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The Situation Surrounding Organic Agriculture in Japan

May 2024

Ministry of Agriculture, Forestry and Fisheries

Sustainable Agriculture Division, Crop Production Bureau

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What are Organic Agriculture and Organic Farm Products?

Organic agriculture

- According to the Codex Alimentarius Commission's *1 Guidelines for the Production, Processing, Labelling and Marketing of Organically produced Foods, "Organic agriculture is a holistic production management system which promotes and enhances agroecosystem health, including biodiversity, biological cycles, and soil biological activity."

  *1: An international intergovernmental organization established in 1963 by the FAO and WHO with the objectives of protecting consumer health and ensuring fair trade in food. It is responsible for formulating international food standards, and Japan has been a member since 1966.

- In Japan, the Act on the Promotion of Organic Agriculture (Act No. 112 of 2006) defines organic agriculture as agriculture that uses methods that basically do not, in principle, use chemically synthesized fertilizers, pesticides or genetic modification technology and which aims to minimize the burden of agricultural production on the environment.

Organic farm products

Agricultural products produced in accordance with the standards of the Japanese Agricultural Standard for Organic Products of Plant Origin (Organic JAS Standard), which conforms to the Codex Alimentarius Commission's Guidelines.

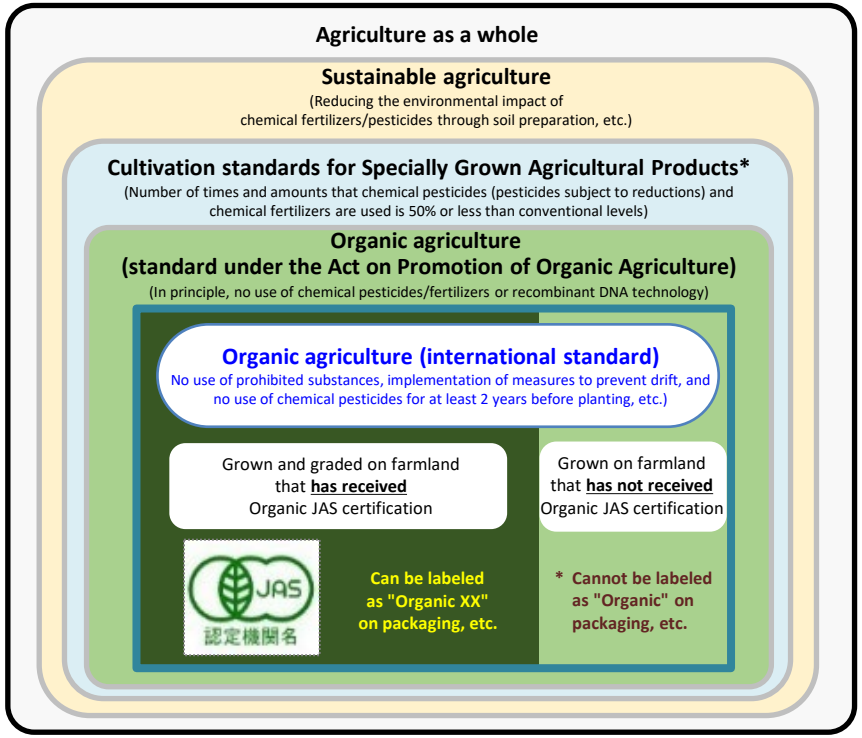
A **third-party organization conducts inspections** to ensure that production complies with these standards, **and businesses that are certified** can use the "Organic JAS Mark" and label their products as **"Organic XX" or "Organic," etc.**

Agricultural products that have not been certified cannot be labeled as "Organic," etc.

The Japanese Agricultural Standard for Organic Products of Plant Origin (Organic JAS) stipulates that, based on the principle of **avoiding the use** of chemically synthesized fertilizers and pesticides, in order the fully utilize the productivity of farmland as derived from the properties of the soil and in order to adopt cultivation management methods that minimize the environmental burden caused by agricultural production:

- ✓ **Necessary measures must be taken to prevent prohibited materials from drifting or flowing in from the surrounding area.**
- ✓ **No chemical fertilizers or synthetic chemical pesticides must be used for more than two years prior to seeding or planting.**
- ✓ **No use of recombinant DNA technologies or irradiation must be used**

■ Relationship between the use of chemical fertilizers/pesticides (standards) and terminology



* Based on the definition of "Specially Grown Agricultural Products" in the third definition of the 2007 Guidelines for the Labeling of Specially Grown Agricultural Products.

MIDORI Strategy for Sustainable Food Systems (overview)

~ Innovation will be the key to enhance both productivity potential and sustainability~
Measures for achievement of Decarbonization and Resilience with Innovation (MIDORI)

May 2021
MAFF

Current situation and future issues

- Decreasing numbers of/aging producers and the decline of local communities
- Global warming and large-scale natural disasters
- Supply chain disruptions triggered by COVID-19 and increase in home-cooked meals
- Strengthening response to SDGs and the environment
- Participation in international rule-making

"Farm to Fork Strategy" (May 2020) Reduce the overall use and risk of chemical pesticides by 50%, and boost organic production to reach 25% by 2030

"Agriculture Innovation Agenda" (Feb. 2020)
Increase agricultural production by 40 percent while cutting the environmental footprint of U.S. agriculture in half by 2050

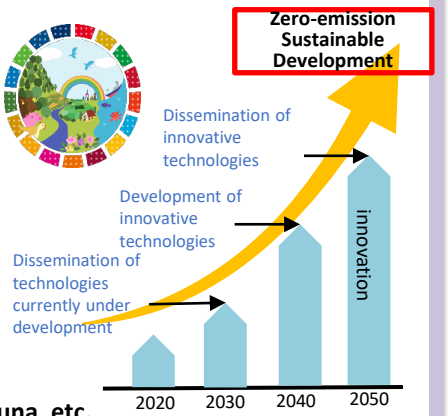
There is an urgent need to build sustainable food systems that also take into account the future of local communities and of agriculture, forestry, and fisheries

In order to build sustainable food systems, the "MIDORI Strategy for Sustainable Food Systems" was formulated, and initiatives at each stage of procurement, production, processing, distribution, and consumption are being promoted from a medium- to long-term perspective, along with innovations to reduce environmental burdens, such as via carbon neutrality

Goals and Directions for Initiatives

Key Performance Indicators by 2050

- Zero **CO2 emission** from fossil fuels combustion in 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 1Mha (equivalent to 25% of farmland)**
- **At least 30% enhancement in productivity of food manufacturers** (by 2030)
- **Sustainable sourcing for import materials** (by2030)
- **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.**



Strategic Approach

By 2040, progressively develop innovative technologies and production systems (technology development goal)
By 2050, based on the development of innovative technologies and production systems:
In the future, promote the "greening of policy methods" and realize their social implementation (social implementation goal)

* "Shift to green policy methods":
  By 2030, concentrate support measures on individuals engaged in sustainable food, agriculture, forestry, and fisheries.
  By 2040, based on the state of technological development, the goal is to achieve carbon neutrality for subsidized projects.
  Enhance cross-compliance requirements together with expanded subsidies and a more complete menu of measures to reduce environmental impact.
* Review regulations that will be necessary at that time, with a view to supporting sustainable initiatives and the social implementation of innovative technologies and production systems. Review the regulations necessary to build local production for local consumption energy systems.

Expected effects

Economic — **Building a sustainable industrial base**

- Shift from imports to domestic production (procurement of fertilizers, feed, and raw materials)
- Increase exports by improving the reputation of domestic products
- Expand diverse working styles by utilizing new technologies, and expand the base of producers

Social — **Enrich people's diets; increase local employment and income**

- Healthy Japanese-style diet in collaboration with producers and consumers
- Local economic circulation utilizing local resources
- Local communities where diverse people coexist

Environ-mental — **Passing on a safe and secure global environment for the future**

- Food, agriculture, forestry, and fisheries in harmony with the environment
- Contributing to carbon neutrality by switching away from fossil fuels
- Reducing costs by limiting the use of chemical pesticides and fertilizers

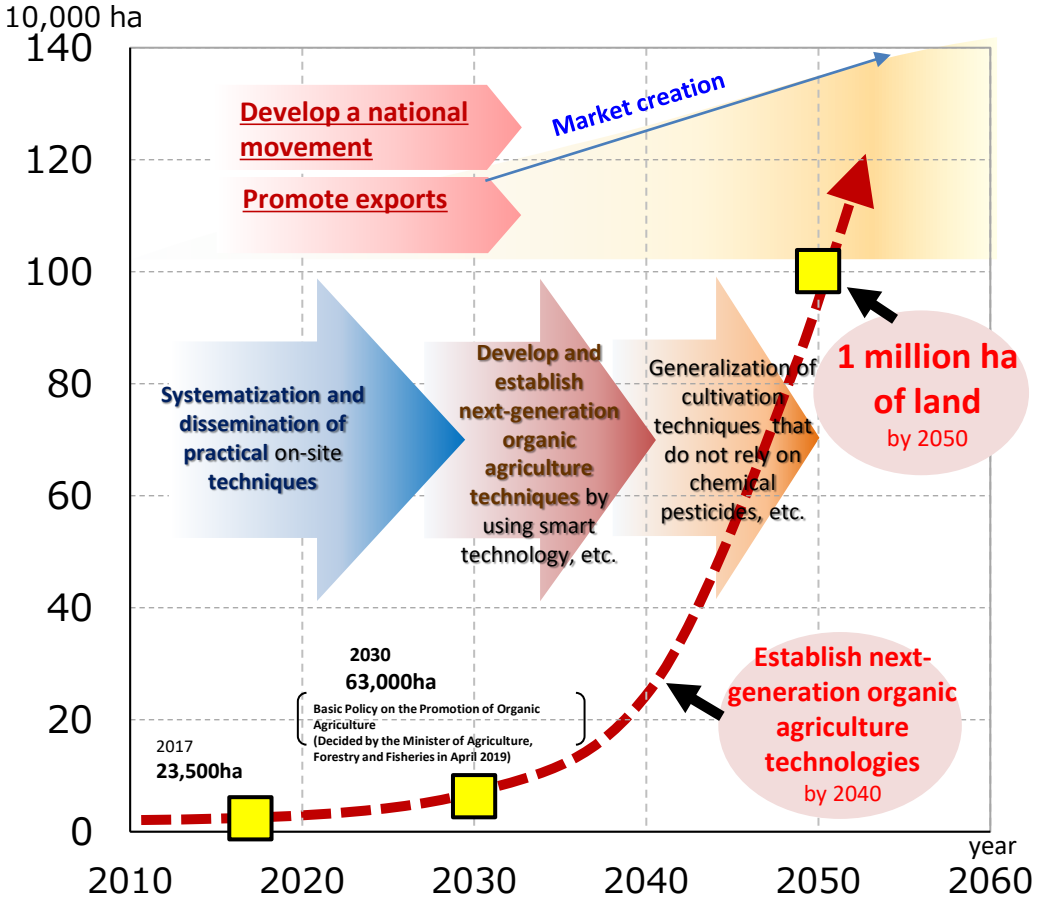
Presented as a model for sustainable food systems in the Asian monsoon region, and participated in international rule-making (such as at the UN Food Systems Summit (September 2021))

Expanding Organic Agriculture Efforts

Goal

- **By 2050, expand the organic market** while also **increasing the proportion** of arable land area **used for organic agriculture to 25% (1 million hectares)** (*organic agriculture as practiced internationally)

(・**By 2040, establish next-generation organic agriculture techniques** for major crops that many farmers can use)



Basic Policy on the Promotion of Organic Agriculture

Promotion and Dissemination Goals

● Set **production and consumption goals in anticipation of increased demand for organic food, both domestically and internationally**, 10 years from now (2030)

Area used for organic agriculture
23.5 thousand ha(2017) → **63 thousand ha** (2030)

Number of organic farmers
11.8 thousand (2009) → **36 thousand** (2030)

Domestic share of organic food products
60%(2017) → **84%** (2030)

Percentage of people who eat organic food at least once a week
17.5%(2017)→**25%** (2030)

Promotion Measures

- **Developing human resources**
- **Creating production areas**
- **Diversifying sales opportunities**
- **Increasing consumer understanding**
- **Technology research and development**

Recent Examples of Research and Surveys on the Effects of Organic Agriculture on the Environment

SUSTAINABLE DEVELOPMENT GOALS

➢ Research and survey results have been published showing that organic agriculture contributes to conserving biodiversity and to preventing global warming

Relationship between cultivation methods and biodiversity in paddy fields

15 LIFE ON LAND — Contribute to maintaining ecosystems and biodiversity

Biota	Comparison of cultivation methods
Red list plants	Conventional < reduced-pesticide < organic
Tetragnatha genus spiders	Conventional < reduced-pesticide / organic
Sympetrum genus dragonflies	Conventional < organic
Pelophylax nigromaculatus genus frogs	Conventional / reduced-pesticide < organic
Waterfowl	More common in areas with more organic paddy fields

August 28, 2019 (National Agriculture and Food Research Organization) press release: "(Research Results) Clarifying the Relationship between Organic/Reduced-Pesticide Cultivation and Biodiversity"

Survey results on the effectiveness of organic farming in preventing global warming

13 CLIMATE ACTION — Proper soil management can help mitigate climate change

Initiative name	Amount of greenhouse gas emissions reduced per unit* (tCO_2/ha/year)	Area of activities (ha)	Amount of greenhouse gas emissions reduction (tCO_2/year)
Organic farming	1.04	11,610	12,074

*Figures comparing (subtracting) greenhouse gas emissions when organic farming is practiced and when conventional management (use of chemical fertilizers) is used.

Compiled by the Sustainable Agriculture Division based on materials from the Third Party Committee on the Direct Payments for Environmentally Friendly Agriculture (9th meeting, March 7, 2024)

Overseas examples of the effects of organic agriculture

3 GOOD HEALTH AND WELL-BEING — Preventing water pollution by reducing the use of chemical fertilizers and pesticides contributes to people's health and welfare

6 CLEAN WATER AND SANITATION — Prevents chemicals from running off into waterways

13 CLIMATE ACTION — Proper soil management can help mitigate climate change

15 LIFE ON LAND — Contribute to maintaining ecosystems and biodiversity

Report from the Heinrich von Thünen Institute (a think tank of the German Federal Government)

In 2019, the results of a comparative study of 2,816 organic and conventional agriculture cases from 528 previous research papers were compiled, and it was concluded that organic agriculture has **advantages (organic agriculture is superior) in terms of water quality conservation, soil fertility, biodiversity, prevention of global warming (soil carbon storage), prevention of soil erosion, resource usage efficiency (nitrogen, etc.), and** animal welfare.

(Compiled by the Sustainable Agriculture Division based on https://literatur.thuenen.de/digbib_extern/dn060722.pdf)

(Reference)

The relationship between organic agriculture and the SDGs, according to IFOAM (International Federation of Organic Agriculture Movements)

2 ZERO HUNGER — Sustainable agricultural systems promote sustainable food production

3 GOOD HEALTH AND WELL-BEING — Preventing water pollution by reducing the use of chemical fertilizers and pesticides contributes to people's health and welfare

6 CLEAN WATER AND SANITATION — Prevents chemicals from running off into waterways

12 RESPONSIBLE CONSUMPTION AND PRODUCTION — Purchasing organic foods contributes to sustainable food production

13 CLIMATE ACTION — Proper soil management can help mitigate climate change

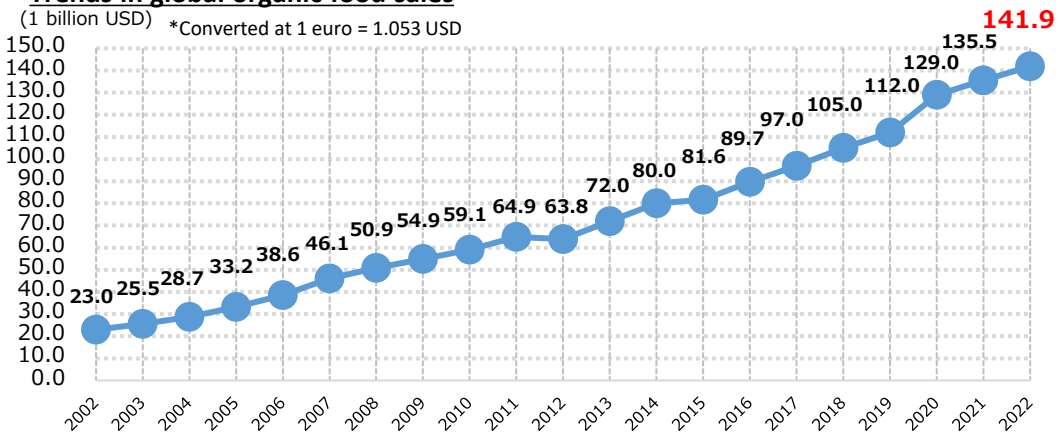
15 LIFE ON LAND — Contribute to maintaining ecosystems and biodiversity

* Prepared by the Sustainable Agriculture Division based on materials from IFOAM Japan

Organic Food Market: (1) Globally

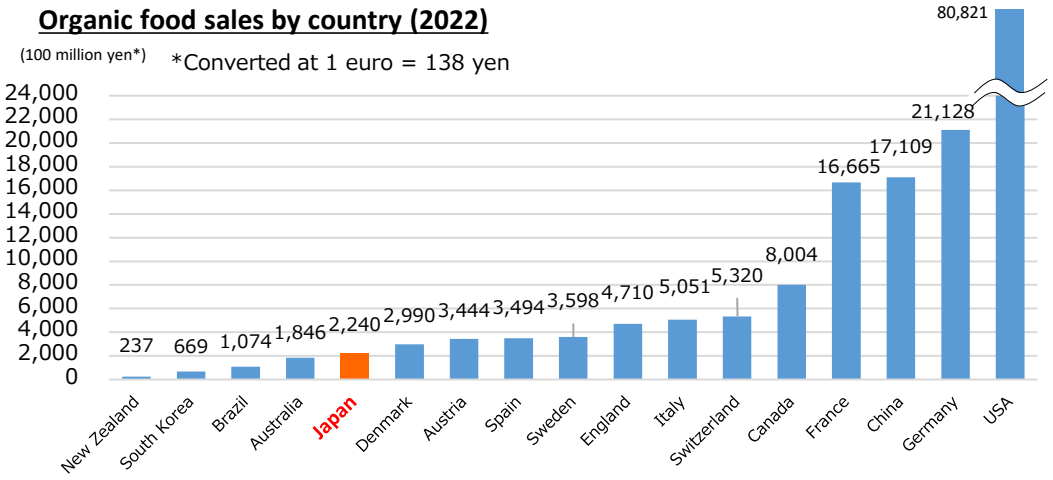
- Global organic food sales continue to grow, reaching approximately $141.9 billion in 2022 (approx. 18.7 trillion yen at 1 USD = 132 yen).
- Sales are over 8 trillion yen in the US, over 2 trillion yen in Germany, and over 1 trillion yen in China and France. Japan is the second largest organic food market in Asia after China and the 13th largest in the world (2022).
- In Germany and France, organic food sales are highest in general stores. In Germany, there has been remarkable growth over the past two years (2021).
- The global average organic food consumption per capita is 2,346 yen (17.0 euros), with a high tendency in Switzerland and Nordic countries (2022).

Trends in global organic food sales



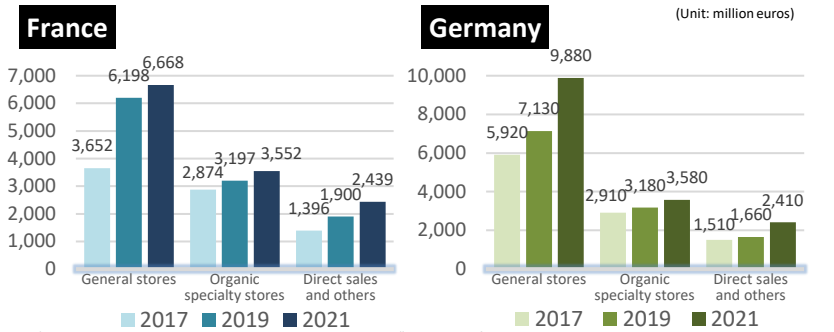
*Prepared by the Sustainable Agriculture Division based on "The World of Organic Agriculture Statistics & Emerging Trends 2010-2024" by FiBL＆IFOAM

Organic food sales by country (2022)



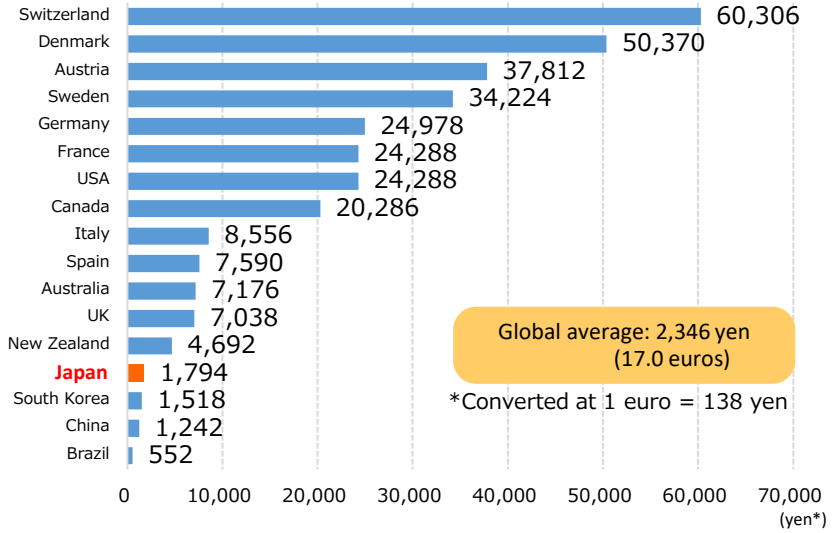
* Prepared by the Sustainable Agriculture Division based on "The World of Organic Agriculture Statistics & Emerging Trends 2024" by FiBL＆IFOAM

Trends in organic food sales by retail format in European countries



* Prepared by the Sustainable Agriculture Division based on "The World of Organic Agriculture Statistics & Emerging Trends 2023" by FiBL＆IFOAM

Annual per capita consumption of organic food by country (2022)



* Prepared by the Sustainable Agriculture Division based on "The World of Organic Agriculture Statistics & Emerging Trends 2024" by FiBL＆IFOAM

Organic Food Market: (2) Japan

- Based on consumer surveys, the organic food market size in Japan is estimated to have been 130 billion yen in 2009, 185 billion yen in 2017, and 224 billion yen in 2022.
- In surveys conducted in 2022, 32.6% of consumers stated that they consume organic food at least once a week.

Estimated size of the organic food market in Japan (based on consumer surveys)

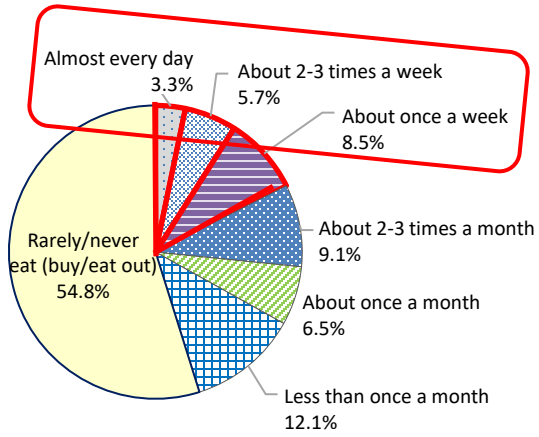
Estimate year	2009	2017	2022
Estimated size of the organic food market in Japan (yen)	130 billion yen	185 billion yen	224 billion yen

* Prepared by the Sustainable Agriculture Division. 2009 estimates are based on the IFOAM Japan/Organic market Research Project; 2017 estimates are based on the "Survey on Organic Food Markets" by MAFF; and the 2022 estimates are based on the "Project to Examine Estimation Methods for Organic Food market Size and for the Area Utilized for Organic Agriculture" by MAFF.

Consumer survey results

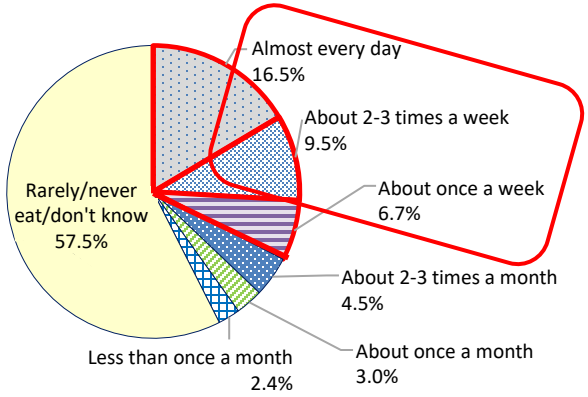
2017

Consume organic food at least once a week = 17.5%



2022

Consume organic food at least once a week = 32.6%

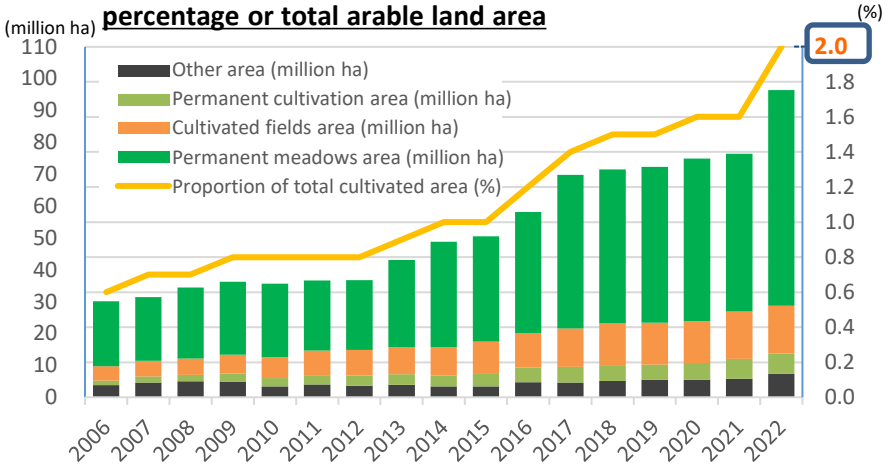


Prepared by the Sustainable Agriculture Division based on "Project to Examine Estimation Methods for Organic Food market Size and for the Area Utilized for Organic Agriculture" by MAFF.

Land Area Used for Organic Agriculture: (1) Globally

- The global land area used for organic agriculture has tripled over the past 15 years, to approx. 96.4 million hectares in 2022, accounting for approx. 2% of total arable land area. Over the past decade or so, there has been a notable expansion of permanent meadows.
- The percentage of land area used for organic agriculture is high in European countries, but low in the United States and China, at less than 1%.
- In terms of the percentage of land area used for organic agriculture by cultivation category and land type, Japan tends to have a higher proportion of paddy fields and a lower proportion of meadows compared to Europe and the United States.

Global organic agriculture land area, and its percentage or total arable land area



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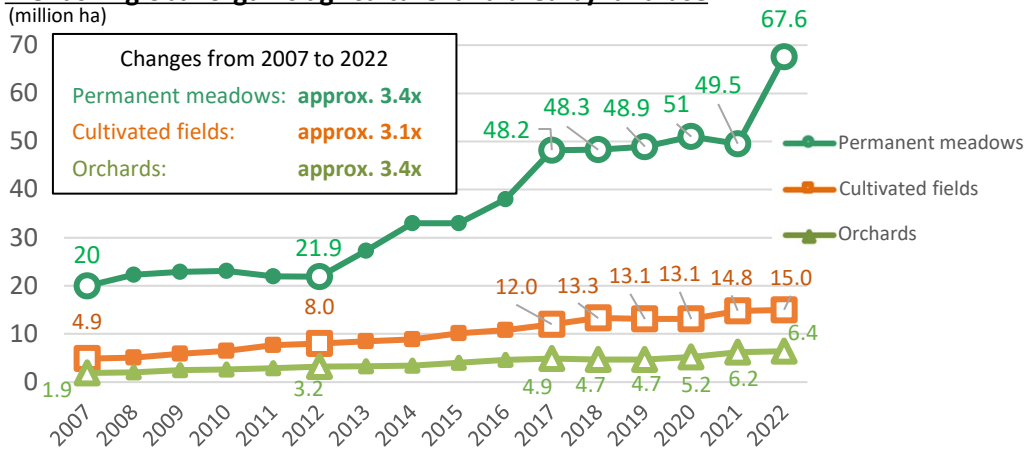
Trends in global organic agriculture land area by land use



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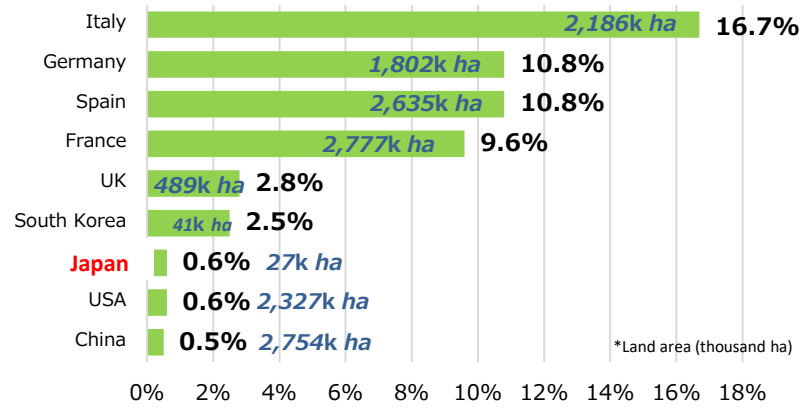
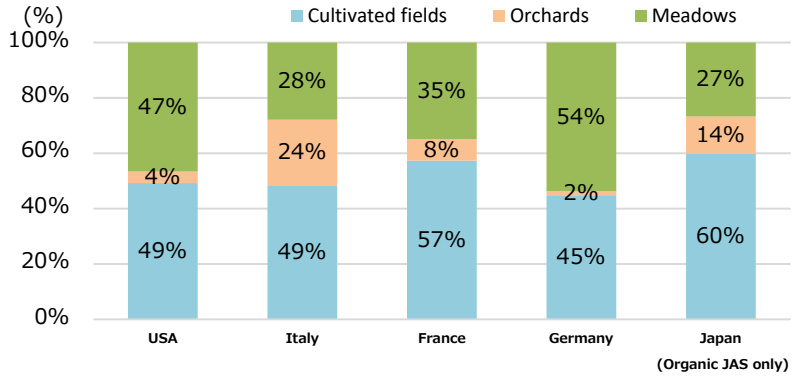
Organic agriculture land area, and its percentage of arable land area (2021)



Note 1: Prepared by the Sustainable Agriculture Division based on "The World of Organic Agriculture Statistics & Emerging Trends 2023" by FiBL＆IFOAM

Note 2: Japan includes agricultural land area that has not received Organic JAS certification but where international-standard organic agriculture is being practiced

Percentage of organic agriculture land area by land use in each country (2021)

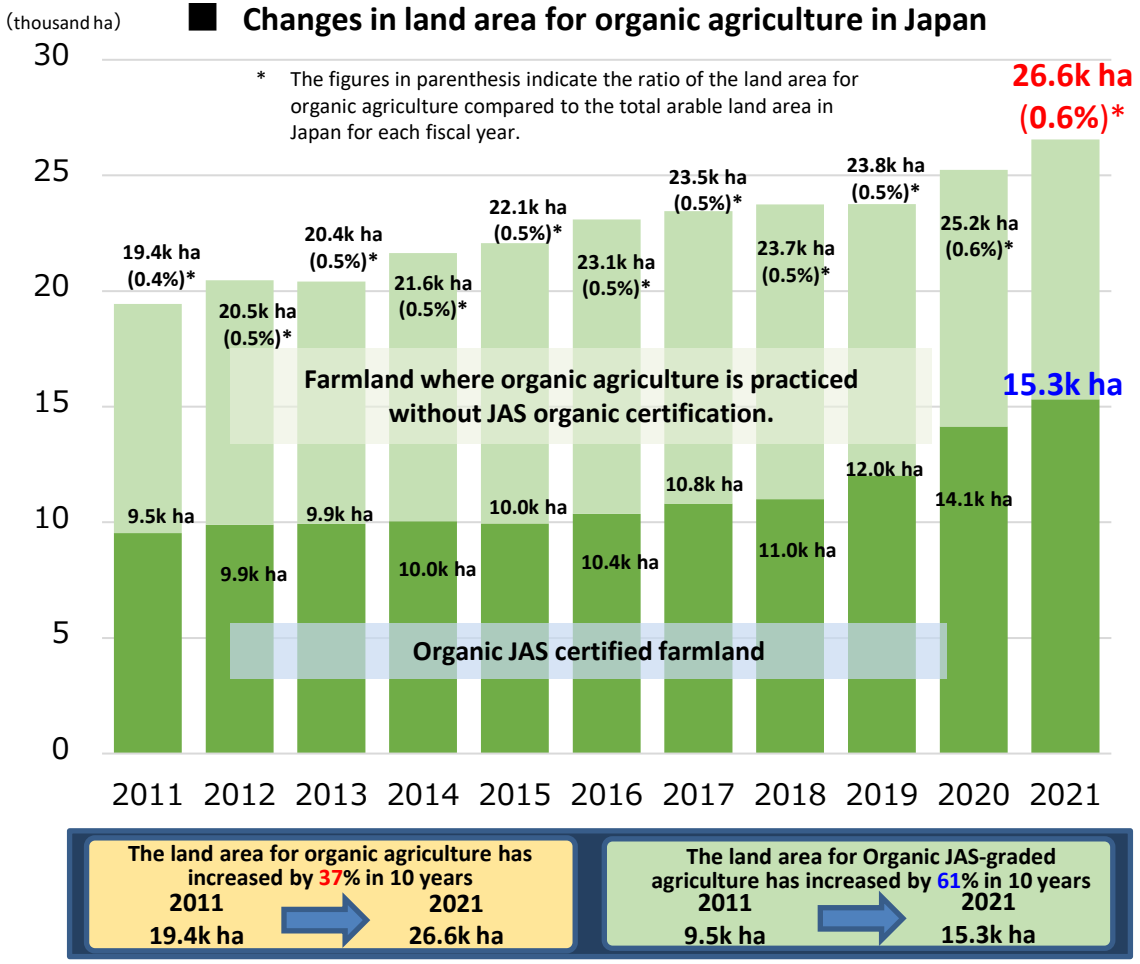


* Prepared by the Sustainable Agriculture Division based on "The World of Organic Agriculture Statistics & Emerging Trends 2023" by FiBL＆IFOAM

Land Area Used for Organic Agriculture : (2) Japan

- The land area for organic agriculture in Japan is on an upward trend, and Organic JAS land in particular has expanded by 60% in 10 years.
- By land category, the expansion has primarily been in ordinary cultivated land and pastures.

Changes in land area for organic agriculture in Japan

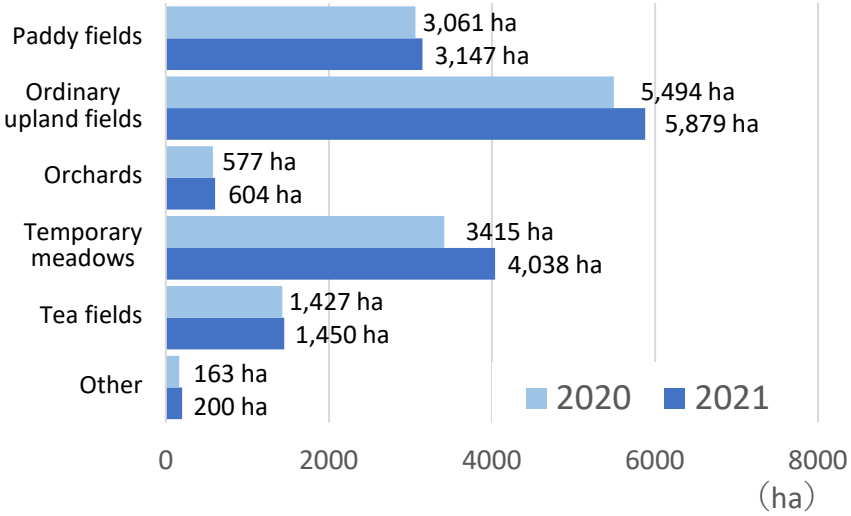


The land area for organic agriculture has increased by 37% in 10 years
2011 19.4k ha → 2021 26.6k ha

The land area for Organic JAS-graded agriculture has increased by 61% in 10 years
2011 9.5k ha → 2021 15.3k ha

* Organic JAS certified farmland was surveyed by the Food Manufacture Affairs Division of the Ministry of Agriculture, Forestry and Fisheries. Farmland that has not received Organic JAS certification was estimated by the Sustainable Agriculture Division (Note: From 2011 to 2014, estimates were made based on the results of the "2010 Organic Agriculture Basic Data Creation Project" survey (MOA Natural Farming Culture Foundation) or from interviews with prefectures. From 2015 onwards, estimates were compiled by the Sustainable Agriculture Division based on interviews with prefectures.)

Changes in land area by land use for Organic JAS agriculture (FY2020 to FY2021)



Prefectures with the largest growth in Organic JAS land area by land category (FY2020 to FY2021)

Paddy fields
1. Fukui Pref. 34ha
2. Miyagi Pref. 31ha

Ordinary upland fields
1. Hokkaido 155ha
2. Gunma Pref. 35ha

Temp. meadows
1. Hokkaido 638ha
2. Chiba Pref. 21ha

Tea fields
1. Kagoshima Pref. 20ha
1. Kyoto Pref. 20ha