic and Paralympic Games as a step, it is important to change perceptions of farmers, distributors and retailers and raise awareness of consumers.
- Japan should promote GAP, organic farming and independent efforts toward the engagement of persons with disabilities in production in terms of sustainability. Passing the ideas of "the establishment of the trust of the world in 'Made in Japan' products" and "realization of sustainable agriculture through the use of international-standard GAP certification" down the generations as legacies of the 2020 Tokyo Olympic Games to further expand exports.

Increase in the acquisition of GAP certification and expansion of exports.

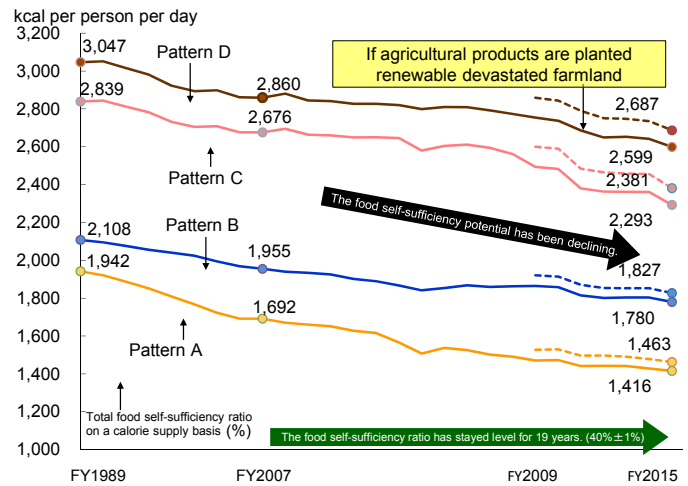


1. Objectives and present situation of Basic Plan for Food, Agriculture and Rural Areas

Food self-sufficiency potential and food self-sufficiency ratio

- The food self-sufficiency potential index, which shows the potential food production capability, has been declining due to the shrinkage of agricultural areas and stagnated average yields.
- On the other hand, the food self-sufficiency ratio has been around 40% in recent years on a supply heat quantity basis, and 39% in FY 2015 (same as the previous year). On a production value basis, the ratio has been between 60 - 69% in recent years, and 66% in FY 2015 (2 points up from the previous year).
- The government will continue to improve food self-sufficiency potential and the food self-sufficiency ratio through efforts such as the increase in the demands of domestic agricultural products at home and abroad including exports, farmland consolidation and intensification, and efforts toward the training and recruitment of farmers.

Food self-sufficiency potential index and food self-sufficiency ratio



Note 1: Values of the food self-sufficiency potential index are the maximum value of the food supply heat quantities calculated based on the agricultural land and average yields at that time.

Note 2: Calculation is carried out on the assumption that: Pattern A mainly cultivates rice, wheat and soy beans taking nutritional balance into account, Pattern B mainly cultivates rice, wheat and soy beans, Pattern C mainly cultivates potatoes taking nutritional balance into account, and Pattern D mainly cultivates potatoes.

Agricultural income and related income in rural areas

- In 2015, agricultural output in Japan increased to 8.8 trillion yen, a 5.2% increase from the previous year and the agricultural income produced increased to 3.3 trillion yen, a 16.1% increase from the previous year as a result of the rise in the prices of rice, vegetables and livestock.
- Agricultural income per management entity, calculated by deducting agricultural expenditure from agricultural gross income, increased from the previous year in major farming types.
- The market size of AFFrinnovation in FY 2014 increased to 5.1 trillion yen, a 400 billion yen increase from the previous year. Related income in rural areas calculated from the market size increased to 1.3 trillion yen, a 100 billion increase from the previous year.

Agricultural income by major farming type

(Unit: ha, 10,000 m², numbers, 10,000 yen)

		2014	2015
Paddy farming	Total area of paddy farming	1.67	1.72
	Agriculture incomes	27.2	52.6
	More than 10.0ha		
	Total area of paddy farming	19.12	20.88
Vegetable grown in facilities	Agriculture incomes	681.3	947.6
	More than 20.0ha		
	Total area of paddy farming	31.20	36.73
	Agriculture incomes	1,087.1	1,522.3
Fruit farming	Total area of vegetable grown in facilities	0.43	0.43
	Agriculture incomes	423.8	496.6
	More than 10,000m ²		
	Total area of vegetable grown in facilities	2.14	2.16
Dairy cattle	Agriculture incomes	1,064.3	1,303.1
	Total area of fruit planting	0.98	0.99
	Agriculture incomes	187.6	207.9
	More than 3.0ha		
Fatting cattle	Total area of fruit planting	4.20	4.13
	Agriculture incomes	694.3	700.9
	Number of cattle farmed for milking	43.9	44.2
	Agriculture incomes	832.5	1,054.2
Dairy cattle	Number of cattle farmed for milking	159.8	165.6
	Agriculture incomes	2,235.2	2,924.3
	More than 100		
	Number of fatting cattle farmed	107.5	103.2
Fatting cattle	Agriculture incomes	671.2	1,243.2
	Number of fatting cattle farmed	375.4	423.2
	More than 200		
	Agriculture incomes	1,572.4	5,432.6

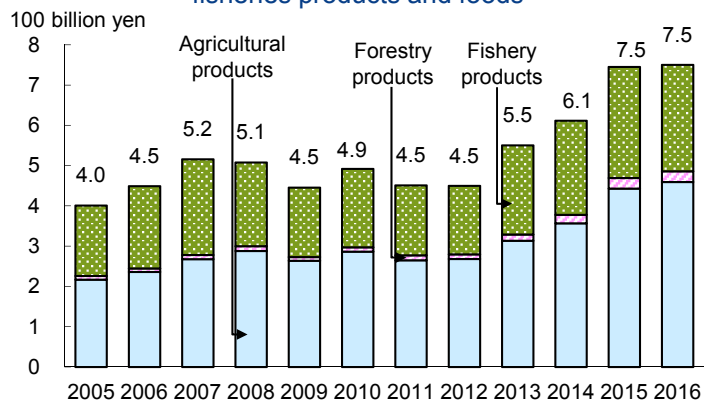
Source: MAFF, Management Statistics by Farming Type (Individual Management)

2. Strategic exploration of global market

Promoting the export of agricultural, forestry and fisheries products and foods

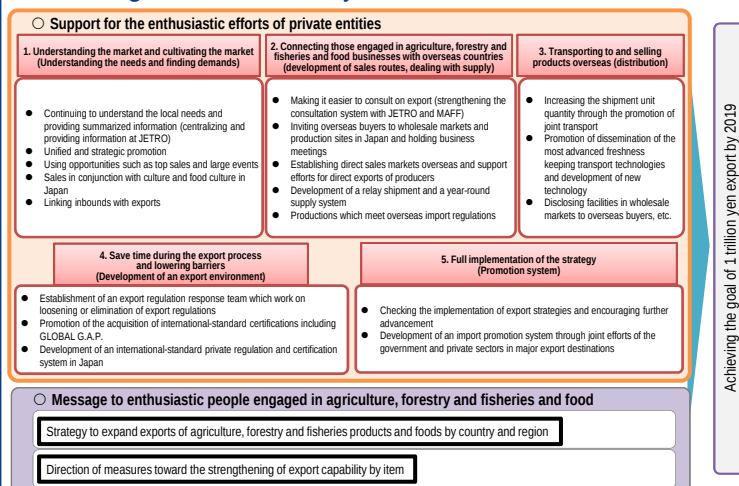
- Japan's agricultural, forestry and fisheries products and food exports totaled 750.2 billion yen (2016), a 0.7% increase from the previous year.
- The targeted year of achieving 1 trillion yen export is moved forward by 1 year to 2019 in the "economic measures to realize future investment" (decided on by the Cabinet in August 2016).
- In May 2016, the "Strategy to Strengthen Export Capabilities of the Agricultural, Forestry and Fisheries Industries" was formulated in order to support enthusiastic efforts of private entities toward the achievement of export of 1 trillion yen.
- In November 2016, the "infrastructure development program for the export of agriculture, forestry and fisheries products" was formulated in order to develop infrastructure in a consistent and planned manner both in tangible and intangible aspects, which are necessary to implement this strategy.
- Promoting measures listed in the "Agricultural Competitiveness Enhancement Program" such as the establishment of a new organization which is in charge of promotion and branding of "Made in Japan" products.
- The meeting on animal and plant quarantine for the export of agriculture and livestock products lifted a ban on the export of pears to Vietnam, apples to Canada, brown rice to Australia, and hen eggs (as personal effects) to Singapore in FY 2016. The limit in the age of beef cattle exported to Thailand was also eliminated (a total of 11 ban removals and relaxation was achieved in 8 countries).

Export of agricultural, forestry and fisheries products and foods



Source: Prepared based on MOF, Trade Statistics

About the Strategy to Strengthen Export Capabilities of the Agricultural, Forestry and Fisheries Industries

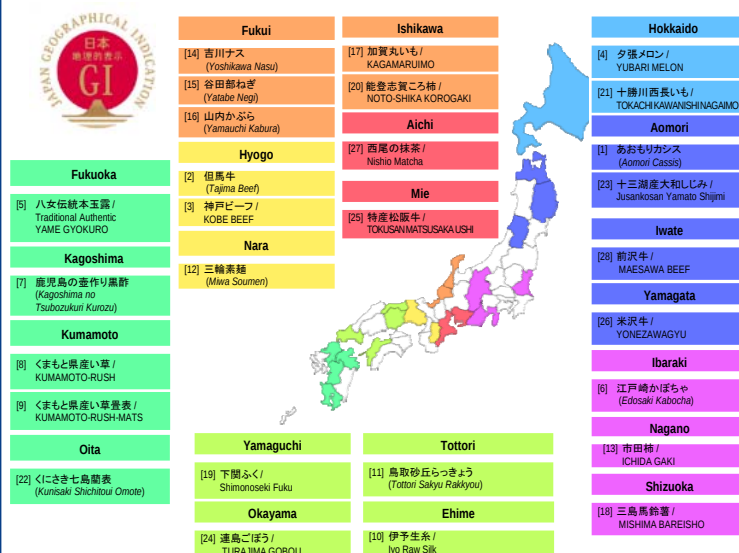


Source: Materials developed by the Headquarters on Creation of Regional Vitality in Agriculture, Forestry, and Fisheries

Overseas expansion, etc. of Japanese food culture

- The following institutions have been promoted from FY 2016: an institution to certify foreign chefs of Japanese food with a certain level of knowledge and cooking skills in Japanese cuisine, and an institution to certify overseas restaurants which actively use ingredients from Japan as a "supporter restaurant."
- Setting new JAS standards which showcase Japan's strength and promoting their application. Submitting the bill for the Act on Standardization and Proper Quality Labeling of Agricultural and Forestry Products to the Diet.
- 28 products have been registered as geographical indication (GI) under Japan's GI protection system. These registered products carry characteristics that are linked to their geographical origin such as mountainous areas. The GI Act was amended (came into effect on December 26, 2016) in order to realize GI protection pursuant to international agreements.

Products registered as geographical indication (As of March 2017)



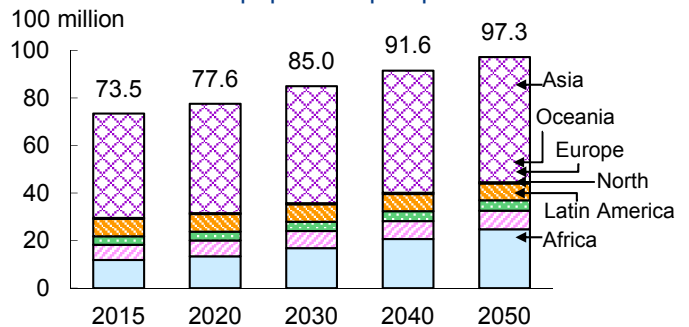
Note: Italic characters in column of "Name" is a reference information.

3. Global food supply and demand, and efforts for establishing food security

Global food supply/demand trends

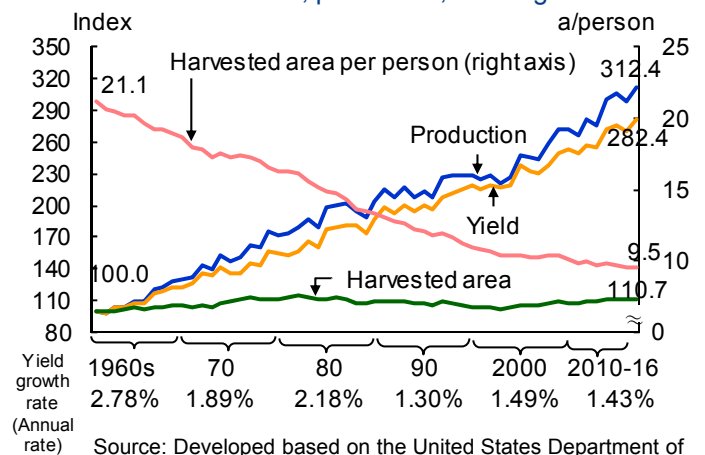
- The world population reached 7.4 billion (2015) and continues to increase mainly in developing countries, and is expected to be 9.7 billion in 2050.
- It is estimated that demands for grain and meat around the world will rise in the future due to the population increase.
- On the contrary, production of grain for food and feed has slowed down with stagnated yields which have helped production growth. There are some unstable factors which could affect the production such as climate changes including global warming and tight water supply and demand. In the medium to long term, tightening of supply and demand of grain around the world will be a concern.

World population prospects



Source: Developed based on the United Nations, World Population Prospects: The 2015 Revision

Harvested area, production, etc. of grain



Source: Developed based on the United States Department of Agriculture, PS&D; United Nations, World Population Prospects: The 2015 Revision

Efforts for establishing comprehensive food security

- In preparation for unforeseeable events, the government regularly analyzes and assesses the impacts of risks associated with the stable food supply and considers and implements measures.
- The top three exporters of corn, wheat, soy bean, beef and chicken account for more than 90% of the total imports for Japan. Japan thus depends heavily on a limited number of specific countries for farm imports.
- Discussions on food security were held in the G7 Niigata Agriculture Ministers' Meeting in April and the sixth Tokyo International Conference on African Development (TICAD VI) in August 2016.

G7 Niigata Agriculture Ministers' Meeting, one of the related Ministerial meetings of the G7 Ise-Shima Summit

Strengthening of global food security was discussed in the G7 Niigata Agriculture Ministers' Meeting held in April 2016, and the "G7 Niigata Agriculture Ministers' Meeting Declaration" was adopted.

The declaration includes "Increasing farmers' income and Revitalizing rural areas focusing on innovation and food value chains", "Improving sustainable agricultural production/productivity" and "Implementing four joint actions by G7 to hold international forums, such as international forum for empowering women and youth in agriculture and food system".



G7 Niigata Agriculture Ministers' Meeting

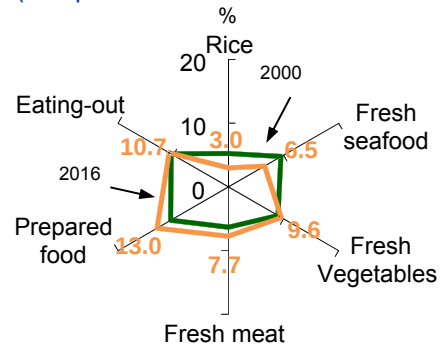
Trends of countries on the TPP Agreement

- The TPP Agreement was approved by the Diet on December 9, 2016. In January 2017, the Japanese Government notified New Zealand, the Depository of the Agreement, of the completion of Japan's domestic procedures for the TPP. In the same month, the U.S. sent a notification of withdrawal from the agreement. Japan will discuss what can be done in the future with related countries.

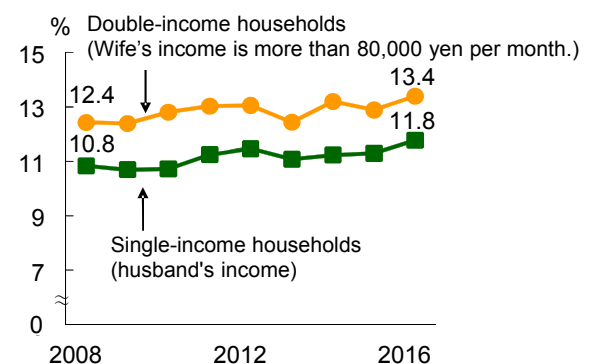
4. Food consumption trends and promotion of Shokuiku (food and nutrition education)

- Food consumption expenditure in households with two or more members, whose head is aged 65 or older, decreased in fresh seafood and rice and increased in prepared food and fresh meat in the last 16 years.
- Food consumption expenditure in double-income households is high in prepared food compared to single-income households (husband's income) due to the limited time spent on household chores.
- The government promotes Shokuiku (Food and nutrition education) through the introduction of the Japanese dietary pattern and the provision of Japanese food lunch in elementary and junior high schools. It also promotes the consumption expansion of domestic agriculture, forestry and fishery products.

Percentage by expense in households whose head is aged 65 or older (comparison between 2000 and 2016)



Percentage of expenditure on prepared food in double-income households



Source: Ministry of Internal Affairs and Communications (MIC), Family Income and Expenditure Survey (households with two or more members)

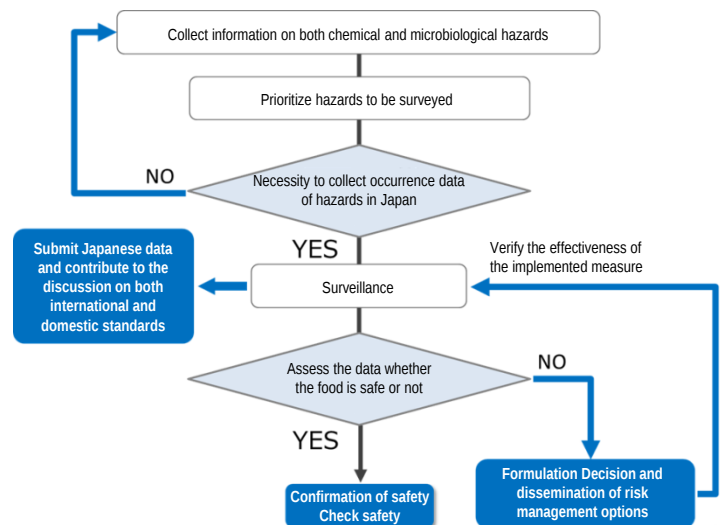
Note: Percentage in food consumption expenditure

5. Ensuring food safety and consumer confidence

Efforts for improving food safety

- It is important to take measures throughout the food chain from production to consumption in order to ensure food safety, based on both the idea of "prevention is better than crisis management" and scientific evidences.
- In 2016, the priority lists of both chemical and microbiological hazards in food and feed were reviewed and new Mid-term plans were developed.
- The government promoted awareness raising in decreasing the intake of chemical hazards that might affect health and actions that can be taken at home to prevent food poisoning.
- For the introduction of HACCP in food production procedures, training for HACCP team leaders and training on how to respond to HACCP required by importers are provided and support the development of facilities using policy loans.

Flow of risk management on food safety



Animal epidemic prevention and phytosanitary measures

- The following three measures are taken to prevent outbreak and spread of infectious diseases of livestock in Japan.
 - [1] International cooperation to decrease outbreak level of epidemics in overseas countries.
 - [2] Quarantine at airports and seaports to prevent overseas infectious diseases of livestock from entering Japan.
 - [3] Development of a system to prevent infectious diseases outbreak of livestock and to provide prompt responses at a time of outbreak.
- In FY 2016, 12 Highly Pathogenic Avian Influenza cases occurred in Japan followed by a case in Aomori in November. Livestock was killed and facilities were disinfected immediately, and movement restriction areas opened within a month in all cases.
- An emergency control for *Globodera pallida* found in Hokkaido in 2015 started in October 2016. Oriental fruit flies found in Kagoshima in 2015 were eliminated in July 2016 after an emergency control.

Outbreak of Highly Pathogenic Avian Influenza and response state

Outbreak outline		
Case	Date of outbreak – date of opening movement restriction areas	Number of poultry/type
[1] Aomori City, Aomori	11/28-12/27	About 18,000 / duck
[2] Sekikawa Village, Niigata	11/29-12/27	About 310,000 / layer chicken
[3] Joetsu City, Niigata	11/30-12/28	About 240,000 / layer chicken
[4] Aomori City, Aomori	12/2*-12/27	About 4,700 / duck
[5] Shimizu Town, Hokkaido	12/16-1/15	About 280,000 / layer chicken
[6] Kawaminami Town, Miyazaki	12/19-1/12	About 120,000 / broiler chicken
[7] Nankan Town, Kumamoto	12/27-1/19	About 92,000 / layer chicken
[8] Yamagata City, Gifu	1/14-2/8	About 81,000 / layer chicken
[9] Kijo Town, Miyazaki	1/24-2/17	About 170,000 / broiler chicken
[10] Kohoku Town, Saga	2/4-2/28	About 71,000 / broiler parent stock
[11] Kurihara City, Miyagi	3/24-4/18	About 220,000 / layer chicken
[12] Asahi City, Chiba	3/24-4/18	About 62,000 / layer chicken

Notes:

- 1) The date of outbreak is the date when suspected animals were proved positive for Influenza A virus subtype H5 or they were proved positive for a simple testing*.
- 2) The number of domestic poultry is the number of infected poultry or poultry with a pseudo infection.
- 3) As of April 18, 2017

Expansion of country of origin labeling system for ingredient of processed food

Efforts to ensure consumers' confidence

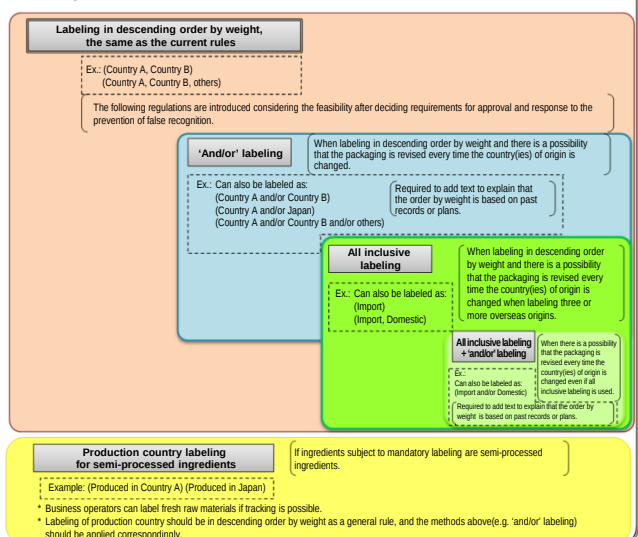
- While consumers take a growing interest in country of origin labeling for ingredient, the Consumer Affairs Agency and MAFF jointly held a "meeting on the country of origin labeling system for ingredient of processed food." In the meeting, discussions were held toward the expansion of country of origin labeling system for ingredient of processed food and the interim report was published in November 2016.
- The details of the report are as follows:
 - [1] The heaviest ingredient of all processed foods produced in Japan should be required to label the country(ies) of origin.
 - [2] Mandatory labeling should be made in descending order by weight as a general rule, and the new labeling system should include feasible labeling methods such as 'and/or' labeling(e.g. 'Country A and/or Country B') and all inclusive labeling(e.g. 'Import').

Based on the report, the Food Labeling Standards will be revised in the future.
- Promoting research and development for the acquisition of scientific evidence on functionality and the development of healthy cities using local functional agricultural products for the expansion of production and consumption of functional agricultural products.

Processed food subject to mandatory labeling: all processed food produced in Japan (Excluding restaurant/in-store processed food, etc., the same as the current rules)

Ingredient subject to mandatory labeling: the heaviest ingredient in the final product

Labeling method:



Others:

- Mandatory labeling must be on the package of food.
- When 'and/or' labeling or all inclusive labeling is applied, it is desirable to disclose supplementary information on a voluntary basis using the Internet.
- A certain period of transitional measures should be set before labeling is required.
- The government should promote consumers' awareness of the contents of the new labeling system and meaning of terms.

Source: The interim report of the meeting on the country of origin labeling system for ingredient of processed food

[Example of labeling based on the current labeling rules]

Name:
Pork Sausage
 Ingredients:
pork, pork fat, protein hydrolysate, reduced starch syrup, salt, spices

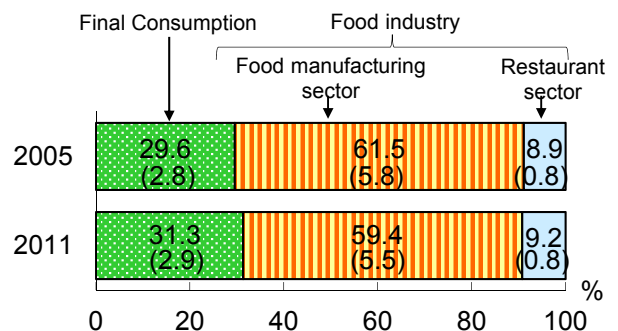
[Example of labeling based on the new labeling rules]

Name:
Pork Sausage
 Ingredients:
pork (U.S.), pork fat, protein hydrolysate, reduced starch syrup, salt, spices

6. Trends of food industry

- Small and tiny companies make up the majority of the food industry, which account for 70% of the destinations of domestic agriculture, forestry and fishery products.
9.5% of the total domestic production and 12% of the total number of employees are from the food industry. As one of the major industries in rural areas, it is an essential industry for the regional empowerment for Japan's growth and the revitalization of regional economy.
- The market size of e-commerce transactions for consumers is expanding. E-commerce transactions in food and beverages are expected to grow further in the future as the number of aged households is increasing.
- More than half of the food in Japan depends on imports from overseas and 6.21 million t (2014) of food loss and waste are generated from food-related businesses and households.
A national campaign to reduce food loss and waste was launched in order to reduce food loss and waste, and the government promotes the review of delivery deadlines of processed food to retailers, food bank activities and not having leftovers at restaurants.

Breakdown of domestically produced agricultural, forestry and fisheries products by use



Market size of e-commerce transactions for consumers in the sales area

(Unit: 100 million, %)

Category	2014	2015	Growth rate
Total in sales area	68,043	72,398	6.4
Food, beverage, alcohol drinks	11,915	13,162	10.5

Source: METI, Market Survey on E-Commerce Transactions

7. Exploring new demand for agriculture, forestry and fisheries products and food

- The number of business plans approved under the AFF rinnovation act based on the Act on Promotion of the "Sixth Industry" to Create New Value Added Using Agricultural Products In Rural Areas was 2,227 (as of the end of FY 2016).
Promotion councils with participation of a wide range of related people were established on a municipality level, and the formulation of a strategy concerning AFFrinnovation is promoted.
- The number of subscriptions decided for the Agriculture, Forestry and Fisheries Fund Corporation for Innovation Value-Chain and Expansion Japan was 109 (as of February 14, 2017).
- The percentage of farmer's markets that play a significant role in local consumption of local produce with annual sales of over 100 million yen was 20.3% (FY 2014).
Excellent examples of efforts made by farmer's markets are compiled and promoted for dissemination.
- The check-off system, in which producers carry out voluntary sales promotion activities, etc. using their own contributions, will be given legal force by the government if it can obtain a certain level of agreement in the industry of each item.

Sales of vegetable gelato from hilly and mountainous areas (Wakayama)

Kimino Town, Wakayama is in a hilly and mountainous area. Tetsuji Ushiro returned to his hometown and became engaged in farming in 2008. He opened the gelato shop "kiminoka" in 2013.

He produces agricultural products and develops products taking consumers' needs into account.

He makes gelato using the goodness of home-grown vegetables and local fruits.

The gelato is gaining popularity, which is sold at his own shop and on-line.



Tetsuji Ushiro

Topics

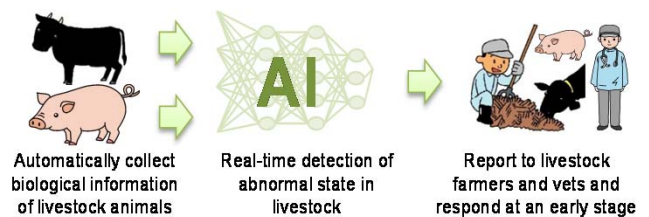
Improving productivity by applying groundbreaking AI, IoT and robot technologies

The lack of farmers in hilly and mountainous areas is becoming a serious problem. It is important to try to improve productivity by developing innovative AI, IoT and robot technologies with a clear goal of sales prices, etc. with participation of people engaged in agriculture.

Present status of AI technology and future measures

- Artificial Intelligence (AI) technology in the agriculture field has been under development.
- “The research project for the future agricultural production utilizing artificial intelligence” has been carried out since FY 2016, which promotes research, etc. of AI technology using innovative ideas of the private sector. Specifically, technology for early detection of livestock diseases has been developed.

Development of a technology to detect livestock diseases early using AI technology.

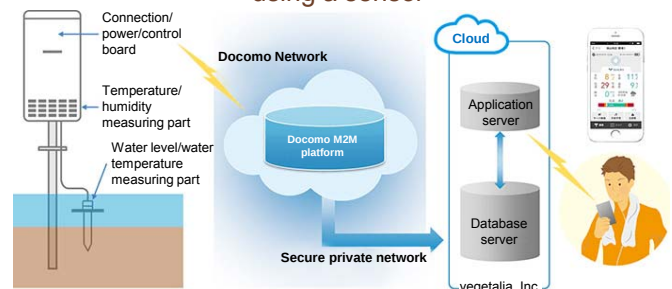


- ✓ AI indicates appropriate responses at an early stage.
- ✓ Decrease in the number of fatal accidents of livestock animals and prevent the spread of diseases.

Present status of IoT technology and future measures

- Internet of Things (IoT) technology in the agriculture field has been applied commercially in the system that enables farmers to track data of the water levels and water temperatures of paddy fields collected by a sensor on their tablet device. In a test demonstration conducted by a developer, the length of time necessary for water management decreased by 40% on average.
- In order to analyze the large amount of accumulated data, a guideline was developed to standardize agricultural work terms so that data collected in different systems can be shared. In the future, the government will consider the development of a coordination base for agricultural data and promote the provision of data owned by public institutions such as agricultural land block information (estate boundary polygon), etc.

System for the tracking of agricultural field status using a sensor



Source: NTT Docomo, Inc.

Present status of robot technology and future measures

- Although Robot technology in the agriculture field has been under development, it will soon be applied commercially in tractors as follows:
 - [1] Automatic traveling system for tractors using GPS, etc.
 - [2] Agricultural assist suit that reduces the physical burden of farmers in carrying work.
- The number of workers engaged in agriculture is decreasing. With the help of robots, elderly people and female farmers can have more opportunities to participate in agricultural work.

Reduction of weight burden using an assist suit for agriculture



1. Promoting structural reform of agriculture

Total agricultural output trends

Explained in page 8 (Special Topic 2)

Efforts of the Public Corporations for Farmland Consolidation to Core Farmers through Renting and Subleasing

- The total farmland area in 2016 decreased 25,000 hectares from the previous year to 4.471 million hectares.
- The usage accumulation rate of agricultural land to business farmers is listed on page 7 (Special Topic 2). The total area rented by Farmland Intermediary Management Institutions in 2015 increased 47,000 hectares from the previous year to 76,000 hectares, and the total subleased area increased 53,000 hectares from the previous year to 77,000 hectares.

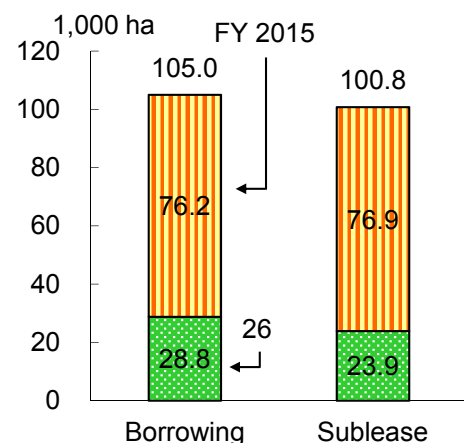
Development of/securing business farmers

Explained in page 5 and 6 (Special Topic 2)

Strengthening of human resources capability

- The percentage of agricultural high school graduates who became engaged in farming was 2.6% and the percentage of those who entered a prefectural college of agriculture was 4.2% (FY 2015). In order to promote agricultural high school graduates' engagement in farming, the government promotes cooperation of agricultural high schools with prefectural colleges of agriculture and farmers who are successful in the region.
- Farming grants for young farmers (changed to "investment in next generation human resources in agriculture" in FY 2017) support a stable income of pre-farmers during their training period and of farmers during the period of unstable management immediately after their engagement in farming. 2,477 pre-farmers and 11,630 new farming businesses have used the grant (FY 2015).
- It is essential to nurture farmers with an excellent business sense as well as farming skills as the future leaders of regional agriculture. The government supports the holding of management seminars and "Online Agri Business School" for students of prefectural colleges of agriculture and new farmers. Also, the promotes the launching of "agricultural management seminar" where local farmers can learn management skills while engaging farming.

Achievements of Farmland Intermediary Management Institutions



Source: MAFF

GLOBALG.A.P. from a high school with a view to the world (Aomori)

The prefectural Goshogawara Agriculture and Forestry High School in Goshogawara City, Aomori, acquired the first GLOBALG.A.P. certificate among all high schools in Japan in December 2015 for their cultivation of apples. The school also acquired a certificate for rice in December the following year.

In January 2017, students of the high school went through procedures for the export of apples themselves and practiced face-to-face sales in a department in Chengdu City, Sichuan Province, China.

The high school has received a "G.A.P. Awards 2016."

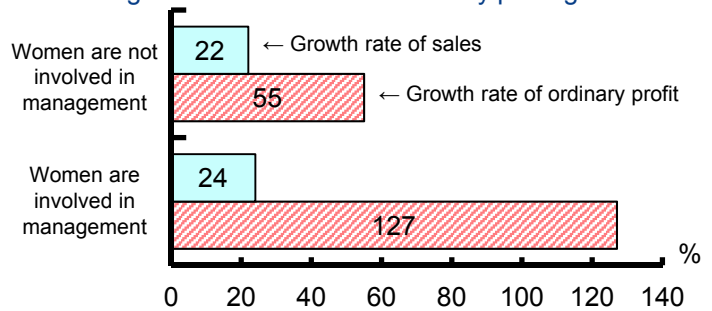


Practice in face-to-face sales of apples

Participation of female farmers

- The earning capacity of management entities where women are involved is higher than that of management entities where women are not involved.
- The percentage of women that are core persons mainly engaged in farming is high in vegetable and fruit farming, and the percentage of farm households where women are involved in management is high in vegetables grown in facilities and dairy businesses.
- The percentage of female members of the Agriculture Committee and officers of agricultural cooperative is increasing. The government promotes community understanding and fosters a mindset for further increase.
- The “Nougyou-Joshi Project” (Project for female farmers to be more active in agricultural business by cooperation with various companies to tap female farmers' knowledge and experience) formulated “Team Hagukumi” and launched activities to foster future female farmers from students. Japanese female farmers actively exchanged opinions with U.S. and French female farmers at the G7 International Forum.

The relationship between women's involvement in management and sales and ordinary profit growth rate



Source: Japan Finance Corporation, Trend Survey on Employment Status (surveyed in July 2016)

Note: Growth rate in agriculture management in the past three years

Percentage of women that are core persons mainly engaged in farming (Unit: %)

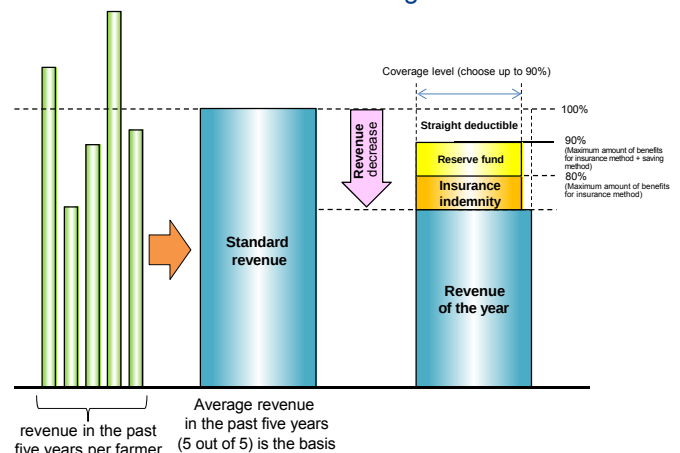
	Core women mainly engaged in their own farming	Farm households where women are involved in management
Rice cultivation	39.3	40.9
Outdoor grown vegetables	45.5	54.7
Vegetables grown in facilities	46.1	62.7
Fruits	46.0	55.6
Dairy	41.9	63.1
Beef cattle	41.0	51.2
Pig farming	40.8	56.8
Poultry farming	42.6	59.0

Source: MAFF, “2015 Census of Agriculture and Forestry”

Introduction of the revenue insurance system

- The Agricultural Competitiveness Enhancement Program summarized a document on the introduction of a revenue insurance system as a safety net for agricultural businesses which work on their management development based on a business decision.
- The revenue insurance system covers farmers who file blue returns and conduct appropriate management.
 - [1] All items are covered,
 - [2] provides coverage for revenue decrease due to natural disasters as well as price decline, etc.
 The insurance covers items and risks that were not covered by the agricultural mutual relief system.
- The bill for the amendment of the Compensation Against Agricultural Loss Law which is intended to introduce this system was approved in the Diet.

The basic ideas of the revenue insurance system included in the Agricultural Competitiveness Enhancement Program



Note: When people who have filed blue returns for 5 years or longer choose 90% of maximum coverage (insurance method + saving method).

2. Developing and conserving agricultural production infrastructure

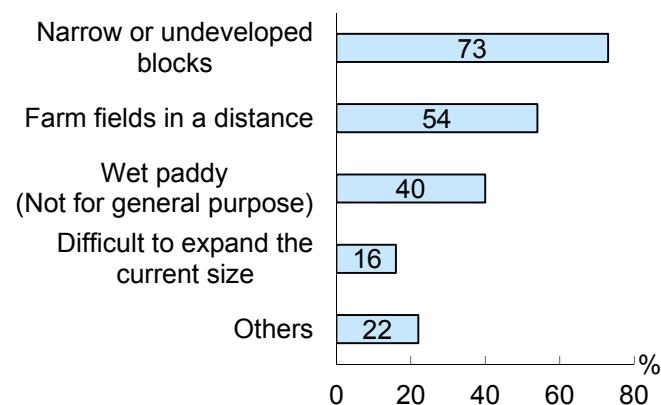
Current status and direction of agricultural production infrastructure

- The government approved the Long-Term Plan of Land Improvement (FY 2016 - 2020) incorporating three policy issues and measures in the cabinet meeting in order to respond to the situation at home and abroad and issues surrounding agriculture and rural areas. At the same time, after the implementation of the land improvement project, MAFF compiled case examples of the promotion process in rural areas, which introduced advanced examples that realized characteristic development.

Review of the land improvement system

- Farmers are highly unlikely to rent agricultural land with insufficient infrastructure development. For this reason, when a consolidation of land use to farmers is conducted, the government aims to establish a system in which a farmland consolidation project can be carried out without requesting farmers to pay expenses. To realize this, the government submitted a bill for the revision of the Land Improvement Act to the Diet.

Reasons that business farmers refused the request for cultivation (multiple answers)



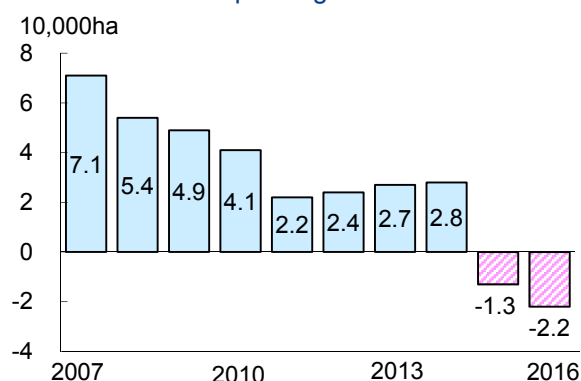
Source: MAFF (survey conducted in November 2010)

3. Production trends for major farm and livestock products

Rice

- In FY 2016, a shift of cultivation to feed rice, wheat and soybean advanced and there has been no excess planting of table rice for two consecutive years. For the production starting in 2018, related people are working together to promote the production based on demands without relying on the target volume of rice production allocated by the government.
- Reduction in feed rice production and greater value added to livestock products using feed rice are promoted by using manuals and holding "Feed Rice Yield" competitions.
- The government formulates guidelines for the labeling of rice flour such as standards by use and non-gluten indication and promotes the development and dissemination of appealing products using the property of rice flour.

Excess planting for table rice



Source: MAFF

Wheat

- The total planted area of wheat produced in 2016 increased 1,000 hectares from the previous year to 214,000 hectares, which was the largest in the last 10 years. The production decreased 213,000 tons from the previous year to 791,000 tons due to bad weather.
- Wheat cultivar for medium ground flour has been produced which is suitable for udon noodles. In recent years, however, a variety of cultivars for uses in bread, Chinese noodles and pasta have been developed and promoted.
- Following the efforts of Local Production for Local Consumption, domestically produced wheat has been used for bread and noodles for school lunch programs.

Main uses of domestically produced wheat and shipment quantity by cultivar

(Unit: 10,000 t)

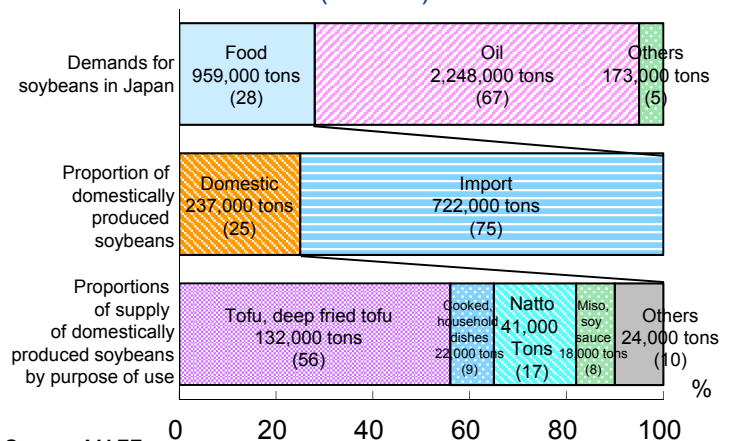
Purpose	Variety	2001 production	2006	2011	2016 (Quick estimation)
Varieties for bread	Haruyo Koi	0.1	3.0	2.3	5.1
	Yumehikara	-	-	0.0	6.2
Variety for chinese noodles	Chikushi W No.2 (Wheat for ramen noodles)	-	-	0.2	0.5
Variety for pasta	Setodur	-	-	-	0.0
Varieties for Japanese noodles	Kitahonami	-	-	56.6	48.4
	Satonosora	-	-	0.6	4.7
	Shirogane Komugi	5.4	7.4	5.4	4.0
	Chikugo Izumi	4.3	5.7	3.6	3.1
	Norin No. 61	13.1	10.6	6.2	1.7
	Hokushin	45.1	49.6	0.2	0.0

Source: MAFF, Results of Agricultural Product Inspection

Soybeans

- The total planted area of soybeans produced in 2016 increased 8,000 hectares from the previous year to 150,000 hectares, which was the largest in the last 10 years. The production decreased 5,000 tons from the previous year to 238,000 tons due to bad weather.
- Soybeans are used for food such as tofu and natto, and oil. Domestically produced soybeans have received recognition for their quality and taste, and almost all production is used for food.
- As users expect a stable supply, in addition to the existing post-harvesting bidding transactions, a pre-sowing bidding system has been introduced on a trial basis from the 2017 production, which will be fully introduced from the 2020 production.

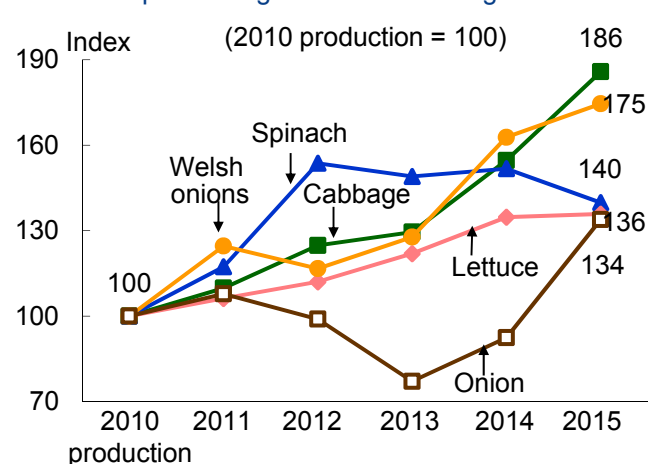
Demands for soybeans and use of domestically produced soybeans (FY2015)



Vegetables

- The total planted area of vegetables produced in 2015 decreased 2,000 hectares from the previous year to 397,000 hectares. The production decreased 50,000 tons from the previous year to 11,909,000 tons.
- In recent years, production for processing and manufacturing uses has been increasing. The government promotes new cultivar development and the introduction of a coherent mechanized system in order to increase the ratio of domestic production in vegetables for processing and manufacturing uses.
- Looking at vegetables for processing and manufacturing uses by product, shipment of stem vegetables such as lettuce, cabbage and welsh onions increased and a large quantity of lettuce is produced in Gunma and Nagano, cabbage in Gunma and Aichi and welsh onions in Osaka and Tokushima.

Shipment of vegetables for processing and manufacturing uses



Sources: MAFF, Statistics on Production and Shipment of Vegetables

Fruits

- The total planted area of fruits produced in 2015 decreased 4,000 hectares from the previous year to 230,000 hectares. The production decreased 160,000 tons from the previous year to 2,945,000 tons due to citrus fruits being affected by bad weather.
- The production of fruits is decreasing. The cultivation of varieties such as "Shine Muscat," a grape cultivar which can be eaten with its peel, and "Setoka," a citrus fruit which can be peeled easily, is increasing because they are easy to eat, taste good, and satisfy consumers' needs.
- Previously, products below standard have mainly been used for processing and manufacturing uses. The cultivation of varieties such as "Chiyuki" apples, whose cross section is less subject to discoloring and suitable for cut fruits, and "Tsuyuakane," from which ruby-colored plum wine is made, is increasing to allow the development of new demands.

Shipment of fruits for processing and manufacturing uses

Apple Chiyuki
(cultivar name: Aori 27)
(Discoloration of fruit)



Grated
apple

Cross
section

Left: Chiyuki Right: Fuji

Source: Aomori Prefectural Industrial
Technology Research Center

Plum Tsuyuakane



Source: National Agriculture and
Food Research Organization

Livestock products

- The number of livestock farms has decreased in Japan due mainly to livestock farmers' growing retirement as they age and shortages in their successors. However the number of animals per farm has increased.
- The raw milk production increased 1.0% from the previous year to 7.41 million tons (FY 2015) due to the increase in milk yield per delivered cow, although the number of delivered cow farmed is decreasing. The beef production decreased 5.4% from the previous year to 475,000 tons (FY 2015) due to the decrease in the number of beef cattle farmed. Transaction prices of beef calves have been high.
- Productions of pork and eggs have generally remained unchanged in recent years. However chicken production reached a record high because of the rise in health awareness (1,517,000 tons (FY 2015)).

The number of livestock farms and animals per farm

(Unit: household, animal, poultry)

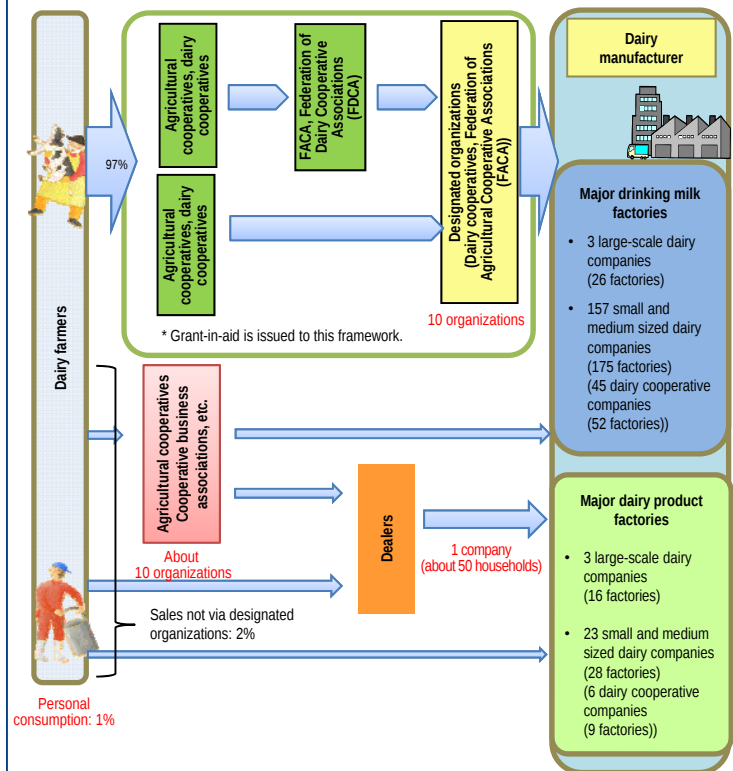
		Number of livestock farms		Number of animals per farm	
		2006	2016	2006	2016
Dairy cattle	Hokkaido	8,590	6,490	99.7	121.1
	Excluding Hokkaido	18,000	10,500	43.3	53.3
Beef cattle		85,600	51,900	32.2	47.8
	Cows for breeding	73,400	44,300	8.5	13.3
	Fattening cattle	13,100	8,330	54.7	86.4
	Dairy cattle for beef	7,830	5,040	134.4	166.1
Pigs		7,800	4,830	1,233.3	1,928.2
Layers(× 1000)		3,600	2,440	38.0	55.2
Broilers(× 1000)		2,590	2,360	40.0	56.9

Source: Prepared by MAFF, "Statistics on Livestock"

Livestock products (continued)

- In order to increase the number of breeding cattle, the government promotes the use of cattle stations and the embryo transfer (ET) of Japanese beef cattle to breeding cattle. In order to secure the number of descendant dairy cattle, the government promotes the technology to use sexed semen and the introduction of automatic calf feeders.
- Bill for the amendment of the Act on the Stability of Livestock Farming and the Act on the Agriculture & Livestock Industries Corporation, Independent Administrative Agency was submitted to the Diet in order to review the present method in which the government issues a grant-in-aid for producers who commit to sell to designated organizations.
- The government supports the introduction of machinery and devices such as milking robots, which could significantly contribute to the improvement of labor conditions in order to implement a "labor condition reform" of dairy farmers.
- In order to establish livestock farming that does not depend too much on imported feeds, the government promotes the development of a wide-area distribution system of domestic feeds, the expansion of public rearing ranch uses, and Japanese-style grazing. It is also necessary to try to ensure steady management of the compound feed price stabilization system.

Sales routes of raw milk



Note: Number of dairy manufacturers as of December 31, 2015

4. Promoting technological innovation on production/distribution field

- The council of industry-academia-government collaboration - "Field for Knowledge Integration and Innovation," which was established in April 2016, established a research and development platform for production and distribution technologies with involvement of those who are engaged in agriculture, forestry and fisheries in discussions.
- Through cooperation between the farming industry and the business world, demonstrations of the sensing technology that allows the tracking of field crop growth with a camera started being put into practical use.
- In response to the requests from site workers for information on the latest technologies and research results, MAFF developed and published the list of researchers and their specialized fields collected from research institutes in Japan.
- The National Agriculture and Food Research Organization (NARO) developed a system to immediately stop the blades of grass cutters in order to prevent accidents during farming work.

Long-term storage of "Shine Muscat" grapes

NARO developed a long-term storage technology for "Shine Muscat" grapes with research institutes in Yamagata and Aomori prefectures.

The cold storage method by keeping the rachis of harvested "Shine Muscat" in a plastic tube filled with tap water prevents discoloring of rachis and maintains the fruit quality and marketability of products even after 4 months.

This enables a constant supply of domestic grapes during the period from after October to early in the New Year when their stocks are low. Grapes can also be exported to East Asia when there is a high demand during the Chinese New Year.

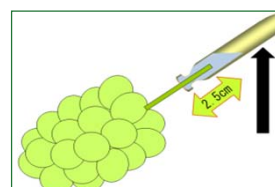


Image of hydration from a plastic tube to the bunch



"Shine Muscats" stored for 4 months (Left: not hydrated, Right: hydrated)

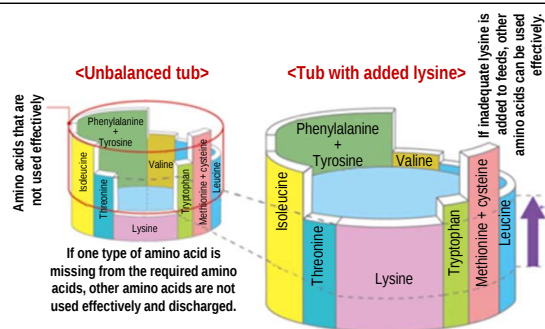
5. Promotion of environmental policy such as responses to climate change

- The Paris Agreement, which will be a legal framework replacing the Kyoto Protocol to the United Nations Framework Convention on Climate Change, came into effect in November 2016.
- Based on the Paris Agreement, MAFF formulated the global warming countermeasure plan in March 2017, which embodies the direction of promoting efforts in agriculture, forestry and fisheries industry.
- To expand production and the market of organic farm products, the "Network for Organic eco Agriculture and Food lifestyle NIPPON" was established in July 2016 with participation of people involved in industry, academia and the government. On the occasion of 10th year after the enforcement of the law on the promotion of organic farming, people involved in organic farming determined that the enactment of the bill, December 8, would be "Organic Farming Day."

Lysine, an amino acid that has the potential to reduce greenhouse gas emissions

When livestock animals are fed unbalanced amino acids, the excess amino acids are not used and get excreted as nitrogen compounds. This produces nitrous oxide with 300 times the greenhouse effect of carbon dioxide, which is one of the factors causing global warming. By adding lysine, an amino acid lacking in feed materials, the greenhouse gas emissions from livestock can be reduced and the production efficiency of livestock can be improved.

Amino acid balance in livestock feeds ("Tub Theory")



Source: Ajinomoto Co., Inc.

6. Agriculture-related organizations supporting agriculture

- The number of agricultural co-operatives was 686 (as of the end of FY 2015).
The revised Agricultural Cooperatives Act came into force in April 2016, which stipulates that agricultural co-operatives should give full consideration to increasing agricultural income.
The percentage of female board members of agricultural co-operatives increased 0.3 points from the previous year to 7.5% (2016).
- The number of Committee on Agriculture (COAG) was 1,706 (As of October 1, 2016).
Based on the revised Act for the Committee on Agriculture which was enforced from April 2016, 20% of the total number of agricultural committees in FY 2016 and 70% in FY 2017 will shift to a new system.
The percentage of female members of agricultural committees increased 0.7 points from the previous year to 8.1%. It was 11.2% in agricultural committees which shifted to a new system (2016).

Status of agricultural co-operatives (general agricultural cooperatives)

(Unit: number of cooperatives, 1,000 persons)

	2011	2012	2013	2014	2015
Number of cooperatives	723	717	712	692	686
Number of members	9,834	9,978	10,145	10,268	10,370
Full members	4,669	4,614	4,562	4,495	4,433
Associate members	5,165	5,364	5,584	5,773	5,937
Number of staff	216	212	209	207	205

Source: MAFF, Statistics on Agricultural Cooperatives

Note: 1) The number of cooperatives is the total in the statistics on agricultural cooperatives.

2) Figures are as of the end of fiscal year in each cooperative.

Status of Committee on Agriculture (COAG)

(Unit: number of committee, persons)

	2011	2012	2013	2014	2015	2016
Number of agricultural committees	1,713	1,710	1,710	1,708	1,707	1,706
Number of agricultural committee members	36,034	35,729	35,514	35,618	35,488	33,174
Number of coordinating members	—	—	—	—	—	3,257
Number of office workers	7,758	7,755	7,732	7,725	7,722	—

Source: MAFF (as of October 1 each year)

Topics

Bringing a brighter future for the agriculture in hilly and mountainous areas: a new challenge using local "treasure" products

Hilly and mountainous areas have values such as abundant natural surroundings and excellent landscape, which are not present in flat land. It is important to increase income by treating these resources in rural areas as "treasures" and launch projects including agriculture with creativity.

Current situation and issues in hilly and mountainous areas

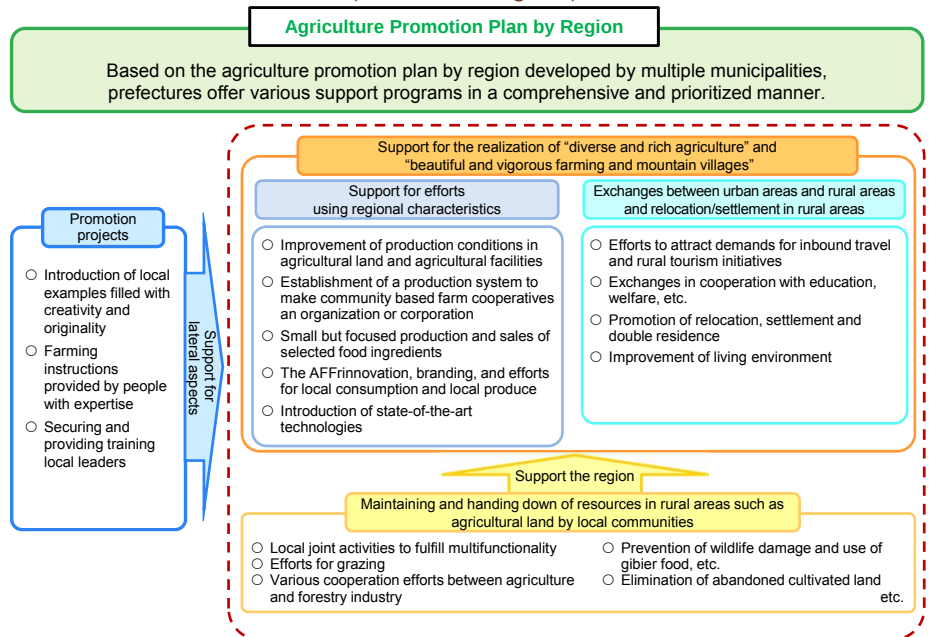
- Although the population in hilly and mountainous areas is a mere 10% of the total population, both cultivated land and agriculture output account for 40% of the total. These areas play an important role as places for food production and in maintaining and using multifunctionality in agriculture and rural areas.
- Hilly and mountainous areas have more slopes, are vulnerable to damage from wild animals, and have a faster aging rate compared to flat land. On the contrary, these areas possess resources such as clean water, a cool climate, etc. which are not present in flat land. There is a potential to operate farming with earning power using these resources.

Support for efforts using regional characteristics

- Treating resources in hilly and mountainous areas such as abundant natural surroundings and landscape as treasures and taking the following actions using creative and original ideas.
 - [1] Production and sales and the AFFrinnovation of agricultural products with high profitability
 - [2] Proactive provision of support for farmers who are enthusiastic and attract visitors through exchanges between urban areas and rural areas in cooperation with tourism, education and welfare sectors and farm stays.

The Japanese agricultural direct payment system is introduced to support local activities to achieve multifunctionality and continuous farming.
- The Agriculture Renaissance Project in hilly and mountainous areas will be implemented from FY 2017, which establishes a limit in priority numbers in various support programs and relaxes requirements for efforts positioned in the plan developed by each prefecture.

Agriculture Renaissance Project in hilly and mountainous areas (schematic diagram)



Expanding agricultural productivity by incorporating community-based farm cooperatives (Kochi)

Doi and Hirano communities in Shimanto town, Kochi are agricultural zones in an area at an altitude of 230 meters above sea level in the Shimanto River basin.

In 2013, community-based farm cooperatives in the Hirano community were incorporated as the "Agricultural Producers' Cooperative Corporation Hirano." It is entrusted machinery works for rice using the direct payment system to farmers in the hilly and mountainous areas, and cultivates garlic chives in facilities.

Rice cultivated in the area where the temperature difference is extreme between day and night is sold as the Niida Rice brand.

In FY 2015, Hirano community signed a partner agreement with the Doi community to expand measures.



Cultivation of garlic chives

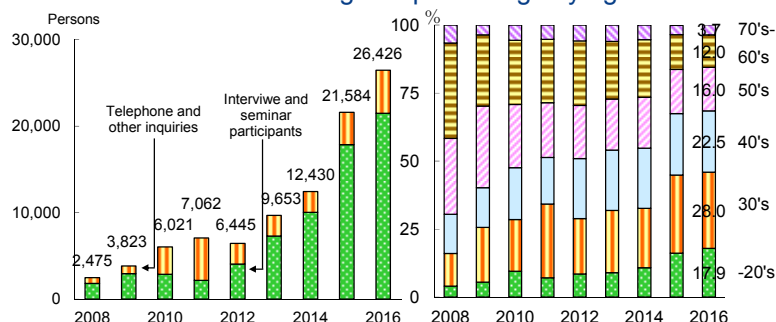
Horizontal spreading of excellent examples

- From the viewpoint of spreading creative and original approaches, it is important to spread excellent examples of agriculture in hilly and mountainous areas.

1. New trend of visit to rural areas toward regional empowerment

- The rural population in 2015 decreased 4.1% compared to 5 years ago (total population decrease 0.8% compared to 5 years ago). In recent years, the number of people in their 20s and 30s inquiring about moving to rural areas is increasing due to the popularization of the Coming Back to Rural Areas movement.
- Young people from urban areas visit rural areas, and the government promotes measures based on the Rural Invigoration Vision and supports regional practical activities.
- There is an example of a person who moved to a rural area, became a farmer and has produced facility horticulture crops, growing the operation 5 times over after 3 years of the farming business operation.
- The number of inbound visitors marked a record high of 24.04 million (2016). It is important to attract tourists including inbound visitors in order to increase agriculture income in rural areas. The government promotes the development of areas that launch rural tourism businesses (500 areas by 2020).

Number of people inquiring about moving and percentage by age



Source: Survey by Furusato Kaiki Shien Center

Using old houses for rural tourism businesses (Hyogo)

In Sasayama City, Hyogo Prefecture, an NPO corporation of community residents and a general incorporated association NOTE developed a system for the implementation of rural tourism projects.

The annual number of people using old house accommodations is slightly less than 700 (1 year from October 2015), showing that there are many visitors.

Ripple effects to the community such as U-turn migrants and the renovation of dilapidated farmland.

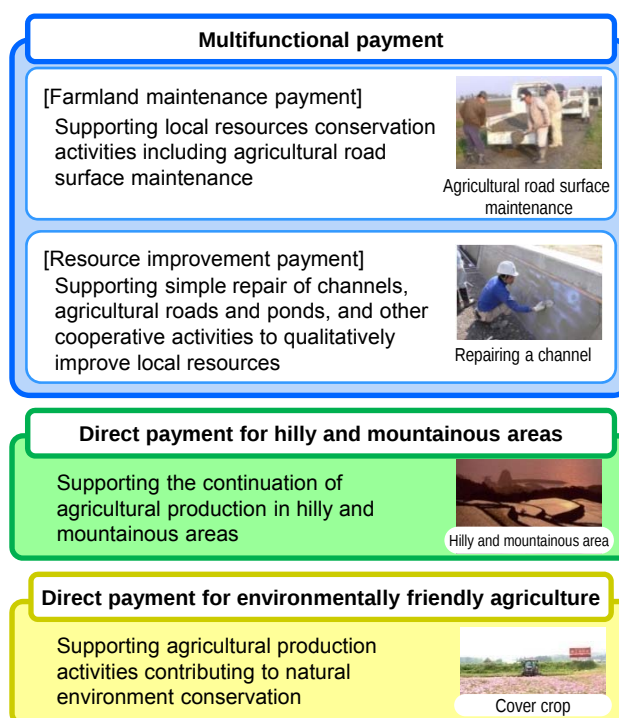


Maruyama community offering accommodations

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

- Agriculture and rural areas have multifunctional roles including not only food supply but also national land conservation, water recharge, biodiversity conservation, good landscape formation and cultural succession. All people have benefited from these roles.
- In order to maintain and demonstrate these multifunctional roles, the government steadily implements Japanese agricultural direct payments (multifunctional payment, direct payment to farmers in hilly and mountainous areas, direct payment for environmentally friendly agriculture) to support regional cooperation, agricultural production in hilly and mountainous areas and agricultural production for natural environmental conservation.

Outline of the Japanese agricultural direct payment system



3. Responding to wildlife damage

- Annual wildlife damage to farm products has remained high level at 17.6 billion yen in FY 2015. This damage is affecting not only agricultural production but also decrease in the motivation for farming.
- Although the aging of owners of a hunting license is advancing, the percentage of women is increasing. The number of people acquiring a new license has been more than 10,000 annually and the percentage of people acquiring a new gunning license is increasing.
- Teams for implementing measures to prevent damage due to wildlife based on the Act on Special Measures for the Prevention of Damage Caused by Wildlife are placed in 1,093 municipalities (as of the end of October 2016).
In December 2016, the revised Act on Special Measures for the Prevention of Damage Caused by Wildlife was promulgated and put into force in order to effectively promote measures to prevent damage due to wildlife.
- Demonstrations have begun in various areas using ICT and drones.
- The government is working on the development of gibier (wild meat) demands and securing a supply system based on the demands, as well as providing support for the establishment and operation of unified standards for gibier by private organizations.

Mobile wildlife slaughtering vehicles

The Japan Gibier Promotion Association and Nagano Toyota Motor Sales Co., Ltd. manufactured the first mobile wildlife slaughtering vehicle in 2016.

The slaughtering vehicle can travel close to the site where wildlife was hunted, and mounts various equipment to maintain the same quality of meat as that in a fixed general meat processing facility.

Through the introduction of the vehicle, the use of hunted animals as gibier food is expected, which were previously buried or incinerated.



Mobile wildlife slaughtering vehicles

4. Proactive utilization of local resources

Creation of new values taking advantage of local resources

- 29 municipalities have developed a basic plan based on the Act on the Promotion of Renewable Energy in Rural Areas (as of December 2016).

Improvement of the employment structure in rural villages

- It is necessary to secure employment opportunities of local residents in order to increase income in agriculture and related industries and to maintain and develop rural areas.
To achieve this, the scope of industries to be introduced to rural areas is expanded to service industry, etc. and the bill for the revision of the Act on Promotion of Introduction of Industry into Agricultural Regions has been submitted to the Diet.
- The government promotes support measures based on the Act on Promotion of Introduction of Industry into Agricultural Regions, the provision of financial support, and promotes the use of related measures such as cross-industry tax measures.

Examples of industries other than manufacturing with a potential of introduction in rural areas.

- Farmer's markets and retailers selling processed products
- Hotels and food/beverage services such as rural tourism and farm restaurant businesses
- Electricity industry such as woody biomass power generation using thinned wood
- Healthcare and welfare service
- Information and communications industry

Farmer's markets



Farm restaurant



Rural tourism

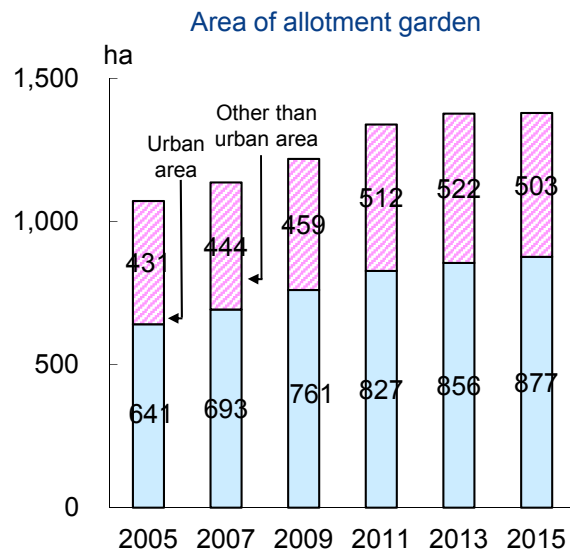


Woody biomass power generation



5. Promotion of urban agriculture

- In response to the rising demands of urban residents, the area of allotment gardens is increasing year after year mainly in urban areas.
- Based on the Basic Act on Promotion of Urban Agriculture, the Basic Plan for the Promotion of Urban Agriculture was formulated in May 2016, which embodies basic policies on the promotion of urban agriculture.
- Based on the plan, local governments will develop regional plans and consider promotion measures for urban agriculture.



Source: MAFF

6. Coordination between agriculture and various other areas

Cooperation with the education field

- It is important for children to experience farming and interact with people in rural areas so that they can deepen their understanding of future agriculture and rural areas.
- Through cooperative efforts, related ministries and agencies promote farm stay experiences for children in rural areas in the "exchange project for children experiencing farming and rural lives."

Welcoming children with more than 80 programs (Ishikawa)

In Noto Town, Ishikawa Prefecture, local residents including those moved there established the Shunran no Sato Executive Committee and started initiatives to showcase the farming experience and educational trips using farmhouse accommodations.

More than 80 experiencing programs are on offer including rice planting and country cooking. In FY 2016, the town welcomed about 1,800 children from 9 schools from urban areas including Tokyo.

It is generating ripple effects such as the elimination of dilapidated farmland and migration and settlement of young people.



Rice planting experience

Cooperation with the welfare field

- The government promotes cooperative efforts in agriculture and welfare which benefit both industries. Efforts that have been made include the operation of welfare gardens to secure employment of people with disabilities by employment facilities for people with disabilities and the employment of people with disabilities depend on each individual characteristic of disability by agricultural corporations, etc.
- There is a need to consider a system in which "agricultural and livestock products with active involvement of people with disabilities" can be purchased in an appropriate manner with the 2020 Tokyo Olympic and Paralympic Games in mind.

People with disabilities contribute greatly to the stable production of traditional vegetables (Nagano)

In Wago District, Anan Town, Nagano Prefecture, people with disabilities are engaged in the production of local traditional vegetables such as eggplants and gourds.

The number of days that people with disabilities engage in farming is around 60 per year, and the number of Suzugasawa eggplant stubbles planted by people with disabilities in 2016 was about 900 out of the total 1,300. They contribute greatly to the stable production of these vegetables.

Those with disabilities who are engaged in farming said they are pleased because they feel like they are living in the community.



Local residents and people who are engaged in farming.

Topics

Natural disasters that left ravages of destruction: efforts that contributed to early restoration

The Kumamoto Earthquakes occurred in April 2016 and a series of typhoons in the summer have brought tremendous damage to the agriculture, forestry and fisheries industry. However, early restoration was achieved through various efforts.

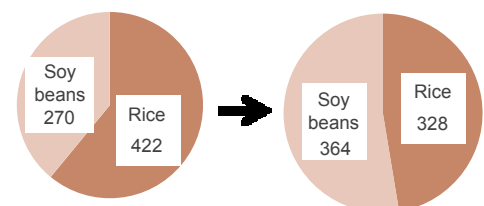


Kumamoto Earthquakes

Crop diversion from rice to soybeans prevents the generation of unplanted land.

- In Kashima Town, agricultural producer's co-operative corporation Kashima Wide-Area Farm produces rice and soybeans. As its agricultural land was damaged by the earthquake, the farm identified the damage status immediately, summarized farmers' willingness for cropping and repaired a channel. In paddy fields where no irrigation water can be used, crop diversion was conducted from rice to soybeans to prevent the generation of unplanted land.

Farming program and achieved area (ha) of Kashima Wide-Area Farm



The shipment of vegetables is continued by sorting manually with the help of related people.

- JA Kumamoto Economic Agricultural Cooperatives Garden Distribution Center in Uki City suffered damage to the building, sorting machine, etc. The center sorted melons and mini tomatoes manually and in the neighboring distribution facilities during the peak of their shipment in April and May. The sorting machines have been repaired and restarted operation in sequence. Shipment continued with the help of JA groups nationwide.



Damaged melon sorting machine

With the prompt response of people related to dairy farming, the amount of raw milk wasted was kept to a minimum.

- Immediately after the occurrence of earthquakes, dairy farmers in Nishihara Village were forced to dispose of raw milk due to the disruption of transport networks and the ceased operation of dairy plants in the prefecture. After that, transport destinations were found with cooperation of dairy manufacturers which own plants in the neighboring prefectures and outside the Kyushu region, and raw milk was distributed by collecting milk tank lollies from all over Japan with the help of the National Federation of Agricultural Cooperative Associations (ZEN-NOH), the National Federation of Dairy Cooperative Associations and designated raw milk producer groups in Japan.



Cracked open cattle farm

Toward the further development of agriculture through dividing land (including damaged agricultural land) in larger blocks

- Kumamoto Prefecture developed a restoration/reconstruction plan and has promoted the completion of restoration by FY 2018, the corresponding division of damaged agricultural land into larger blocks and farmland concentration to farmers. The prefecture takes measures for the development of infrastructure to divide a wide area of agricultural land including damaged land into larger blocks in 3 districts and plans land concentration to farmers as well as the introduction of crops with high profits such as vegetables.



Typhoons

Promotion of early restoration of agricultural land in cooperation with the River Department and Bureau

- In the Tokachi region, Hokkaido, a series of typhoons in the summer caused flooding of the river, resulting in soil discharge in about 1,900 hectare of agricultural land. The early restoration of the damaged land was encouraged with cooperation of the River Department and Bureau by using excavated soil in rivers for the restoration of agricultural land. The restoration works have been under way for planting in 2017 in areas outside of some that suffered devastating damage.



Agricultural land with discharged soil from river flooding

Potato chip plant reopened early using the pre-investigation groundbreaking system

- JA Furano Sirera Furano Plant processes potatoes from Minamifurano Town, Hokkaido into potato chips. The plant and the storage warehouse were submerged due to the flooding of rivers caused by the typhoon, and it was unable to receive raw materials and operate the business. By using the pre-investigation groundbreaking system and starting the restoration work early, the plant received raw materials again in October, the operation of the plant restarted in December, and the restoration of the entire plant will be completed within this fiscal year.



Inundated factory

1. Restoration/Reconstruction from natural disasters (Kumamoto Earthquakes, etc.) occurred in FY 2016

Response to disaster damage from Kumamoto Earthquakes

- On April 14 and 16, 2016, earthquakes measuring a maximum seismic intensity of 7 occurred centered in Kumamoto, causing 165.7 billion yen worth of damage to the agriculture, forestry and fisheries industry.
- Immediately after the disaster, about 2.78 million meals were provided by the food aid supply through push-type support that sent supplies without waiting for requests from the municipality and pull-type.
- The government designated the disaster caused by Kumamoto Earthquakes as a Disaster of Extreme Severity. MAFF supported early restoration of the disaster area through the promotion of a disaster restoration program, early payment of mutual relief indemnity, special measures for disaster-related funds, and subsidies for the reconstruction and repair of damaged facilities.
- The restoration and reconstruction of the disaster area has made steady progress, for example, crops were planted in almost all paddy fields due to the emergency work of agricultural land and crop diversion and the reconstruction and repair of damaged facilities progressed.



Depressed agricultural land



Collapsed animal house barn



Delivering relief supplies to disaster-affected areas



Paddy fields after crop diversion to soybeans

Response to typhoon damage

- A series of typhoons No. 7, 11, 9, 10, and 16 arrived between August and September 2016. For the first time in recorded history, three typhoons hit Hokkaido in a year and a typhoon struck the Tohoku region from the Pacific coast. The typhoons caused 159.6 billion yen worth of damage to the agriculture, forestry and fisheries industry.
- The government designated the disaster caused by typhoons as a Disaster of Extreme Severity. MAFF supported early restoration of the disaster area through the promotion of a disaster restoration program, early payment of mutual relief indemnity, special measures for disaster-related funds, and subsidies for the reconstruction and repairs of damaged facilities.
- The areas conducted disaster restoration projects before it started to snow using the pre-investigation groundbreaking system and made steady progress in restoration and reconstruction.



Agricultural land damaged by the flooding of rivers (Memuro Town, Hokkaido)



Onions discharged from the flooding of rivers (Kitami City, Hokkaido)



Heavy rain carried sediment in paddy fields (Fukagawa City, Hokkaido)



A vinyl greenhouse smashed by the flooding of rivers (Iwate)

Response to the damage caused by torrential rainfall between June 6 and July 15.

- A stationary rainy front on Japanese islands and the depression which passed over the front caused torrential rain, which led to 60.9 billion yen worth of damage to the agriculture, forestry and fisheries industry mainly in Kyushu.
- The government designated the disaster caused by the torrential rain as a Disaster of Extreme Severity. MAFF supported early restoration of the area through the promotion of a disaster restoration program and special measures for disaster-related funds.
- The area conducted disaster restoration projects using the pre-investigation groundbreaking system and made steady progress in restoration and reconstruction.



Sediment flowed in paddy fields
(Oita)



Sediment flowed in paddy fields
due to the collapse of mountain slopes
(Kagoshima)



Channel for irrigation
damaged by a landslide
(Kumamoto)



Sediment flowed in paddy fields
(Miyazaki)

Response to disaster damage from earthquakes centered in central Tottori Prefecture

- On October 21, 2016, earthquakes measuring a maximum seismic intensity of a lower 6 occurred centered in central Tottori Prefecture, causing 1.6 billion yen worth of damage to the agriculture, forestry and fisheries industry.
- MAFF supported early restoration of the disaster area through the promotion of the disaster restoration program and early payment of mutual relief indemnity.
- Restoration and reconstruction is making steady progress and out of 12 shared facilities covered by the disaster restoration program, 7 facilities are expected to restart operation in 2017.



Fallen pears
(Tottori)



Damaged pear sorting machine
(Tottori)



Damaged watermelon sorting machine
(Tottori)

Response to disaster damage from heavy snow in winter

- Heavy snow in winter caused 5.5 billion yen worth of damage in the agriculture, forestry and fisheries industry.
- MAFF supported early restoration of the disaster area through the promotion of a disaster restoration program, early payment of mutual relief indemnity, grants for the introduction of agricultural greenhouses, and grants for the damaged fruits.



Broken apple tree
(Yamagata)



Damaged shungiku
(chrysanthemum coronarium) greenhouse
(Hyogo)



Damaged grape greenhouse
(Tottori)

2. Restoration/Reconstruction from the Great East Japan Earthquake

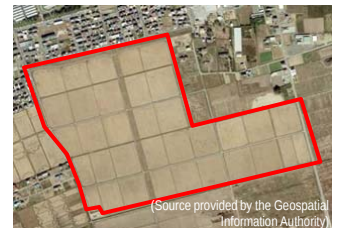
Earthquake and tsunami damage and restoration/reconstruction efforts

- Of 20,120 hectares of agricultural land covered by the restoration program (diverted land excluded from 21,480 hectares of agricultural land damaged by tsunami), 16,770 hectares (83%) of agricultural land restarted the farm by the end of January 2017. By the end of September 2016, all debris was removed from the 19,000 hectare of agricultural land in Iwate, Miyagi and Fukushima except for areas to which evacuation orders have been issued.
- MAFF took measures to increase the productivity of agricultural management and agriculture income through the promotion of dividing damaged agricultural land into larger blocks when agricultural land damaged by tsunami was restored, and promotion of introduction of advanced technologies.

Example of agricultural land restoration (Sendai City)



Example of dividing agricultural land into larger blocks (Omagari District, Higashimatsushima City, Miyagi)



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

- As a result of efforts for the restarting of the farm, reconstruction is making steady progress as follows:
 - [1] Full-scale planting of rice restarted in about 2,500 hectares of land in Minamisoma City, Hirono Town, Kawauchi Village, Tamura City and Naraha Town.
 - [2] Shipment of 'ANPOGAKI' (a kind of semi-dried persimmon fruit) was restored to about 80% of that before the earthquake.
- According to the survey results of radioactive materials conducted in FY 2016, no agricultural and livestock products exceeded the maximum limits. After April 2016, the restriction of distribution was removed from agricultural and livestock products and areas whose safety has been confirmed.
- In order to accelerate the restarting of the farm,
 - [1] From July 2016, Fukushima Prefecture, municipalities and MAFF worked together to visit certified farmers in 12 disaster-affected municipalities individually, took a survey on requests and explained support measures.
 - [2] Under the second supplementary budget for fiscal 2016, support programs for the introduction of machines, equipment and livestock, etc. necessary to restart the farm were provided.
- The basic principle for the acceleration of Fukushima's restoration from nuclear damage was decided on by the Cabinet in December 2016. Based on the principle, efforts for the restarting of the farm and eliminating harmful rumors will be strengthened.



In Minamisoma City, an experimental cultivation of rice was carried out in 2013 and rice crop restarted in 2014.

Total planted area
in FY 2014: 99ha
Total planted area
in FY 2015: 720ha
Total planted area
in FY 2016: 1,781 ha



'ANPOGAKI,' a specialty in the Date region exercised their self-control in processing operation for the second consecutive year after the nuclear accident. After cleaning persimmon trees and the development of nondestructive inspection equipment, shipment restarted after 3 years in December 2013.

Total shipment in FY 2016: 1,154 t
(About 80% of shipment before the earthquake)

Summary of FY2017 Measures for Food, Agriculture and Rural Areas

Summary

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

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

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

II. Measures for securing a stable supply of food

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

III. Measures for sustainable development of agriculture

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

IV. Measures for promotion of rural areas

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

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

VI. Measures for reorganization/restructuring of relevant bodies

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