

**APAC-SCA**

Asia-Pacific Society for  
Cellular Agriculture

# Prospect of Cultivated Meat & Seafood in Japan

Understanding consumer perception and acceptance



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# FOREWORD

Motivated by a desire for increased food security, sustainability, bio-restoration, and zoonotic disease mitigation, the cultivated meat and seafood industry has been undertaking a transition from small-scale research & development to global commercialisation over the past decade.

To effectively bring cultivated meat and seafood to market, the Asia-Pacific Society for Cellular Agriculture (APAC-SCA) sought to understand consumers' perception and acceptance of these products for companies to produce animal meat that consumers crave without the downsides of the conventional animal agriculture system.

This research conducted in Japan will be valuable for the industry, government and other stakeholders to assess consumers' attitudes and acceptance of cultivated meat and seafood, alongside the areas for collaboration, for the sector to reach its full potential.

Commissioned by APAC-SCA, the analysis was carried out by Akira Igata, Project Lecturer at the Research Center for Advanced Science and Technology, The University of Tokyo and the Director of the Japan Association for Cellular Agriculture (JACA).



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# KEY STATISTICS

## Dietary Preference of Japanese Consumers



**91%**

of surveyed Japanese do not have dietary restrictions



**0.4%**

of surveyed Japanese are flexitarian



**0.3%**

of surveyed Japanese are pescatarian



**1%**

of surveyed Japanese are vegan

## Phrase recognition of “cell-based foods”



**58%**

of surveyed Japanese have never heard of “cell-based foods” i.e., cultivated meat and seafood



**39%**

have heard of cultivated meat and seafood



**3%**

understood in detail the concept of cultivated meat and seafood

# KEY STATISTICS

## Consumer Views

**42%**

of surveyed Japanese are willing to try cultivated meat and seafood if it is safe



**64%**

do not know if cultivated meat and seafood are safer than conventional foods



**44%**

highlight the presence of government regulations as the most important factor to determine the safety of cultivated meat and seafood



## Consumer Preferences



### Top Three Expectations

1. Taste
2. Expanding Food Options
3. Appearance



### Top Three Motivators

1. Safety
2. Healthy
3. Cheaper Price



### Top Three Cultivated Protein

1. Beef
2. Chicken
3. Pork

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# MEAT CONSUMPTION IN JAPAN

Japan has seen a dramatic shift in the protein preference of its citizens over the past decades. In 2006, meat overtook fish and shellfish as the most consumed source of protein. Yet, the country only produces roughly half the pork products it consumes and around one-third of its beef despite the government's focus on food self-sufficiency. This popularity of a meat-centric diet has made Japan a significant meat importer, with per capita consumption at 31.4 kilograms in 2022.

Scaling up the current production of conventional meat to meet the growing demand for protein would place substantial pressure on the already strained livestock agricultural system, generating more greenhouse gas emissions while depleting scarce resources such as land and water. Feeding the world in a sustainable way requires meat to be produced differently. Cultivated meat and seafood holds the potential for a climate-resilient food future.

## Cultivated Meat & Seafood Industry

Cultivated meat and seafood are genuine animal proteins grown directly from animal cells. This production method is done in isolation of the animal and replicates the sensory and nutritional profiles of its conventionally produced counterparts such as meat, poultry, aquatic products, dairy and eggs.

Motivated by a desire for increased food security, sustainability, bio-restoration, and zoonotic disease mitigation, cultivated food technology has seen rapid advancement over the past decade. There are now more than 150 companies focused on the production of cultivated food products around the world, with 2 in Japan.

According to JACA, the industry has attracted over 40 Japanese companies involved in the food and beverage or life sciences industries, with many working through partnerships or product/service offerings to support the commercialisation of cultivated meat and seafood.

To aid the industry's communication efforts with regulatory bodies and consumers, 36 key stakeholders across the Asia Pacific (APAC) signed a Memorandum of Understanding to align the region on the term 'cultivated' as the preferred English-language descriptor for food products grown, ex-vivo from animal cells.

While we recognise that other entities and jurisdictions have adopted different terms of preference to describe foods cultivated from animal cells (e.g. cell-based or cultured), we will utilise the term 'cultivated' throughout this document for consistency.

## Government Response

The Japanese Prime Minister Fumio Kishida has pledged its support towards the industry, acknowledging the importance of cultivated meat and seafood in building sustainable food supply chains. Under his leadership, Japan will develop a conducive environment to bring cultivated meat and seafood into the market with efforts focused on safety and labelling rules.

As the primary risk management body, the Ministry of Health, Labour and Welfare (MHLW) is the main stakeholder that governs the sale, manufacture and import of cultivated meat and seafood. The risk assessment and framework development for cultivated products are governed separately by two other agencies under the Cabinet Office.

The Food Safety Commission under the Cabinet Office is the primary risk assessment agency. As the technical and academic advisor to the MHLW, the Commission adopted a 2-year project to understand risk assessment methods for cultivated chicken. This report will be the main point of reference for MHLW to determine the safety management approach for cultivated meat.

The Newly Developed Food Committee of the Food Sanitation Council is the primary team tasked to develop Japan's cultivated meat and seafood regulatory framework. Established under the MHLW, the Council organised a session in late 2023 to evaluate the hazards and risks associated with cultivated meat and seafood. In April 2024, the Council will transfer to the Consumer Affairs Agency (CAA), housed under the Cabinet Office.



## MOTIVATORS & BARRIERS TO CONSUMER ACCEPTANCE

The motivators and barriers to consuming cultivated meat and seafood can range widely. Factors could include price, taste, texture, food safety, health, environment and animal welfare considerations, familiarity, and naturalness of the product. Likewise, consumer characteristics such as their dietary types (i.e., flexitarian/vegetarian) and age groups could contribute to their awareness and perceived appeal of cultivated meat and seafood products.

As cultivated meat and seafood companies prepare to go to market, more evidence is needed to provide an in-depth understanding of the motivators and barriers that could influence consumers perception and attitudes towards cultivated meat and seafood products and therefore their likelihood of purchase.

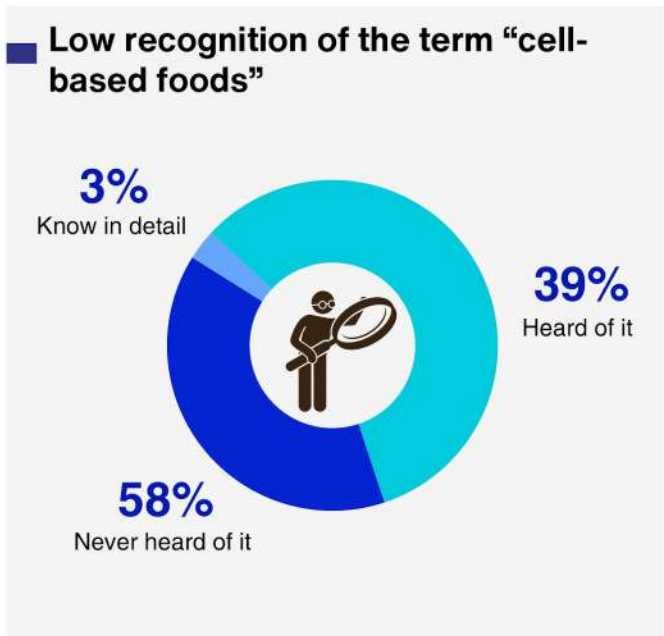




# CONSUMER PERCEPTION OF CULTIVATED MEAT & SEAFOOD

APAC-SCA conducted a survey to understand Japanese consumers' perception and attitudes towards cultivated meat and seafood (See page 14 for more details.)

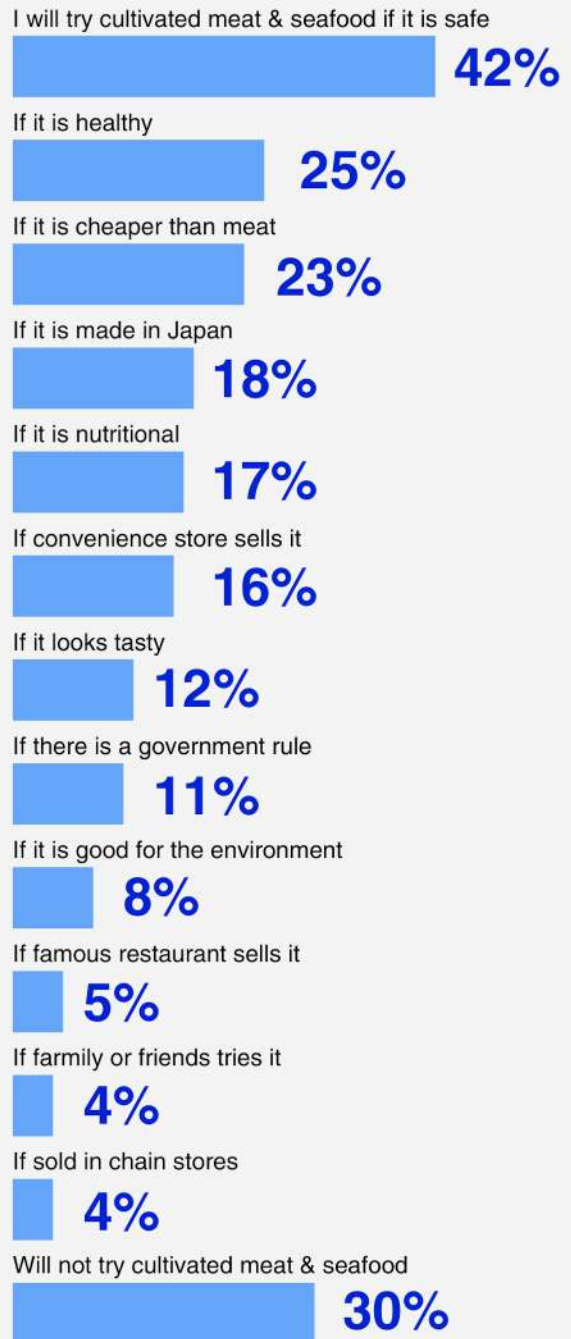
Recognition of the term "cell-based foods" (i.e. cultivated meat and seafood) is low among the Japanese population. 58% of consumers claim that they have not heard of it before, while 39% shared that they have heard of it. Only 3% say that they understood the concept behind the term.



42% of consumers say they are willing to try cultivated meat and seafood if it is safe. The healthiness of these products and cheaper price points also topped the list as factors that would encourage their consumption.

However, 1 in 3 consumers (30%) will not try cultivated meat and seafood.

## 4 in 10 consumers are willing to try cultivated meat & seafood products if it is safe



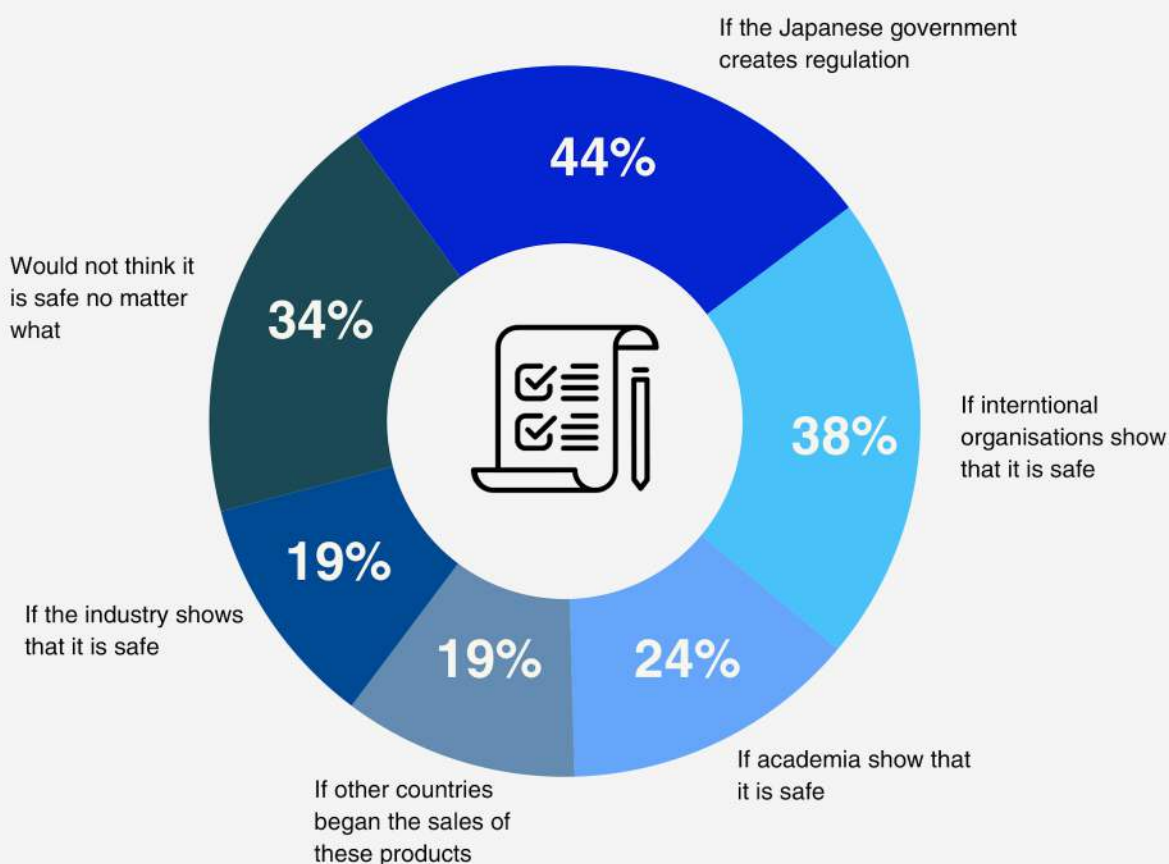
Yet, 64% of the Japanese consumers shared that they do not know if cultivated meat and seafood are safer than conventional foods. 19% found no difference in the safety between conventional foods and cultivated products. By age group, such sentiments were the highest among youths in their 20s.

When prompted on the conditions required to determine the safety of cultivated meat and seafood, 44% highlighted the presence of Japanese government regulations as the most important element. This is especially so for women in their 20s, 40s and 60s.

Safety assurance by international organisations was the second most selected option, with more men in their 40s perceiving this as an important factor.

For the industry, this signifies the importance of engaging the Japanese authorities and international organisations (such as the WHO and UN FAO) to increase consumer confidence and drive widespread acceptance in the long run.

### What conditions are required to determine the safety of cultivated meat & seafood?

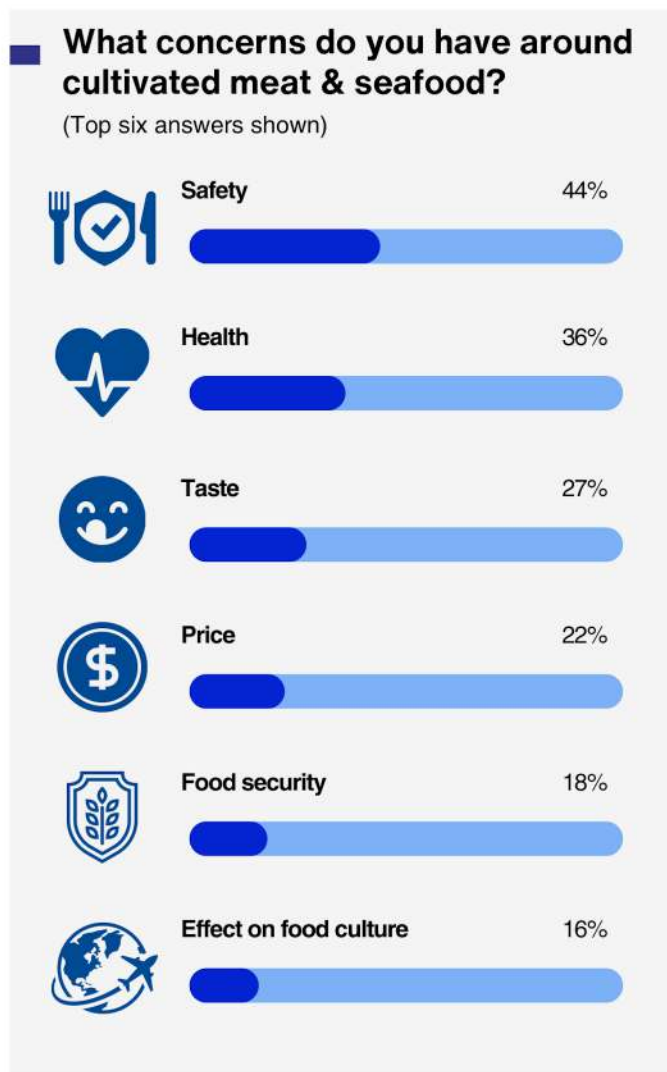
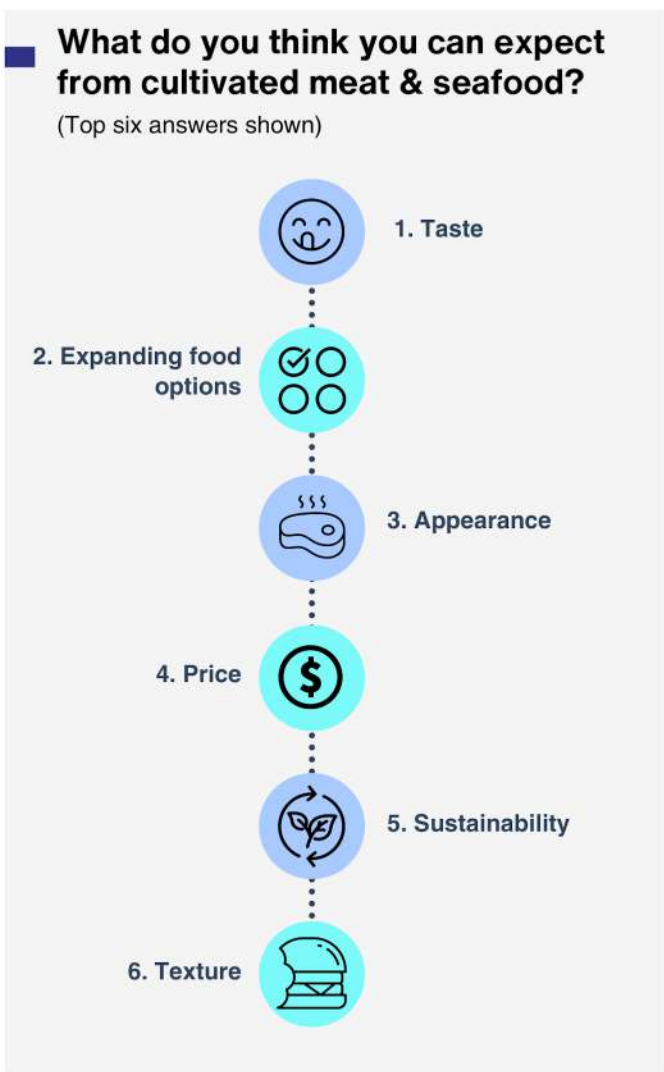


When prompted about their expectations of cultivated meat and seafood, taste, expanding food options, and appearance were the top three responses.

However, 37% of Japanese consumers selected the option of 'none applies'. With consumers' unfamiliarity with the concept of cultivated meat and seafood and the lack of experience in consuming such products, it is natural that they often do not know what to expect.

Safety (44%) and health (36%) were the leading concerns for Japanese consumers. The older the age group, the higher their significance.

Notably, 1 in 3 youth respondents (35%) selected the option of 'none applies' when asked to choose from a list of potential concerns. Higher than the overall average, this potentially indicates that Japanese youths are less concerned about cultivated meat and seafood compared to the general population.



# ATTITUDES TOWARDS PRICING

A cheaper price point was the third most influential consideration for consumers' intention to purchase and consume cultivated meat and seafood. As such, the industry needs to understand the price levels that consumers are willing to pay.

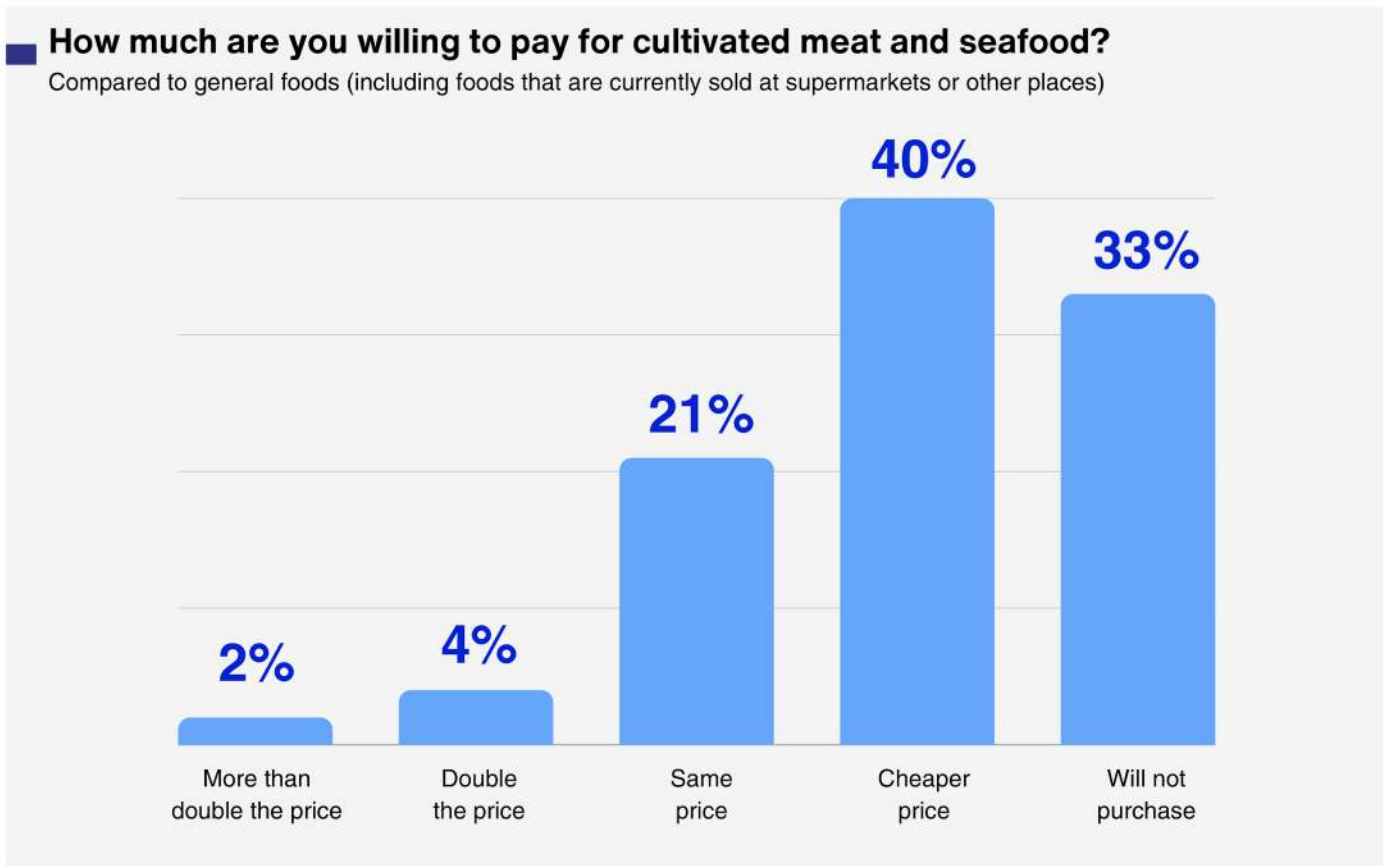
21% of Japanese consumers say they are willing to purchase cultivated products if priced the same as general foods (including foods currently sold at supermarkets and other places).

40% find it acceptable if it is priced cheaper. 4% noted the intention to purchase even if it is twice the price of general foods.

Men in their 20s expressed the most interest in purchasing cultivated meat and seafood – 18% shared they are willing to buy them even if the products are priced higher than conventional foods.

Similar to other countries, Japanese consumers are likely to remain price-sensitive. The industry has to work towards scaling up its production to achieve price parity with conventional meat.

Increased public funding from governments at this stage will be critical to advance the cultivated meat and seafood industry at the pace and scale needed to feed the population without the downsides associated with the conventional animal agriculture system.



# ATTITUDES TOWARDS CONSUMPTION BY CHILDREN

For cultivated meat and seafood to be the future of food, parents play the direct role of shaping the consumption patterns of the next generation.

Considering that many Japanese consumers do not yet understand the concept behind cultivated meat and seafood, 17% of Japanese parents shared their willingness to feed their children these products. 50% were unsure, and 33% said they would not feed their children such products.

For the industry, this signifies the importance of capturing the interest of consumers who are neutral but not opposed to the concept of cultivated meat and seafood.

## ■ As a parent, will you feed your children cultivated meat and seafood products?



# KEY RECOMMENDATIONS

## ACCELERATING REGULATIONS

- Establishing a direct line of communication with regulators (MHLW and CAA) is essential to convey data/information that can showcase the safety of cultivated meat and seafood. These can be in the form of pre-market consultation services or a regulatory sandbox framework.
- Through the participation of activities such as the APAC Regulatory Coordination Forum, regulators and industry players can find common consensus on topics that can support the development of a consistent assessment approach towards the safety assessment of cultivated meat and seafood.

## ECOSYSTEM BUILDING

- Regional collaboration between government agencies, academia, and companies can help to accelerate R&D efforts through resource and knowledge sharing.
- Sharing success stories beyond the cultivated meat and seafood industry can foster confidence among investors, consumers and government bodies.

## MESSAGE MAPPING

- Develop message maps for consumer education and awareness of the benefits of cultivated meat and seafood. This can raise consumer confidence and trust in these products.
- Socialising international reports such as the UN FAO report on the safety of cultivated meat and seafood can increase public awareness and assure the safety of cultivated meat and seafood products.

# RESEARCH METHODOLOGY

## An Online Survey of Consumers

- 1,000 online responses were collected in May 2023. Of these, 417 respondents have heard of “cell-based foods” before.
- The sample population was evenly distributed along age groups (20 through 69 years old) and gender.
- The results were weighted to mirror the population pyramid in Japan.

## Demographics of Japanese consumers who have heard of “cell-based foods” before

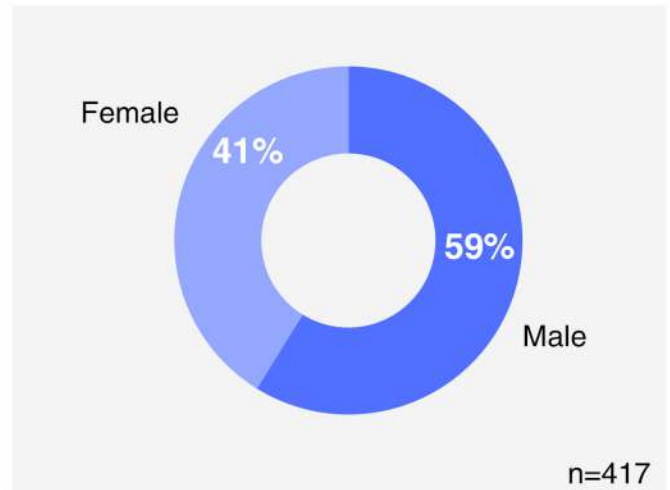
The surveyed population resides in the following areas (top six places of residence shown)

Tokyo	-----	<b>16%</b>
Kanagawa	-----	<b>10%</b>
Saitama	-----	<b>8%</b>
Aichi	-----	<b>7%</b>
Osaka	-----	<b>7%</b>
Hyogo	-----	<b>5%</b>

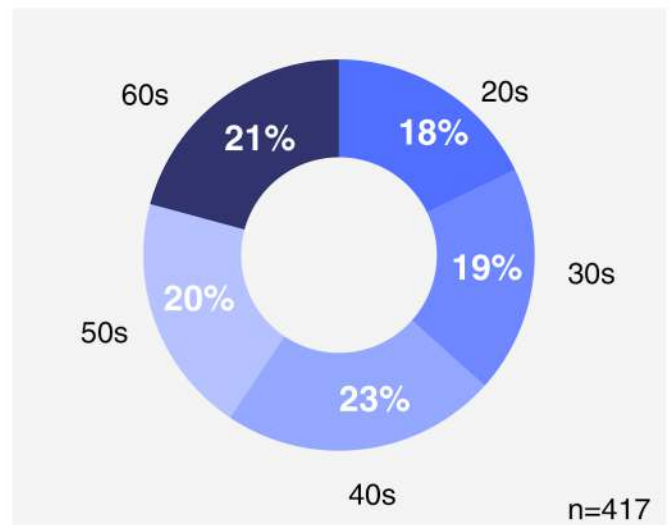
### Note:

- Statistics highlighted in this study have been rounded off, hence there may be minor variations of 0.5 to 1%.

Gender profile of Japanese consumers who have heard of “cell-based foods” before.



Age profile of Japanese consumers who have heard of “cell-based foods” before.



# ABOUT APAC-SCA

The Asia-Pacific Society of Cellular Agriculture is the region's industry association for the cultivated meat and seafood sector, with the goal of changing the way we approach conventional food production and consumption.

Headquartered in Singapore since 2022, we are working closely with regulatory bodies, policy experts, scientists, and consumers, to facilitate the development of robust regulatory frameworks for the cultivated food industry, and to advocate for a safe and sustainable future.

## APAC-SCA Regional Initiatives

To encourage continuous and systematic cross-border dialogue between companies, industry associations, think tanks, governmental agencies and regulators in different jurisdictions, APAC-SCA and GFI APAC formed the Asia Pacific Regulatory Coordination Forum in 2023.

The Forum focuses on all aspects of cultivated foods fit for human consumption. It is intended to complement activities carried out by the regulators, to assist in the mutual recognition of coordinated regulatory frameworks in APAC, and in doing so to minimise trade barriers and cost to consumers.

## APAC-SCA Membership

Our members are founders of trailblazing ventures invested in advancing cultivated meat and seafood to meet the soaring protein demand; for better health, security, and sustainability.



## Global Cellular Agriculture Alliance

APAC-SCA, together with our cellular agriculture counterparts in the United States of America and Europe, formed a tripartite alliance that aims to drive regional synergies and coordinate science-based regulatory frameworks and standards that can create safe, fair and transparent pathways for companies to reach market commercialisation.



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**Want to know more?** Contact us at [info@apac-sca.org](mailto:info@apac-sca.org)





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