FY2022

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



May 2023



Ministry of Agriculture, Forestry and Fisheries

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FY2023 Measures for Food, Agriculture, and Rural Areas

FY2022 White paper on Food, Agriculture, and Rural Areas

- 1 Agriculture has functions of supplying food essential to people's lives, and rural areas play a role as a foundation for sustainable development of agriculture.
- 2 On the other hand, Japan's agriculture and rural areas are facing challenges such as shrinking domestic markets due to population decline, decreasing and aging of the working-age population, rising food security risks due to changes in the global food situation, and the need to address today's challenges such as climate change. Japan is now at a major turning point.
- 3 For this reason, while strengthening food security by increasing the production of importdependent wheat, soybeans, and feed crops, MAFF is promoting smart agriculture and working on export promotion of agricultural, forestry, and fishery products and foods to capture the global food market. MAFF aims to make agriculture an attractive industry where young people are motivated and proud to play an active role so that the next generation can take over the agricultural industry.
- 4 The FY2022 White Paper on Food, Agriculture, and Rural Areas describes trends in food, agriculture, and rural areas in a concise and simple manner, together with a special topic on strengthening food security and six topics, so that the public will further deepen their interest and understanding of food, agriculture, and rural areas in our country.

In doing so, in addition to analyzing and explaining statistical data, introducing case studies of initiatives being developed in various parts of the country, attaching as many photographs as possible to make the content easy to understand. QR codes will also be helpful to link with the MAFF website.

Plane view of the contents in FY2022 White Paper on Food, Agriculture, and Rural Areas

(Arrangement of the relationship with the composition of measures based on the Basic Plan for Food, Agriculture, and Rural Areas)



Special Topi<u>c</u>

Toward Strengthening Food Security

Our country, which depends on overseas for much of its food supply, has reached a turning point for the future stable food supply due to rising food security risks associated with increased global food demand and destabilization of the international situation.

This special topic, therefore, describes the impact of rising prices of foodstuffs and agricultural production materials, and measure to deal with them, as well as the "The Policy Outline to Strengthen Food Security" decided in December 2022.

Increased food security risks due to changes in the global food situation

- While food demand is expected to increase due to global population growth and economic growth in emerging countries, there are concerns that food supply could become tight over the medium- to long-term, as changes in areas where agricultural products can be produced due to climate change and large-scale crop failures due to abnormal weather may affect food supply.
- In addition, due to Russia's invasion of Ukraine in February 2022, the stable supply of grains and agricultural production materials has been threatened by price hikes and stagnation of exports from raw material suppliers. The domestic and international situation surrounding our country's food supply is changing by the minute, increasing food security risks.



International prices of grains and other commodities, which had been on an upward trend in recent years, have risen sharply since 2021

- International price of grains and other commodities have been on an upward trend in recent years due to rising demand from emerging countries for livestock products, increased demand for energy such as biofuels, and the effects of climate change.
- After 2021, international wheat prices reached a record high of \$523.7/t in March 2022 due to poor harvests in the U.S. and Canada, growing demand for feed in China, combined with Russia's invasion of Ukraine since 2021. Since January 2023, the price level has generally dropped to the level before the invasion of Ukraine, but remained high.
- > International prices of maize and soybeans remain near record highs



<Focus> Ukraine's grain production is expected to fall sharply

- According to the published data from USDA, Ukraine's wheat production volume is expected to decline 36% to 21 million tons in FY 2022/23 due to the impact of the Russia's invasion. Exports are forecast at 13.5 million tons, down 28% from the previous year. In addition, the forecast for maize production volume in 2022/23 is 27 million tons, down 36% from the previous year.
- According to a forecast by the Ministry of Agrarian Policy and Food of Ukraine, the country's crop acreage for grains and pulses in 2023/24 is expected to be 10.24 million ha, a decrease of 1.41 million ha from 2022/23.



Source: Compiled by MAFF based on the data of USDA, "PS & D" (March 2023)

Prices of compound feeds and fertilizer raw materials have risen significantly since 2021

- Approximately 50% of the raw material for compound feed is maize and about 10% is soybean oil cake, and Japan imports most of the feed grains. The ex-factory price of compound feeds increased by 20% to 100,000 yen/t in January 2023 compared to 83,000 yen/t in the same month last year.
- Import prices of fertilizer raw materials have been on an upward trend since 2021. Due to factors such as Russia's invasion of Ukraine, the prices have been fluctuating widely, reaching a record high at one point.
- With reference to measures taken at the time of the price hike in 2008, it is necessary to respond to the impact of changes in the international situation, such as measures to support the fertilizer costs for farmers who are making efforts to reduce the use of chemical fertilizers, and measures for a stable supply of fertilizers, such as stockpile of fertilizer raw materials and expanding the use of fertilizers from domestic resources.
- Increased global demand for grains, rising prices for energy and fertilizer raw materials, and the impact of foreign exchange rates combined to drive up the prices of agricultural production materials in Japan. In February 2023, price of fertilizer increased by 40% and feed increased by 20%, compared to the same month last year.
- In addition to rising global food prices, the impact of rising oil prices and foreign exchange rates, combined with various factors at each stage of the global supply chain, including global shortage of containers, rising ocean freight, and the Russia's invasion of Ukraine, has driven up the import prices of grains, etc.
- > Consumer prices in Japan remain on an upward trend.



Source: Compiled by MAFF based on the data of "Monthly Feed Statistics" by Public Interest Incorporated Association for Supply Stabilization of Compound Feeds

Note: Price of compound feeds is the weighted average price of all livestock species ex works.



Source: Compiled by MAFF based on the data of the Ministry of Finance's "Trade Statistics" Note: Prices for the previous month are indicated for months with imports of 5,000 tons or less per month.

<Focus> DI for agricultural business conditions in 2022 is the lowest since the survey began

- According to the survey conducted by Japan Finance Corporation (hereinafter referred to as the "JFC") in January 2023, the DI for agricultural business conditions for the entire agricultural sector fell 9.5 points from the previous year to minus 39.1 points in 2022, the lowest since the survey began in 1996.
- According to the survey released by Tokyo Shoko Research, Ltd. in January 2023, 75 corporate bankruptcies were recorded in the agricultural sector in 2022, the second highest level in the past 10 years.
- In addition to soaring international prices of production materials such as imported raw materials, fertilizers, feed, and fuel oil, the impact of reduced demand for eating-out and inbound travel due to the spread of COVID-19, and the outbreaks of HPAI, classical swine fever (CSF), and other livestock infectious diseases, suggest that agricultural management is in a difficult situation.



Number of corporate bankruptcies in the agricultural sector



Source: Compiled by MAFF based on the data of Japan Finance Corporation, "Survey of Agricultural Business Conditions" (survey conducted in January each year from 2014 to 2023)

Note: The DI for agricultural business conditions is the composition ratio of business farmers who answered that agricultural management "has improved or will improve" minus the composition ration who answered it "has worsened or will worsen."



The value of agricultural imports in 2022 increased by 31.2% from the previous year. Meanwhile, grain import volume increased slightly. Beef and fruit import volume declined

- > In 2022, the value of agricultural imports increased by 31.2% from the previous year to about 9.2 trillion yea, reflecting higher unit prices, especially for food and feed grains, due in part to the impact of exchange rates, while the volume of imports increased slightly.
- > On the other hand, beef and fruit import volume declined by 4.2% and 7.5%, respectively, from the previous year, amid rising unit import prices. As the increase in the unit price of imported agricultural products can be an opportunity to expand demand for domestic agricultural products, it is important to increase the supply of domestic agricultural products.

Year-on-year change in Import volume and value of agricultural products (2022)

Import value	Year-on-year percentage change (%)		Item name	Import volume (10,000 tons)	Import value	Year-on-year percentage change (%)		
						import volume	Import value	import unit price
9,240.2 billion yen	31.2		Maize	1,527	764.5 billion yen	0.2	47.0	46.7
6,760.7 billion yen	33.2		Soybeans	350	339.1 billion yen	7.1	48.9	39.0
2,476.9 billion yen	26.3		Wheat	535	329.8 billion yen	4.3	68.4	61.5
		I	Beef	56	492.5 billion yen	-4.2	20.8	26.0
f the Ministry of Finance's "Trade Statistics"			Fruits	177	384.6 billion yen	-7.5	7.4	16.1

Source: Compiled by MAFF based on the data of the Ministry of Finance's "Trade Statistics Note: Fruits refer to "fruits and nuts (fresh, dried)" in "trade statistics."

Item name

Farm products

Livestock products

Agricultural products

Japan's main agricultural import structure depends on a small number of specific countries

- > The top six importing countries account for about 60% of Japan's agricultural imports.
- > Maize, soybeans, wheat, and beef accounted for 80 to 90% of the total in the top two countries. Wheat is 99.8% dependent on the top three countries, the U.S., Canada, and Australia.
- > Pork and fruit are about 50% dependent on the top two countries.
- > Japan's import structure for major agricultural products is highly dependent on a small number of specific countries. It will therefore be important to work toward increasing domestic agricultural production and stabilizing and diversifying imports through the maintenance and strengthening of good relations with the countries from which agricultural products are imported.



Source: Compiled by MAFF based on the data of the Ministry of Finance's "Trade Statistics"

Import volume of agricultural products by country (2022)

Japan's fertilizer raw materials are also largely dependent on imports from a small number of countries

- Japan relies on imports for most of its chemical fertilizer raw materials. While resources for main fertilizer raw materials are unevenly distributed worldwide, almost all of ammonium phosphate and potassium chloride, and 95% of urea are imported from a small number of countries. Since the imports are susceptible to export restrictions and international prices on the part of exporting countries, it is necessary to stabilize and diversify imports and promote the exchange of imported raw materials for domestic resources.
- Since the autumn of 2021, China's stricter export inspections of fertilizer raw materials and Russia's invasion of Ukraine have caused Japan's imports of fertilizer raw materials to stagnate. Meanwhile, there has a greater proportion of ammonium phosphate imported from Morocco, showing a move to procure from alternative countries.



Notes: 1) The fertilizer year is from July of the relevant year to June of the following year.

2) Total imports do not include domestic products.

Need to address challenges to ensure food access

Addressing "The issue of Food Access" is an important issue in our country, where consumers are not able to obtain the foods that they need to lead healthy lives. Initiatives are needed to ensure smooth food access in collaboration with relevant ministries and agencies.

<Focus> A certain number of people do not have sufficient access to food stores, etc. > According to a survey conducted by JFC in January 2023, 67.5% of respondents answered that they could access a grocery store

- According to a survey conducted by JFC in January 2023, 67.5% of respondents answered that they could access a grocery store within 15 minutes by public transportation or on foot, while 32.6% said they could not access one within 15 minutes.
- The survey also found that 53.5% of respondents said they could afford to buy food and drink for a healthy diet, while 46.7% said they were unable to do so. These findings suggest that access to food at the household level is a challenge in Japan even in normal times.



- According to the Food Security Report published by the UK in 2021, at least 84% of people in England could access a grocery store within 15 minutes by public transportation or walking in 2019.
- In addition, 92% of UK households in FY 2019/20 answered that they felt they had adequate access to healthy and nutritious food at reasonable prices available and that they were assured of food for their households.
- Although it is not possible to compare the situation in Japan with that in the UK, which has different socioeconomic systems and other conditions, it is necessary for our country to take steps to ensure food access.

Implementing emergency measures in response to rising feed prices

- > Feed cost accounted for about 30 to 60% of operating costs in 2021 for livestock farming in Japan.
 - > To mitigate the effect of feed price increase on livestock farming, compensation is provided to livestock farmers from the regular and supplemental compensation funds under the compound feed price stabilization system.
- > Implementing emergency measures using a contingency fund and supplementary budgets.
 - Providing additional financial resources for the supplemental compensation fund and exceptionally lowering the criteria for triggering the supplemental compensation fund.
 - Taking measures such as providing compensation to livestock farmers who are working to reduce production costs and improve feed selfsufficiency ratio.
- While these emergency measures are making progress in mitigating the impact on livestock farming that are affected by the sharp rise in feed prices, the challenge is to steadily shift the structure that is overly dependent on imports.
- Strengthening support for cultivation and livestock farming collaboration to expand use of domestic feed.



Compound feed price stabilization system

Case of cultivation and livestock farming collaboration



The Miyagi Prefectural Headquarters of the National Federation of Agricultural Cooperative Associations (ZEN-NOH) and the Kagoshima Prefectural Federation of Economic Agricultural Co-operative Associations have started a wide-area marketing demonstration test to mutually distribute "compost pellets" which are made by molding compost into granules, and "rice straw."

Source: Miyagi Prefecture Headquarters of the National Federation of Agricultural Cooperative Associations, Kagoshima Prefectural Federation of Economic Agricultural Co-operative Associations

Implementing emergency measures in response to unstable procurement and soaring prices of fertilizer raw materials

- Fertilizer costs account for about 4 to 18% of operating costs in 2021 for agricultural management in Japan.
- Prices of fertilizer raw materials have soared due to unstable procurement in the context of stricter export inspections in China, a major import source, and Russia's invasion of Ukraine.
- Implementation of measures to cope with unstable procurement and price hikes of fertilizer raw materials by utilizing reserve funds and supplementary budgets.
 - Expanded support for efforts to shift from conventional fertilizer application systems to fertilizer cost-reduction systems.
 - Urgent support for additional costs involved in increased costs for procurement from alternative countries, in conjunction with intergovernmental requests.
 - Taking new measures to support farmers who work to reduce the use of chemical fertilizers by covering 70% of the increase in fertilizer and manure costs.
 - Designating fertilizer as a specified critical material under the Economic Security Promotion Act and establishing a fund to support the development of stockpiling and storage facilities for fertilizer raw materials.
 - In order to promote the use of fertilizer such as compost and sewage sludge resources for domestic production of fertilizers, establishing a mechanism to support the collaborative efforts of livestock farm households, sewerage operators, fertilizer manufacturers, crop cultivation farm households, as well as facility development for this purpose.



Develop and market lowcost fertilizer using compost (Kagoshima Prefecture) Source: Kagoshima Prefectural Federation of Economic Agricultural Cooperative Associations Develop and market low-cost compost-containing granular compound fertilizers, mixed fertilizer (Miyazaki Prefecture) Source: Miyazaki Prefectural Federation of Economic Agricultural Cooperative Associations

While these measures are being taken to mitigate the impact of the current steep rise in fertilizer prices and to ensure a stable supply of fertilizer, the challenge is to stabilize and diversify imports as well as to change the structure of excessive dependence on imports.

In response to rising fuel prices, implementing support measures for facility horticulture farm households

- Fuel costs accounted for about 20 to 30% of operating costs in 2021 for facility horticulture management in Japan.
- As for fuel, crude oil prices rose due to the global recovery in demand and Russia's invasion of Ukraine.
- As a countermeasure against rising fuel prices, MAFF has strengthened the safety net functions for the production areas that are systematically working on conserving energy, and expanded the support framework for the power-up project on production base in the production areas, which supports the introduction of energy-saving equipment.



Heat pump heated by electricity (Chiba Prefecture) Source: Chiba City, Chiba Prefecture

Implementing emergency measures in response to rising prices of food raw materials

- According to the survey conducted in January 2023, 20 to 38% of food companies answered that their costs increased by 20% or more due to rising raw material prices.
- The government resale price for imported wheat is revised twice a year, in April and October. In the fiscal year ending October 2022, as an emergency measure to mitigate the impact of sharp fluctuations in the purchase price of wheat, the calculation period was extended to one year to equalize the price, effectively keeping the price unchanged at 72,530 yen/t.
- In the fiscal year ending April 2023, the policy for domestic production of wheat and the burden on consumers were comprehensively assessed, and as a measure to mitigate radical changes, the price increase was controlled to a level which reflects the buying price for the most recent 6 months, excluding the period affected by the sharp increase immediately after Russia's invasion of Ukraine, revising the price to 76,750 yen/t.
- Urgent support has been provided for initiatives such as switching raw materials to domestic wheat, rice flour, or other materials, shifting to higher-value-added products to meet the cost pass-through, and controlling raw material costs by upgrading production methods.



Providing support to strengthen the stable supply of wheat, soybeans, and other products that are highly dependent on imports

- In order to urgently strengthen the stable supply system for wheat, which is highly dependent on imports, the aggregation of cropping and the introduction of farming techniques and machinery have been supported. On the distribution side, a stable supply system, including temporary storage, has been established.
- For promoting domestic production of wheat, soybeans, feed crops, and vegetables for process/commercial use, production of wheat, soybeans, etc. has been expanded, and conversion of paddy fields into upland fields, etc., have been promoted.



Efficiently increase wheat production by aggregation of diverted paddy fields (Hokkaido) Source: Farm Shirakura

Price pass-through to agricultural and food products due to rising costs is an issue

- The rate of increase in the price index of agricultural products remained moderate compared to the rate of increase in the price index of materials for agricultural production.
- > In order to stabilize agricultural management and ensure a stable supply of agricultural products in the future, it is important to reflect rising production costs in appropriate prices and create an environment where management can continue is important.
- The prices of agricultural products are basically determined according to the supply and demand situation and quality of each item. It is in a difficult situation to appropriately pass on the rising costs of agricultural production materials to transaction prices, due to various factors, such as severe price competition at the distribution stage.
- Soaring prices of production materials are directly linked to increased management costs for producers, etc., and if it is not properly passed on to the sales price of finished products, the basis for stable food supply may be undermined.
- In a survey of agricultural workers conducted between November and December 2022, 13.5% of respondents said they passed on the cost increase to sales prices. A survey of small and medium-sized enterprises (SMEs) conducted between September and November 2022 found that the ratio of price pass-through to cost increases in the food manufacturing industry was 45.0%.



Price index of material for



- Notes: 1) Figures for each month of each year, with an average price of in 2020 as 100 2) Figures for 2022 and 2023 are approximate.
 - 3) The price index of material for agricultural production is an index of the retail prices of individual materials needed for agricultural production that are purchased by agriculture management entities.



Implementation status of price pass-through when agricultural workers sell their produce



Source: Compiled by MAFF based on the data of "The second Emergency Survey on Rising Costs in Agriculture" by Japan Agricultural Corporations Association (published in December 2022)

Source: MAFF, "Survey on Agricultural Price Statistics"

- Notes: 1) Figures for each month of each year, with an average price of in 2020 as 100.
 - 2) Figures for 2022 and 2023 are approximate.
 - The price index of agricultural products is an index of the retail prices of individual agriculture products that are sold by agriculture management entities.

Regarding the rising production costs of agricultural and food products, efforts to create an environment for the price pass-through have been implemented, while gaining the understanding of

- In a survey of farmers conducted from November to December 2022, with regard to their initiatives and efforts to realize price increases (fair price formation), many responded that they "share information closely with their negotiating partners on a regular basis" and "concretely negotiate in price hikes using objective business figures and data."
- In order for farmers to appropriately pass on the cost increase to the price of agricultural products, it is important to accurately understand their management, including manufacturing costs, and disclose trends in agricultural expenses to their clients in a timely manner.
- With regard to the rising production costs of agricultural and food products due to the rising prices of production materials and raw materials, initiatives to improve the environment to pass on costs in the entire food chain, including business operators, has been implemented, while gaining the understanding of consumers.

Share information closely with 101 negotiating partners on a daily basis In price increase negotiations, 94 use objective business figures and data to negotiate specifically Cut expenses to the extent that 32 management can be sustained and appealed that to counterparts Always understand and analyze income and expenditure status 22 accurately by using bookkeeping. accounting systems, etc. Analyze the business conditions and industry information about 17 negotiating partners Learn negotiating skills for price 6 negotiations Seek advice from tax accountants 4 and financial institutions Other 16 20 40 60 100 120 RU Responses Source: Compiled by MAFF based on the data of "The second Emergency Survey on

Farmers' initiatives and efforts to raise prices

Posters and flyers for retailers to promote understanding among consumers

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Source: Compiled by MAF + based on the data of "The second Emergency Survey on Rising Costs in Agriculture" by Japan Agricultural Corporations Association (published in December 2022)

<Focus> Proper business relationships between agricultural producers and business partners promoted in France

- In Japan, passing on the increased production costs of domestic agricultural and livestock products has become a challenge amid soaring prices of agricultural production materials, etc., and there is growing interest in France's effort to promote proper business relationships between agricultural producers and their business partners.
- The French Egalim 2 Law provides: (i) mandatory written contracts between agricultural workers and the first purchaser, (ii) obligation to include in the written contract an automatic price revision method that takes into account the production costs as well as term of the contract, (iii) obligation to include in the written contract when an accredited producer organization negotiates contracts on behalf of farmers and concludes contract framework agreements (as in (ii)), (iv) publication of production cost indicators by an inter-professional organization in which representative organizations at each stage from production to retail are affiliated for each item, and (v) exclusion of agricultural raw material prices from negotiations in distribution after the first purchaser.
- Items subject to the obligation of written contracts between agricultural producers and the first trader include beef, pork, chicken, eggs, and milk and dairy products (the scope is limited based on the opinions of organizations, etc.). Direct sales to consumers, transactions in wholesale markets, etc. are exempted.

The Policy Outline to Strengthen Food Security identifies priority measures for strengthening food security and continuously implements them

- The destabilization of global food production due to climate change and the intensification of procurement competition due to the expansion of global food demand, together with the increasing tension in Ukraine, have caused the prices of imported food raw materials and production materials to rise. The supply of chemical fertilizers, which are more difficult to procure and switch than food due to the uneven distribution of producing countries, has become unstable due to export restrictions and disruptions in international logistics caused by the spread of COVID-19. Strengthening food security is the nation's most urgent and top priority.
- The government took various measures in FY 2022. Especially in view of the sharp rise in stable food supply risks in recent years, it is necessary to realize the enhancement of food security as soon as possible by continuously taking measures to strengthen food security. Therefore, in December 2022, the "Headquarters for Stable Food Supply and Strengthening Agricultural, Forestry, and Fisheries Industries" (headed by the Prime Minister) decided the "Policy Outline to Strengthen Food Security" and clarified the necessary measures and targets to be continuously taken to enhance food security.
- In September 2022, the Minister of Agriculture, Forestry and Fisheries consulted the Council for Food, Agriculture and Rural Area Policies with regard to the verification and review of the Basic Act on Food, Agriculture and Rural Areas, and active discussions has been taken place in the newly established "Verification Subcommittee on the Basic Act," including interviews with experts and verification of measures.



Headquarters for Stable Food Supply and Strengthening Agricultural, Forestry, and Fisheries Industries Prime Minister summarizing the first meeting Source: Website of the Prime Minister's Office



The Minister of Agriculture, Forestry and Fisheries hands over a letter of consultation to the President of the Council for Food, Agriculture and Rural Area Policies

		Goals
	Domestic exchange of production materials	 Reduce the use of chemical fertilizers by 20% by 2030. Double the use of compost and sewage sludge resources and increase the use of national resources to 40% of the total amount of fertilizers used (based on phosphorus) by 2030 (2021: 25%). Expand the area of organic farming to 63,000 ha by 2030 (2020: 25,000 ha) 3.5% reduction and absorption of GHGs in agriculture, forestry, and fisheries by 2030. Increase in area of feed crops production by 32% by 2030.
	Conversion of imported raw materials to domestic production, expansion of production of wheat, soybeans, feed crops, etc., which are highly dependent on overseas production, etc.	- Increase production area by 2030 against 2021. Wheat (+ 9%), soybeans (+ 16%), feed crops (+ 32%), rice flour (+ 188%), etc.
	Fair price formation and fostering public understanding	- Halve commercial food loss and waste against FY 2000 (2.73 million tons) by FY 2030.

KPIs in the Policy Framework for Strengthening Food Security

Steadily promoting a shift in the structure that is excessively dependent on imports by expanding production of items that are highly dependent on overseas, in order to strengthen food security

- As the quality of domestically produced agricultural, forestry, and fishery products such as wheat, soybeans, and rice flour continues to improve, their increased utilization is expected because of the instability in overseas procurement.
- > It is important to establish a supply system required by users, in terms of accessibility in the price, lot size, and stability of quality.
- As for feed, there is a surplus of domestic production and supply capacity, mainly in roughage such as grass, pasture plants, and rice straw. Further expansion of their utilization is expected by reducing labor burden associated with roughage production by livestock farmers, cooperation between crop cultivation farm households as producers and livestock farmers as users, creating a mechanism of wide-area distribution, and providing feed for the convenience of users. Development and extension of domestic feeds such as maize for grain, as alternatives to imports, is expected.
- With regard to fertilizers, there are compost and sewage sludge resources from the livestock industry in Japan, which are expected to be effectively utilized. In addition, efforts to reduce the use of chemical fertilizers and stockpile of fertilizer raw materials that cannot be procured domestically are becoming more important.
- Revising the structure of excessive dependence on imports for both agricultural, forestry, and fishery products and agricultural production materials, promoting domestic exchange and stockpile of production materials, converting imported food materials to domestic production, and further strengthening food security will be promoted, while improving the utilization rate of cultivated land and farmland accumulation rate.
- In addition to fostering public understanding of food, agriculture, forestry, and fisheries, strengthening efforts to reduce food loss and waste, helping food banks that provide food to Kodomo Shokudo (Children's Cafeterias) and other facilities, and supporting shokuiku (food and nutrition education) through meal delivery for children, and providing co-eating spaces will be promoted. Relevant ministries and agencies, led by MAFF, are working together to implement measures for people who have difficulty in accessing food on a daily basis due to rising prices.



Make fertilizer from sewage sludge resources by high-temperature fermentation (Saga Prefecture) Source: Saga City Sewage Purification Center



Food companies and agricultural producers collaborate to produce wheat (Saitama Prefecture) Source: Maeda Foods Co., Ltd

Supporting development of business farmers who support regional agriculture as a source of employment

- > With the aging of households engaged in own farming due to the declining birthrate and depopulation, the further decline in the number of farmers is expected. Weakening of the production base including labor shortages will be a serious issue.
- > Looking at the age structure of the number of core persons mainly engaged in farming in 2022, those in their 50s or younger account for about 21% of the total (252,000 people). Looking ahead to the next 10 to 20 years, it is expected that the number of core persons mainly engaged in farming will decrease significantly. Thus, a small number of agriculture management entities will have to support agricultural production.
- > In the field of agricultural production, model cases have been created in various parts of the country where agriculture management entities have gained the trust of local communities, gradually expanding and upgrading their management while taking over farmlands. Such agriculture management entities have also served as a source of employment and are indispensable for maintenance and development of regional agriculture and rural communities.
- > As the population further declines and ages, in order for a smaller number of business farmers to maintain the production base in partnership with diverse management entities that support rural communities, it is necessary to promote the creation of model agriculture management entities and establish a system to support such entities.



Number of core persons mainly engaged in





establish an efficient production system and secure human resources by expanding the target area of community-based farm cooperatives, leading the regional agriculture (Fukui Prefecture) Source: Wakasa no Megumi Corporation

Source: Prepared based on MAFF, "Survey on Movement of Agricultural Structure"

Note: The core persons mainly engaged in farming are those who are usually engaged in selfemployed agriculture as their work.

Formulate a "PAA" that shows the future use of farmlands through community discussions, and promote farmland intensification utilizing Farmland Banks

- > Farmlands need to be secured sustainably into the future as the foundation of food production and the basis of food security.
- Under the Law to Partially Amend the Act on Promotion of improvement of Agricultural Management Foundation enacted in May 2022, municipalities are required to formulate a "Promotion Plan for Improvement of Agricultural Management Foundation in Area (PAA)," including maps that clarify the future state of agriculture and the future use of farmlands (target maps), based on the existing "Farmers and Farmland Plan", and discussions among farmers and others.
- Based on this plan, the accumulation and concentration of agricultural land utilizing cropland intermediary management institutions (Farmland Banks) as well as the systematic conservation and appropriate use of areal farmlands will be implemented in an integrated manner.
- For food security, it is important to shift to production of wheat, soybeans, vegetables, feed, etc., which are required to increase domestic production. In formulating PAA, it is important to promote production that meets demand after considering what agricultural crops should be produced in the area.



"PAA" development process

Source: Prepared by MAFF

Note: In promoting optimization activities, the agricultural committee shall define the roles of the members of the farmland utilization optimization promotion committee (hereinafter referred to as the "promotion committee members") and the members of agricultural committee, and the members of both committees will work closely together in line with their roles. - The promotion committee members shall conduct optimization activities in their responsible zones, including grasping of the intentions of farmland providers and recipients. The members of the Agriculture Committee shall understand the implementation status of the optimization activities by the promotion committee members and provide necessary support to the promotion committee members.

<Focus> Changes in agricultural structure in line with progress in accumulation and concentration of agricultural land

- In terms of the size of the cultivated land under management by agriculture management entities, the area managed by agriculture management entities with less than 10 ha has decreased, while the area managed by agriculture management entities with more than 10 ha has been on an increasing trend, reaching 59.7% in 2022, indicating that the size of the cultivated land under management has expanded.
- Looking at the number of the management entities by the size of the cultivated land under management, the number of management entities with less than 10 ha is on a decreasing trend, while the number of the management entities with 10 ha or more is on an increasing trend.
- As for the agricultural income per management entity by total planted area, agricultural income per management entity tends to increase as the aggregate planted area of crop increases for both paddy field and upland farming.



Agricultural income per agriculture management entity by the size of total planted area (total number of agriculture management entities, nationwide)





(Upland farming)

Source: MAFF, "Statistical Survey on Agricultural Management" Note: Figures are for 2021.

Toward strengthening food security in the future

- Food security risks in Japan have increased due to changes in the international situation and food supply instability. On the other hand, Japan's population decline is preceding in rural areas, and the persons engaged in farming are aging significantly, weakening the production base. In addition, the domestic food market is expected to shrink rapidly due to declining and aging population, which is expected to reduce demand.
- The situation surrounding food, agriculture, and rural areas in Japan has changed significantly due to the increasing food security risks associated with changes in the global food situation. Japan is now at a turning point in maintaining and strengthening the domestic production base and ensuring a stable supply of food for the future.
- Given these circumstances, in recent years, there has been a challenge in the stable imports of food and agricultural production materials. In order to achieve a stable supply of food, it is necessary to efficiently promote the expansion of domestic production of highly overseasdependent items such as wheat, soybeans, feed crops, vegetables for processing and commercial uses, and agricultural production materials, as well as to work on stabilizing imports and making effective use of stockpiles.
- It is also important for each citizen to establish food security. With the decline in the ability to deliver food, it is important to promote efforts to improve food accessibility for all citizens to have a healthy dietary pattern. In addition, it is essential to gain the understanding of consumers in order to build a food system for fair price formation, in conjunction with efforts by business operators at each stage of the food chain and business management including fair cost monitoring by farmers, etc.
- Moreover, with the expected significant decline in the number of persons engaged in farming, it will be necessary to take on the domestic food supply with considerably fewer agriculture management entities than today. Therefore, it is necessary to play a role in providing food to the people through accumulation and concentration of agricultural land, strengthening the foundation of agricultural management, smart agriculture, and introduction of new varieties, etc., while at the same time developing stable agricultural management and improving productivity.
- In addition, while responding to the growing international debate on climate change and sustainability, it is necessary to shift to an agricultural and food industry that contributes more to reducing environmental impact so that food can be supplied stably and sustainably in the future.
- Based on this, in order to strengthen food security in the future, it is necessary to consider how to respond to unforeseen situations and accurately identify and cope with risks associated with stable food supply from normal times. It is also essential to transform Japan's agriculture and food industry into a risk-resilient structure, steadily promote measures to strengthen food security, and take all possible measures to ensure a stable food supply.

Topic

Exports of agricultural, forestry, and fishery products and food in 2022 reached a new record high of 1,414.8 billion yen, up 14.3% from the previous year

- Export values of agricultural, forestry, and fishery products and food in 2022 increased by 14.3% from the previous year to a record high of 1,414.8 billion yen, due to a recovery in demand for eating-out as well as the impact of foreign exchange rate. Agricultural product values account for 887 billion yen, including non-food items such as flowers (9.1 billion yen).
- In some cases, exports have led to higher income for producers, such as sales at unit prices higher than those for domestic shipments.
- As the domestic food market is shrinking, expanding exports of agricultural, forestry, and fishery products and food is essential for maintaining and expanding the domestic production base, by taking in the global food market as a shipping destination, which is expected to expand significantly in the future.



Export value of agricultural, forestry,

Source: Compiled by MAFF based on the data of the Ministry of Finance's "Trade Statistics"

Case study: Unit prices are higher for exports

Iwate Chu	o Agricultural Co-operatives (Iwate Prefecture)
-Exporting a Vietnam, Th and other co value in FY -The averag sort export p 302 yen/kg, from the ave for farmers of use.	pples to the U.S., Canada, nailand, Hong Kong, Taiwan, puntries and regions. Export 2022 was 30.28 million yen. e unit price for farmers who products in the same year was a difference of 107 yen/kg erage unit price of 195 yen/kg who sort products for general

Promoting efforts to expand exports to achieve the target values of 2 trillion yen by 2025 and 5 trillion yen by 2030

- The export strategy was revised in May and December 2022 in light of the revision to the Export Promotion Act to achieve the target values of 2 trillion yen by 2025 and 5 trillion yen by 2030.
- To achieve the targets, all-Japan export promotion with Authorized Export Promotion Organizations at the core, overseas local support through export support platforms, formation of the model production areas for large-lot exports, and protection and utilization of intellectual properties will be strongly promoted.
- In addition to promoting initiatives to make the most of Japan's strengths, the government will support business operators that take on the challenge of exporting based on a market-in approach, and work together to overcome barriers to exporting.

Case study: Wagyu export promotion



The Hida Meat Agricultural Co-operatives Federation promotes Hida beef exports under advanced sanitary control such as ISO22000, FSSC22000 and others, which contribute to the income increase of the producers (Gifu Prefecture) Source: Hida Meat Agricultural Co-operative Federation



Setting the KPI Targets for 2030 to realize the Strategy for Sustainable Food Systems, MIDORI

- "The Strategy for Sustainable Food Systems, MIDORI" (the MIDORI Strategy) is a policy to be strategically addressed from a medium- to long-term perspective in order to achieve a balance between productivity potential and sustainability in the agriculture, forestry, fisheries, and food industries through innovation. It presents targets to be achieved by 2050 by promoting the development and social implementation of innovative technologies and production systems as well as implementing efforts at each stage of inputs, production, processing and distribution, and consumption.
- New KPI targets for 2030 were set as interim targets in June 2022. The targets include raising the percentage of hybrid horticultural facilities installed per area to 50% and reducing chemical fertilizer use by 20% through promotion of efficient and smart fertilization such as labor-saving and proper fertilization using soil diagnosis, data, etc.

Specific initiatives at each stage of the MIDORI Strategy

Newly established KPI targets for 2030 as interim targets



Reduction of greenhouse gases	10.6% reduction in CO_2 emission from fossil fuels combustion in the agriculture, forestry, and fisheries sectors
	 Electrification and hydrogen battery use for agricultural and forestry machinery as well as fishing vessels (1) Achieving 50% extension rate of electric mowers and automated steering systems in practical use contributing to reduced use of fossil fuels (2) Technology demonstrated under conditions relevant to the operational environment of forestry machinery or prototype demonstrated under actual operational conditions (3) Test operations carried out on small coastal fishing vessels
	Achieving 50% of hybrid horticultural facilities installed per area
Environmental conservation	10% reduction in risk-weighted use of chemical pesticides
	20% reduction in chemical fertilizer use
Fisheries	Achieving 13% of artificial seedling rate in aquaculture of Japanese eel, bluefin tuna, etc. Replacing 64% of aquaculture feed with compound feed

Source: Prepared by MAFF

Promoting nationwide implementation of the basic plan based on the MIDORI ACT, and steadily reducing the use of chemical fertilizers and pesticides, expanding organic farming, etc.

- The MIDORI Act was entered into force in July 2022. This act supports producers and business operators working on reducing the environmental burden.
- All prefectures had prepared and announced their basic plans based on this act by the end of FY 2022, and the government had approved the plans of 33 business operators that produce, sell, and conduct research and development of machinery and materials that help reduce the environmental burden.
- Measures to realize the MIDORI Strategy have been promoted by assisting efforts to switch to Green Cultivation Systems that incorporate environmentally friendly cultivation techniques such as activities for Soil Productivity Improvement and labor-saving techniques, as well as encouraging efforts by Organic Villages, municipalities promoting organic farming on a community basis.



Shiga's "environmentally-friendly agricultural products" cultivation field, the first prefecture in Japan that prepared a basic plan (Shiga Prefecture) Source: Shiga Prefecture



Efforts to promote agriculture with less environmental impact from marketing aspect (Kyoto Prefecture) Source: Saka no Tochu Co., Ltd

Image of effort to verify "eco-friendly cultivation techniques" suitable to producing areas



Strengthening efforts to increase public awareness and understanding of the MIDORI Strategy

- The MIDORI Act stipulates that the government should take measures such as enhancing publicity activities to reduce environmental burden so that stakeholders can deepen their understanding and interest in food systems that are in harmony with the environment.
- Efforts will be strengthened to increase public awareness and understanding of the MIDORI Strategy. In addition, "visualization" of reducing the environmental burden will be promoted so that producers' efforts of reducing the environmental burden can be quantitatively evaluated and communicated to consumers in an easy-to-understand manner.
- > Seizing every opportunity, including in the Asian Monsoon region, the MIDORI Strategy will be promoted internationally.

Promoting field implementation of smart agriculture and acceleration of digital transformation of agriculture to address labor shortages and improve productivity

- > At the agricultural sites, efforts to improve agricultural productivity by using cutting-edge technologies such as robots, AI, and IoT, as well as utilizing data are spreading.
- Efforts are being made to automate farm work and contribute to labor savings by utilizing a smartphone-operated paddy field water management system, and agriculture management applications linked to location information will make it easier such that even unskilled farmers can take the initiative in production activities by digitizing and automating work records.
- The smart agriculture demonstration projects have been implemented in 205 districts nationwide since FY 2019. In FY 2022, in order to accelerate the social implementation of smart agriculture, field demonstrations have been implemented to introduce advanced technologies throughout the production areas.
- At production sites, efforts to provide agricultural support services that promote smart agriculture, such as replacement farming service using drones and autonomous farm machines, and consulting service using data, have expanded.
- The percentage of business farmers practicing data-driven agriculture rose to 48.6% in 2021, up from 36.4% of the previous year. Data utilization has been promoted through on-the-job instructions in production areas by smart support teams consisting of producers and private companies participating in the demonstration projects, as well as instructions in production areas by extension advisors.
- To achieve DX in agricultural sites, utilization of the "Common Application System of MAFF (eMAFF)" has been promoted, which provides online access to administrative procedures such as subsidies under the jurisdiction of MAFF. In addition, the "Common Geographic Information System of MAFF (eMAFF Map)" has been in development, which utilizes digital maps to improve the efficiency of farmland-related operations. The application has been appreciated by its users for its ability to streamline on-site inspection operations.

Actual cases of agricultural chemicals applied by drone (estimate)







Percentage of business farmers practicing data-driven agriculture



In the distribution field, the "smart food chain," an information sharing system, has been developed. It serves as a hub for linking the production, processing, distribution, sales, and consumption stages of agricultural, forestry and fishery products. In addition, projects to realize agricultural DX have been promoted, which include the construction of a palette-based data linkage system and a platform creation for sharing production and distribution information using two-dimensional code.

During the 2022 season, HPAI occurred at an unprecedented rate, with outbreaks in areas where it had never been observed in the past. The price of chicken eggs remained above normal

- The HPAI virus is highly contagious and fatal, and once an outbreak occurs, it can have a significant impact on the local poultry industry and threaten the stable supply of chicken eggs and chicken meat to the public.
- In the 2022 season, highly pathogenic avian influenza cases have been confirmed on all continents except the Australian continent and Antarctica. In Japan, since the outbreak of HPAI was confirmed in October for the first time in history, 82 cases have been identified in 26 prefectures as of the end of March 2023, and approximately 17.01 million chickens have been subject to be killed.
- The number of layers subject to be killed due to HPAI reached a record high, increasing to about 10% of the total number of hens raised in Japan. In addition, due to an increase in production costs caused by soaring feed prices, the retail price of chicken eggs in FY 2022 remained at a high level compared to the average year (288 yen/pack as of March 2023, 135% of the normal). In some areas, retailers restricted purchases, and shortages occurred in the evening. The shortage of chicken eggs for processing has affected food companies, for example, some of the companies reduced the amount of eggs used and suspended sales of products using eggs.



Source: Prepared by MAFF

Note: The numbers show the order of outbreaks. Red numbers show the number of affected poultry farms (premise/establishment) in the 2022 season.

The blue numbers indicate the farms where the poultry was determined to be suspected animals and killed based on the poultry's movement from the affected farms of the red numbers.

Stronger measures against HPAI

- MAFF has strengthened measures to prevent outbreaks and the spread of HPAI by notifying the public about early detection/reporting and thorough sanitary control, dispatching of epidemiologic investigation teams, and supporting epidemic prevention measures implemented by prefectures.
- Support was provided for the resumption of operations by the poultry farm households affected by HPAI outbreaks.
- Urgent call was made to egg producers for a stable supply of chicken eggs by, for example, extending the feeding period of layers, thereby supporting egg production, including countermeasures against rising prices of compound feeds.



Poultry farm that was urgently disinfected with slaked lime



Thorough disinfection around irrigation ponds to prevent avian influenza outbreaks (Kagawa Prefecture) Source: Kagawa Prefecture

Promoting thorough sanitary control and measures against wild boars to prevent classical swine fever (CSF) outbreaks

- Since a case of classical swine fever (CSF) was confirmed in Japan in 2018 for the first time in 26 years, 86 outbreaks have been confirmed on pigs or wild boars feeding farms in 18 prefectures as of March 2023. In FY 2022, 9 outbreaks occurred on farms of pigs or wild boars in 4 prefectures.
- In response to CSF, MAFF shared a sense of urgency with related parties and cooperated with prefectural governments to take measures such as thorough sanitary control as a basis, oral vaccines for wild boars, and strengthen border quarantine.



Locations of CSF outbreak

Source: Prepared by MAFF Note: Number of raised pigs are calculated based on the data of MAFF, "2022 Livestock Farming Statistics."

Expansion of efforts to use digital technology in rural areas to solve regional issues

- The "Vision for a Digital Garden City Nation" aims to accelerate the revitalization of rural areas by using digital technologies to solve social issues in rural areas and increase the attractiveness of rural areas while making the most of regional individuality.
- In December 2022, the government formulated the "Comprehensive Strategy for the Vision for a Digital Garden City Nation" and presented the mid- to long-term direction that the vision should aim for.
- It is expected that rural areas facing aging population and depopulation will utilize digital technology in various efforts to utilize resources in rural areas to revitalize their communities.
- In rural areas, efforts to solve regional issues using digital technology have spread, such as using ICT to make ordering reservations more efficient for people who have difficulty in shopping and developing demand for countryside stay by creating a remote work environment.
- Using the use of digital technology, rural RMOs are expected to efficiently and effectively use the functions of "small bases" that are engaged in regional festivals and operation of public facilities.



Co-working space used for telework and training (Niigata Prefecture) Source: Myoko City, Niigata



Communal exchange using smart speakers (Kyoto Prefecture) Source: Kehara Rice Terraces Wonder Village Project

Registering as Digitalization in hilly and mountainous areas and supporting efforts in cooperation with related ministries and agencies

The areas where efforts are promoted to solve various local issues and revitalize the region by utilizing resources in rural areas and digital technology are registered as Digitalization in hilly and mountainous areas. Such initiatives have been supported in cooperation with related ministries and agencies.



Promoting support for food banks, etc.

- In addition to the prolonged impact of COVID-19, the effects of soaring food and other commodity prices have had a serious impact on those who have difficulty in accessing food.
- As of the end of March 2023, there are 234 organizations in Japan engaged in food bank activities that receive donations of unused food products from food companies, farm households, etc., and provide them to facilities, etc. Food is mainly provided to Kodomo Shokudo (Children's Cafeterias), etc. In addition to budget and personnel shortages, there are issues including a shortage of warehouses, cold storages, and transport vehicles.
- MAFF has supported the establishment of food banks, strengthening of operational bases, advanced initiatives such as cross-regional cooperation, and expansion of acceptance and provision of food for Kodomo Shokudo (Children's Cafeterias).



Activities to deliver surplus agricultural products, etc. produced in hilly and mountainous areas to orphanages, Kodomo Shokudo (Children's Cafeterias), etc. (Okayama Prefecture)

Background for which measures

Source: Japan Harvest (NPO)

Disseminating information on how to address "The issue of Food Access"

- Due to the aging population, the increase in single-person households, the closure of local retail businesses, and the decline of existing shopping districts, an increasing number of people (socalled "people with difficulty in shopping"), especially the elderly, find it inconvenient or difficult to buy and eat food in urban areas as well as in depopulation areas. This is a social issue known as "The issue of Food Access."
- About 90% of the municipalities that responded to the survey recognized the need for countermeasures. "Aging population" is the most common reason for the need of measures.
- It is important for the relevant ministries and departments of local governments to cooperate with each other on a cross-cutting basis, and work continuously in collaboration and cooperation with various stakeholders such as private companies, NPOs, and local residents. Information on approaches to food access issues, support measures, and advanced cases have been proactively disseminated.

