

FY2020

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



May 2021

MAFF

Ministry of Agriculture,
Forestry and Fisheries

SUSTAINABLE DEVELOPMENT GOALS



- The figures in the tables and charts are rounded off and may not exactly reflect actual totals.
- The maps in this report do not necessarily indicate Japan's territories comprehensively.
- Icons used to indicate goals that are particularly relevant to food, agriculture, and rural areas are attached to show the relationship between them and the SDGs. (Not all of the relevant goals are indicated.)

Contents

FY2020 Trends in Food, Agriculture, and Rural areas

Topics	
1	New strategies for exporting agricultural, forestry and fisheries products and foods 1
2	Strategy for Sustainable Food System -Measures for achievement of Decarbonization And Resilience with Innovation (MeaDRI) 1
3	FY2019 Smart Agriculture Demonstration Projects 2
4	Promotion of Digital Transformation in Agriculture and Food-Related Industries 2
5	Response to avian influenza and CSF(Classical Swine Fever) 3
6	Countermeasures against outflow of seedling of new plant varieties 3
7	Current status of Food Tech 3
Special Topic Impact of and response to the novel coronavirus pandemic 4	
Chapter 1 Securing Stable Food Supplies	
1	Food self-sufficiency ratio and food self-sufficiency potential indicator 11
2	Food consumption trends 11
3	Exploration of demand through the creation of new values 12
4	Strategic exploration of global market 13
5	Deepening of the connection between consumers, food and agriculture 15
6	Promotion of shokuiku (food and nutrition education) 15
7	Ensuring food safety and consumer confidence taking international activities into consideration 16
8	Strengthen measures for animal and plant quarantine 16
9	Establishing comprehensive food security in anticipation of food supply risks 18
10	Status of international negotiations 18
Chapter 2 Sustainable Development of Agriculture	
1	Trends of agricultural output, agricultural production income, etc. 19
2	Development and securing of business farmers for realizing a strong and sustainable agricultural structure 19
3	Active participation of diverse human resources and entities that support agricultural sites 21
4	Integration and consolidation of farmland and securing business farmers 21
5	Promotion of initiatives towards stabilization of agricultural management 22
6	Development of an agricultural production base that contributes to the transformation of agriculture into a growth industry and strengthening national resilience 23
7	Strengthening of the production bases compatible with changes in the demand structure, etc., and streamlining of distribution/processing structures 23
8	Promotion of innovations at agricultural production/distribution sites by utilizing information and communication technologies, etc. 27
9	Promotion of environmental policy such as responses to climate change 27
10	Agriculture-related organizations supporting agriculture 28
Chapter 3 Promotion of Rural Areas	
1	Trends in the return to rural living 29
2	Promotion of various types of agricultural management such as multi-management to take advantage of local characteristics 30
3	Promotion of innovations from rural areas such as country stays, agriculture-welfare collaborations, and renewable energy 30
4	Improvement of conditions necessary for people to continue to live in rural areas including hilly and mountainous areas 32
5	Wildlife damage countermeasures and utilization of gibier 33
6	Creation of new movements and vitality to support rural areas 34
Chapter 4 Restoration/Reconstruction from Natural Disasters, Disaster Prevention/Reduction and Strengthening National Resilience	
1	Restoration/Reconstruction from Great East Japan Earthquake 36
2	Restoration from large-scale natural disasters 36
3	Status of restoration from FY2020 disasters 37
4	Disaster prevention, disaster reduction, strengthening national resilience and preparedness for large-scale natural disasters 37
FY2021 Measures for Food, Agriculture and Rural Areas 38	

- In December 2020, "The Strategy to Realize Export Expansion of Agricultural, Forestry, Fishery and Food Products" was decided at the Headquarters on Creating Dynamism through Agriculture, Forestry, and Fisheries and Local Communities.
- Establishment of a market-in system to continuously produce and sell products of the quantity, price, quality, and standards demanded by overseas markets.
- Planning and implementation of policies based on the following three basic concepts in the strategy.

【1st Strategy】

Establishing specific targets by product category in order to make the most of Japan's strengths.

- ① Establish priority export items (27 items) and targets.
- ② Clarify target countries/regions, export targets and means.
- ③ Organize product groups and improve the government's support system overseas.

【2nd Strategy】

Encouraging agriculture, forestry, and fisheries businesses to take on the challenge of exporting with a market-in mindset

- ① Encourage the supply of funds to businesses that are engaged in export.
- ② Develop a list of export production areas and provide focused support for the formation of export production areas.
- ③ Utilize ports and airports, and develop export logistics centers, etc., in order to establish large-lot, high-quality, and efficient export logistics.

【3rd Strategy】

Overcoming obstacles to exports by transcending ministry boundaries and working together as one government

- ① Engage in government-wide efforts to ease or eliminate regulations under the Export Headquarters.
- ② Accelerate the development and certification of HACCP facilities, etc. that meet the needs and adhere to export destination regulations.
- ③ Enhance measures to prevent the outflow of intellectual property in order to protect Japan's advantages, etc.

Establish an "Export and International Affairs Bureau" (tentative name) in the Ministry of Agriculture, Forestry and Fisheries.

Strategy for Sustainable Food System

-Measures for achievement of Decarbonization And Resilience with Innovation (MeaDRI)



- In order to achieve the SDGs and carbon neutrality, it is urgent to transform food systems into more sustainable ones.
- In March 2021, MAFF published an interim report (to be formulated by May 2021) of MeaDRI, a national strategy which will both strengthen the potential productivity and ensure sustainability.
- Followings are addressed in the strategy,
 - Developing innovative technologies and implementing them enable achievement of zero CO₂ emissions from agriculture, forestry and fisheries sectors.
 - Promoting behavior change and actions among stakeholders in the food systems, including farmers, consumers and business people.
 - Sharing the ideas of sustainable food systems with countries in Asian monsoon region and communicating on them in international fora (e.g., UN Food Systems Summit (September 2021))

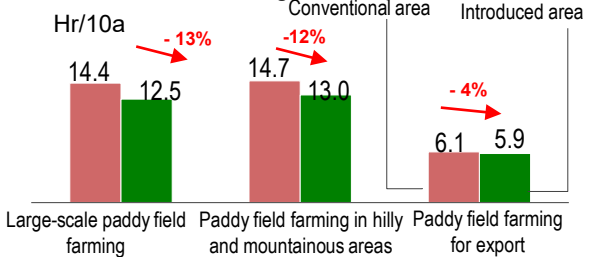
Goals by 2050

- **Zero CO₂ emission** from the agriculture, forestry and fisheries sectors.
- **50% reduction in risk-weighted use of chemical pesticides** by dissemination of the Integrated Pest Management and newly-developed alternatives.
- **30% reduction in chemical fertilizer use.**
- **Increase in organic farming to 1 Mha.** (equivalent to 25% of farmland.)
- **At least 30% enhancement in productivity of food manufacturers**(by 2030).
- **Sustainable sourcing for import materials**(by 2030).
- **90% and more superior varieties and F1 plus trees** in forestry seedling.
- **100% of artificial seedling rates** in aquaculture of Japanese eel, Pacific bluefin tuna, etc.



- The Smart Agriculture Demonstration Project was implemented in FY2019. The project aims to introduce smart agriculture using advanced technologies, such as robotics, AI and IoT at production sites, verify its management effects and disseminate the information.
- The interim report on the demonstration conducted in paddy field farming revealed the result of reducing work hours by the use of robot tractors, drones, etc.
- The “Smart Agriculture Promotion Comprehensive Package” was formulated in October 2020 in consideration of the issues identified through the project, defining the policy direction over the next five years (revised in February 2021).
- Various measures to reduce initial investment using agricultural support services (i.e., sharing services) will be promoted and information dissemination on the effects of introducing smart agriculture technologies will be enhanced.

Case study of results of the paddy farming demonstration (Comparison of work hours per 10a with conventional farming methods)



Source: Prepared by MAFF

Note: Demonstration cases launched in FY2019

Main Example of Smart agricultural technologies

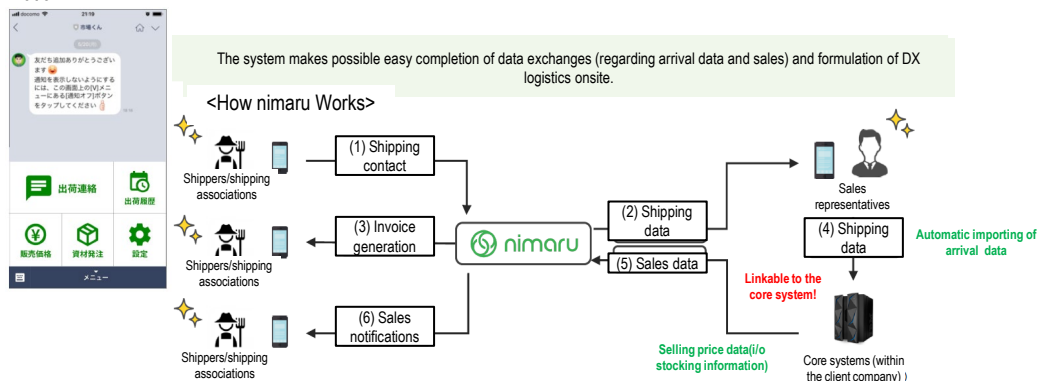


Collaborative work between an unmanned robot tractor and a manned tractor Pesticide spraying by drone



- In agriculture and food-related industries, efforts to transform their environment through the use of digital technologies are underway.
- Fewer than 20% of agricultural management entities utilize data-based agriculture at the moment.
- In rural areas, efforts to use digital technology for wildlife damage control countermeasures, agricultural infrastructure development, etc. are still in progress.
- In distribution and consumption sectors, utilizing digital technology is required to enable data sharing between upstream and downstream.
- In the food manufacturing and food service industries, various advanced technologies are expected to be utilized in various scenarios, such as automation by AI and robot technologies, in order to cope with labor shortages.
- In order to promote DX(*) in agriculture and food-related industries, a new policy blueprint for the use of digital technologies in the agricultural sector named the Conception and Projects for DX of Agriculture was set up. In March 2021, the "Agricultural DX Concept" was put together to promote DX in agriculture and food-related industries.

* DX=Digital Transformation



Seamless and smooth exchange of data on agricultural production and sales between farmers and distributors through an SNS-based application
Source: kikitō Co., Ltd.

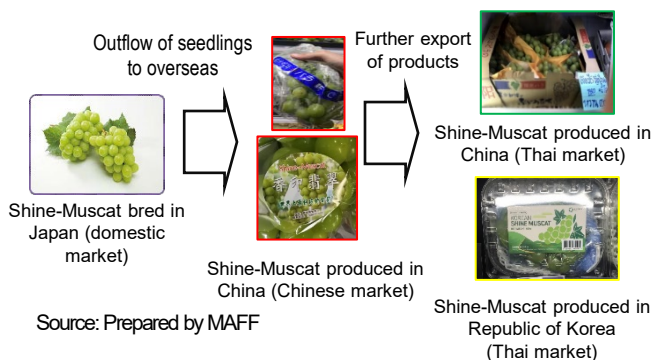
- In November 2020, an outbreak of highly pathogenic avian influenza occurred in Kagawa Prefecture (for the first time in three years) and as of the end of March 2021, 52 cases have been confirmed on farms in 18 prefectures. Approximately 9.87 million birds have been culled so far.
- Following the outbreak of avian influenza, the government notified prefectures across the country to (1) conduct simultaneous appropriate biosecurity management, (2) conduct simultaneous emergency disinfection nationwide, and (3) conduct emergency quarantine exercises.
- In FY2020, five cases of Classical Swine Fever (CSF) occurred on farms in five prefectures.
- Measures against Classical Swine Fever (CSF) include: (1) Ensure thorough biosecurity management, including the installation of protective fences on farms and raising the heating standards for eco-feed; (2) Take measures against ingresses of wild boars by strengthening trapping efforts and spraying oral vaccines, and (3) Proactively vaccinate domestic pigs.



Thorough disinfection of vehicles entering farms

- New plant varieties bred in Japan represent important intellectual properties that will enhance further development of Japan's agriculture. These varieties are highly valued in the foreign export market.
- In order to protect Japan's brand abroad, the amended Plant Variety Protection and Seed Act took into effect, enabling holders of plant breeder's right to restrict the export of their registered varieties outside Japan. It is expected that outflow of Japan's excellent varieties will be controlled, and that the export strategy of Japan's agricultural products by Japan's new varieties will be promoted in the future.

Outflow of Japan's excellent varieties to overseas



- There has been a growing interest worldwide in "Food Tech," a new technology and business model that utilizes new technologies in the food sector in order to connect production, distribution, processing, food service, and consumption. Global investment in FoodTech is estimated to be over 2 trillion yen per year and has been rapidly increasing in recent years.
- In Japan, start-up and other companies carry out business development and R&D activities in fields such as meat alternatives, health and nutrition-oriented food products, cooking robots (as a response to labor shortages as well as individual preferences) and the production of foods, feeds, and fertilizers, using insects, that contribute to the reduction of environmental impact.
- In October 2020, the FoodTech Public-Private Council was assembled. Through its activities, etc., they will promote the creation of new FoodTech markets that take advantage of Japan's unique strengths in such areas as healthy, nutritious food, and insect-based feed and fertilizer production.



Balance, nutritionally completed bread
Source: Base Food Co.



Dishwashing robots respond to labor shortages
Source: Connected Robotics, Inc.

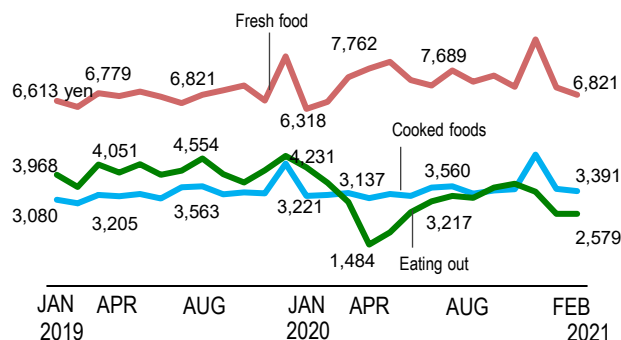
Impact of and new movements in food consumption

Impact on food consumption

<Impact on eating out>

- Since February 2020, school closures, consumer trepidation, and a decrease in inbound demand have had a significant impact on eating/drinking businesses and other related industries.
- Since March 2020, spending on food and beverage services has declined significantly from the previous year.
- Supplies of rice, pasta, and frozen foods were temporarily unavailable or in short supply at supermarkets; however, due to continued production by food manufacturers and holiday deliveries by distributors, a steady food supply was maintained.
- In 2020, the overall market for food and beverage services declined by 15% from the previous year – the largest drop since the survey began in 1994.
- Fast food, supported by demand for take-out and delivery, remained at a 3.7% decrease. On the other hand, with a 50% decline, pubs and izakaya (Japanese-style café bars) took a big hit.
- The state of emergency was reinstated in January 2021. As of the end of March 2021, the number of bankruptcies nationwide relating to the pandemic was highest for restaurants with 205 cases, and fifth highest for food wholesalers with 62 cases.

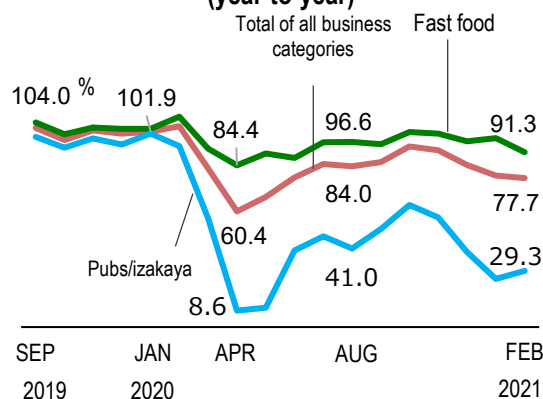
Monthly food expenditures per person



Source: Prepared by MAFF based on the Ministry of Internal Affairs and Communications (MIC) "Family Income and Expenditure Survey" (nationwide usage categories for two-or-more-person households)

Note: Figures are based on the Consumer Price Index (Food: 2015 base) and exclude the effects of price fluctuations

Food and beverage service industry sales by business type (year-to-year)



Source: Prepared by MAFF based on Japan Foodservice Association's "Survey of Market Trends in Eating and Drinking Services"

Number of bankruptcies related to COVID-19 (Top numbers by business type)

	Business type	No. of cases
1	Restaurants/bars	205
2	Construction/engineering	110
3	Hotels/inns	86
4	Retail apparel	67
5	Food wholesalers	62
	Total	1,237

Source: Prepared by MAFF based on "Survey of Trends in New Coronavirus-Related Bankruptcies" published by Teikoku Databank, Inc. on March 31, 2021

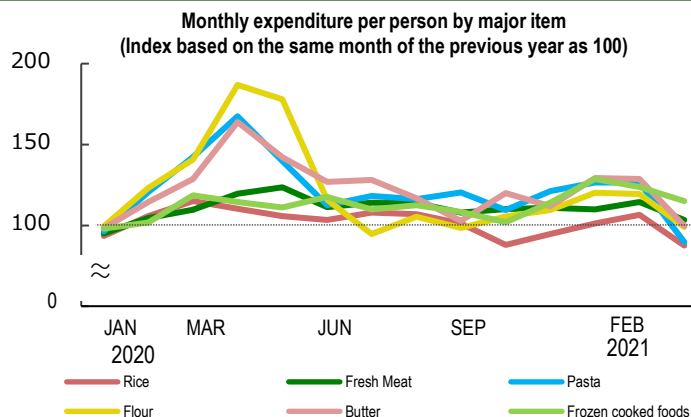
Note: Figures as of March 31, 2021

<Increase in household consumption>

- Since March 2020, spending on products such as rice, pasta, flour, butter, and frozen cooked foods that can be stored for long periods, as well as perishable products such as fresh meat, have increased.
- According to a survey published in July 2020, the number of those who responded that "opportunities to eat at home have increased" and "opportunities to cook have increased" was around 50%, each.

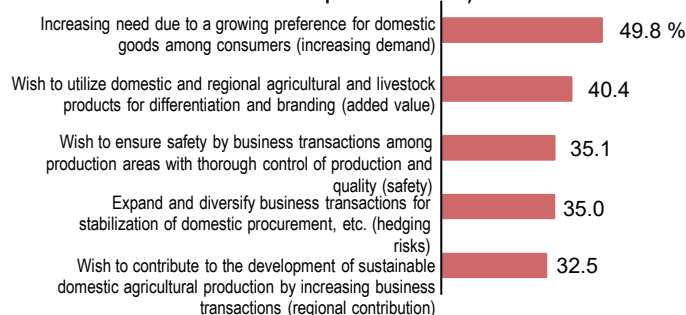
New movements toward the demand for agricultural products

- Due to increases in consumer usage, food and beverage providers have increased their business through take-out and delivery services.
- 10% of consumers said they would support domestic producers (who have lost sales channels) through "ethical consumption".
- 30% of respondents in the food industry want to increase business through the use of domestic production areas. The reason given by 50% of respondents was that their customers are becoming more domestic product oriented. The reason cited by 70% of the respondents was price.
- Unused food meant for consumers was provided to "Children's Cafeterias" through food banks.
- 19 countries, including Russia and other grain exporting countries, have imposed export restrictions due to the spread of COVID-19.
- In January 2021, the WTO informal ministerial meeting and other international meetings were held in which international cooperation was promoted for the purpose of avoiding impacts on food security to include proposals to suppress export restrictive measures and clarify disciplines of export restriction.
- Most countries that once implemented export controls have since lifted them. We will continue monitoring developments in each country to prevent the implementation of unfair export controls.

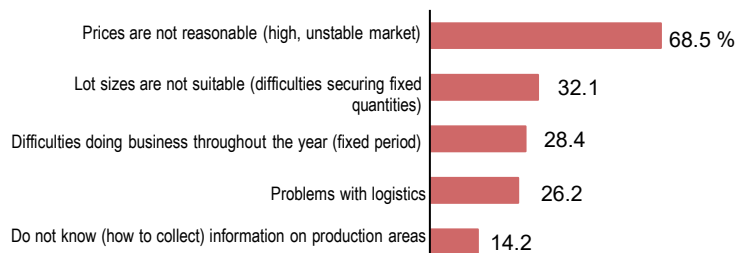


Source: Prepared by MAFF based on the MIC's "Family Income and Expenditure Survey"
 Note: 1) Figures are based on the Consumer Price Index (Food: 2015 base) and exclude the effects of price fluctuations
 2) Calculation method: Current month amount / Same month last year's amount x 100

Willingness to do business with domestic production areas during the COVID pandemic (multiple responses) (Reasons for wanting to increase business transactions with domestic production areas)



(Issues with business transactions with domestic producers)



Source: Prepared by MAFF based on the "Food Industry Trend Survey" by the Japan Finance Corporation (released in September 2020)

Note: The question on reasons for wanting to increase business transactions with domestic production areas is directed at those who responded that is what they wanted



Foods acquisition through food banks



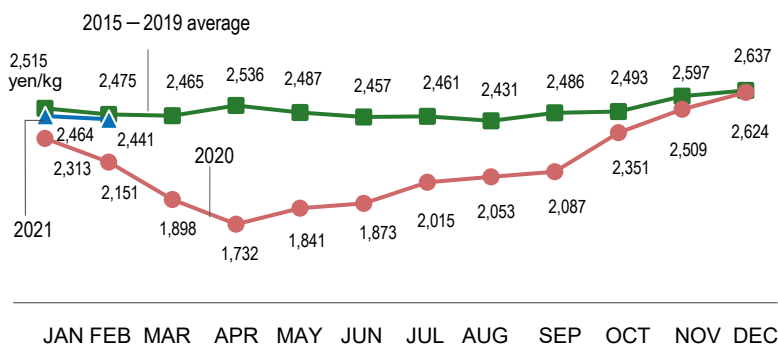
Minister of Agriculture, Forestry and Fisheries speaking at an online WTO informal ministerial meeting

Impact of and new movements in agricultural production and sales

Impacts on market prices and sales channels

- The expansion in COVID-19 affected wholesale prices, etc., mainly for wagyu beef, seafood and flowering plants.
- Wholesale prices for wagyu beef sharply fell in April 2020. Prices have been on a recovery trend since May.
- Due to a decline in demand for dairy products for school lunches and commercial use, the volume of raw milk processed into butter and powdered skimmed milk (products that are storable for longer periods of time) increased.
- Wholesale market prices of cut flowers decreased from March to May 2020. These prices recovered after June due to increased household demand and other factors, but declined again after the state of emergency was issued in January.
- The volume of rice sold has decreased since April 2020, mainly due to home meal replacement (HMR)/eating out.

Wholesale price of beef carcasses (castrated wagyu "A4")

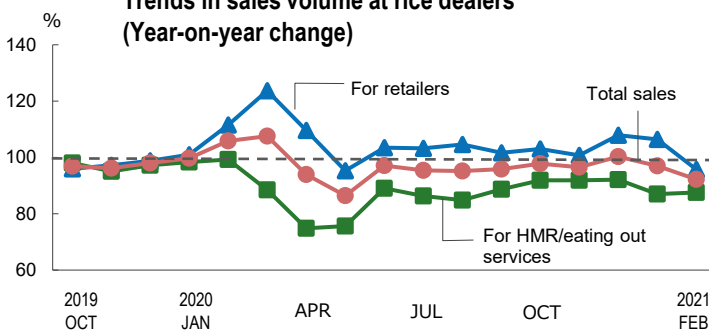


Source: Prepared by MAFF based on the "Statistics Livestock"

Notes: 1) Total of 10 central wholesale markets (CWMs)

2) 2015-2019 figures are simple averages for the relevant months of each year

Trends in sales volume at rice dealers (Year-on-year change)

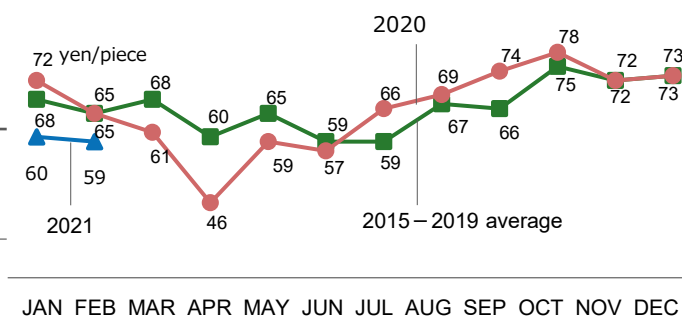


Source: Prepared based on the "Report on Rice Transactions" by MAFF

Notes: 1) The survey targets sellers who supply 50,000 tons or more of brown rice per year

2) Figures are indexed sales volumes of those surveyed

Wholesale market prices of cut flowers

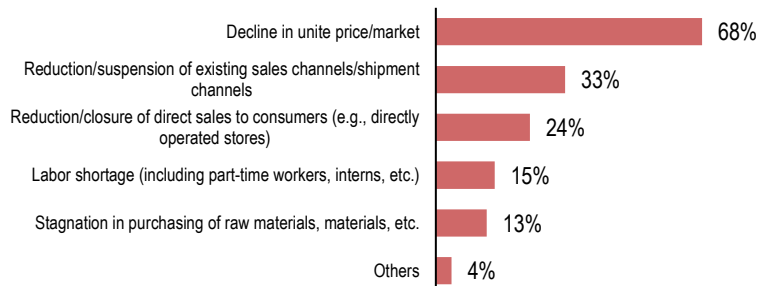


Source: Prepared by MAFF based on the "Market Statistics (Monthly Report)" by the Tokyo Metropolitan Central Wholesale Market

Note: 2015-2019 figures are simple averages for the relevant months of each year

- In the July 2020 survey, half of farmers said their sales were negatively affected (the figure rose to over 60% in the January 2021 survey). The most common reason was a decline in per unit and market prices, followed by shrinking existing sales channels and closures of directly managed facilities, etc.

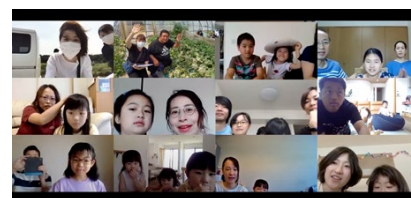
Specific negative impacts on farmers due to the spread of COVID-19 infection



Source: Prepared by MAFF based on Japan Finance Corporation's "Survey of Agricultural Business Conditions" (released in September 2020)

Movements to maintain and expand sales channels

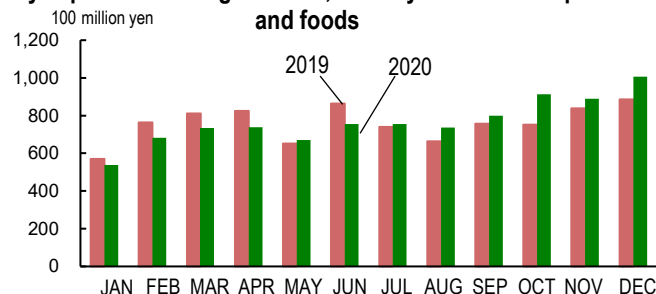
- Producers and tourist farms have maintained and expanded their sales channels by using online to sell directly to consumers and changing their sales channels from eating out service to retail and processing.
- Agricultural, forestry and fisheries products and foods export value trended downward until June 2020, but have increased year-to-year since July. Eggs and grapes, mainly for home consumption, have increased.



Online melon picking

Source: Ibaraki Prefecture

Monthly export value of agricultural, forestry and fisheries products and foods

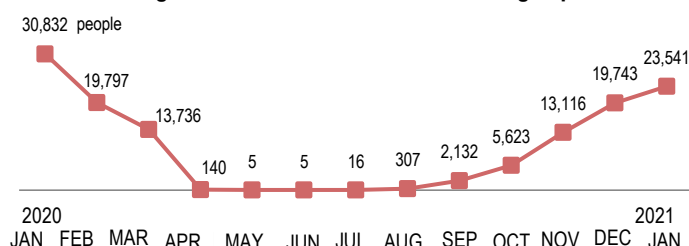


Source: Prepared by MAFF based on "Trade Statistics" (Ministry of Finance)

Impact due to entry restrictions

- Restrictions on the entry of foreign nationals have significantly reduced the number of foreigners who planned to come to Japan from April 2020.
- Despite concerns about the impact of human resource shortages on the agricultural sector, the government responded by securing alternative human resources from other industries.

Number of foreign technical intern trainees entering Japan in all fields



Source: Prepared by MAFF based on "Monthly Statistics on Immigration Control" (Immigration Services Agency of Japan)

Movements to secure labor force

- Efforts have been implemented including securing labor through matching with other industries such as accommodation, addressing labor shortages through agriculture-welfare collaboration and the introduction of smart agricultural machinery.



Co-selection of carnations through agriculture-welfare collaboration



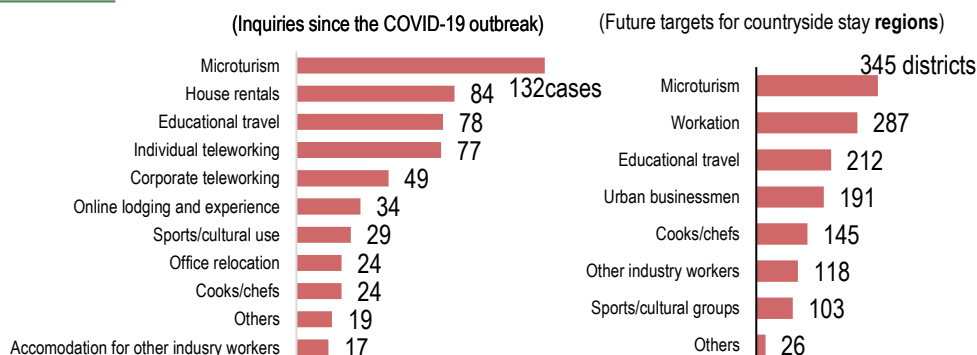
Introduction of smart agricultural equipment (automatic broccoli harvester)

New movements of interest in rural areas, ways of working, and interaction

Growing interest in rural areas

- Interest in rural areas has increased as telework and other location-independent work styles have developed during the pandemic.
- The number of inquiry about workation has increased in countryside stay regions nationwide.

Survey of "workation" requirements in countryside stay regions



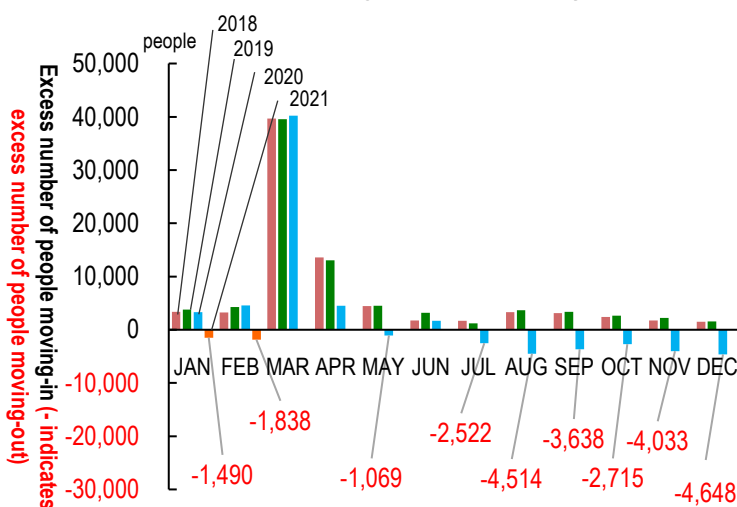
Prepared by MAFF

Note: Inquiries/requests since the outbreak of COVID-19, and the results of responses to questions about targets that should be considered in the future (multiple choice)

Movements regarding migration

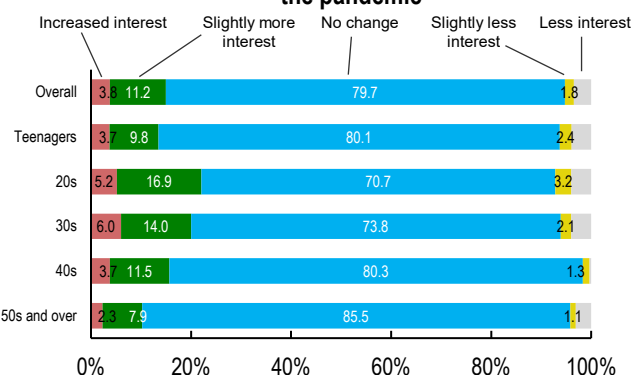
- In May 2020, Tokyo experienced an excess of out-migration for the first time since the start of the survey, and this trend has continued since July.
- Urban residents living in the three major metropolitan areas have increased intents to move to rural areas – particularly among those in their 20s.
- Some municipalities held online immigration counseling events.

Moving-in and -out in Tokyo



Source: Prepared by MAFF based on the "Population Movement Report from the Basic Resident Register" (Ministry of Internal Affairs and Communications)

Changes in interest in rural migration under the influence of the pandemic



Source: Cabinet Office, "Survey on Changes in Attitudes and Behaviors in Daily Life under the Influence of COVID-19" (released in June 2020)

Note: 1) In May-June 2020, an online survey was conducted among domestic residents (10,128 valid responses). Residents of the three major metropolitan areas were targeted in a questionnaire

2) Responses to questions regarding changes in interest in rural migration due to the COVID-19 pandemic

3) The three largest metropolitan areas are the Tokyo metropolitan area (Saitama, Chiba, Tokyo, and Kanagawa prefectures), the Nagoya metropolitan area (Gifu, Aichi, and Mie prefectures), and the Osaka metropolitan area (Kyoto, Osaka, Hyogo, and Nara prefectures)

Increasing interest in agriculture and rural areas and movement of half-farmer, half-X

- Visitors to counseling sessions for those wishing to start farming in FY2020 have increased since September. This suggests growing interest in agriculture.
- Some municipalities have implemented efforts to expand "half-farmer, half-X" (working in other jobs while farming, i.e., farming and accommodation, farming and sake brewing, etc.) in the production field.

Visitors to the New Agriculturist Fair

	Agriculture EXPO (Jul.)	Agriculture Job Fair LIVE (Aug.)	Agriculture EXPO (Sep.)	Agriculture Job Fair LIVE (Oct.)	Agriculture EXPO (Nov.)	Agriculture Job Fair LIVE (Dec.)	Agriculture EXPO (Jan.)	Agriculture Job Fair LIVE (Feb.)
No. of visitors	740	210	1,209	311	560	219	856	305
Year-on-year change	98%	93%	199%	136%	178%	166%	102%	132%

Source: Prepared by MAFF

Note: Number of visitors to the events held in Tokyo and Osaka. Year-on-year figures are based on FY2019 as 100



Practitioners of half-farmer, half-X
(farming and working at a sake brewery)
Source: Shimane Prefecture



Practitioners of half-farmer, half-X
(half-farmer, half-guesthouse keeper)
Source: Farm (mandarin oranges)-style guesthouse "aotokuru"
(Tokushima Prefecture)

Response in the agriculture, forestry, fisheries, and food industries

The MAFF has implemented various measures in its emergency economic efforts, etc., from the perspective of ensuring a stable supply of food to the public in response to the pandemic.

Implementation of emergency economic measures, etc.

➤ Support for the continuation of management of agricultural, forestry, and fishery businesses.

- Support livestock farmers to improve their management in order to cope with the decline in carcass prices and the increase in powdered skimmed milk and butter stocks.
- Provide financial support to farmers who are actively engaged in the cultivation of highly profitable crops.
- Support the business continuity and cash flow of agriculture, forestry, fishery and food-related businesses.
- Support the switch from imported agricultural and livestock products to domestic products, and the development of systems for the continuous and stable supply of domestic agricultural and livestock products.



Plus One Project poster

➤ Support agricultural, forestry, and fisheries businesses, etc. by promoting sales and increasing consumption of domestic agricultural, forestry, and fisheries products.

- Call for increased consumption of milk and dairy products (Plus One Project).
- Support and promote efforts to expand the use of flowers (Hana Ippai Project).
- Promote efforts to sell and diversify sales channels for domestic agricultural, forestry, and fisheries products (including processed products such as sake and shochu).
- Support efforts to maintain and promote the export of agricultural, forestry, fisheries, and food products.
- Support efforts to provide unused food to Children's Cafeteria, etc. through food banks.
- Support efforts to stimulate demand from restaurants and bars.
- Support efforts to restore and expand demand for sake brewing rice (the raw material for sake).



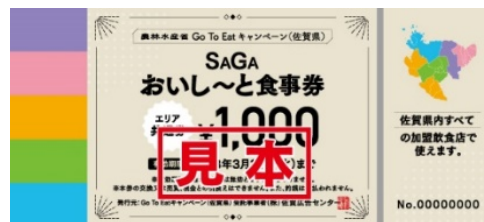
Flowers in front of the main entrance of the MAFF building



School meals served with support from wagyu beef sales promotion

Go To EAT Campaign

- In October 2020, the government launched the "Go To Eat Campaign" to support restaurants operating as well as agriculture, forestry, and fisheries businesses that supply food, while taking measures to prevent infection.
- (1) Premium meal coupons that can be used at registered restaurants and bars are issued, (2) Points that can be used at restaurants and bars in the future will be given to consumers who make reservations and visit them during the period via online restaurant reservation sites.



Premium meal coupon for the Go To Eat Campaign

- Support for securing a labor force for agricultural, forestry and fisheries workers, etc.
- Support for securing a labor force to alleviate shortages due to immigration restrictions, etc.



Automatic asparagus harvesting robot

Prevention of the spread of infection and response to stable food supply

- Disseminate information to the public through websites, MAFF applications, SNS, etc.
- Request smooth distribution to food-related businesses in case of temporary shortages of food items.
- Support competent organizations to develop industry-specific guidelines for infection prevention, etc.

Future actions to be taken

- Risks affecting food supply, such as the spread of COVID-19, have become more diverse.
- Expectations for improving food self-sufficiency and strengthening food security have been increasing. The government will continue to work on reducing the impact of diseases, closely monitor the statuses of outbreaks and take necessary measures.



Poster calling for efforts to reduce the risk of infection during dinner