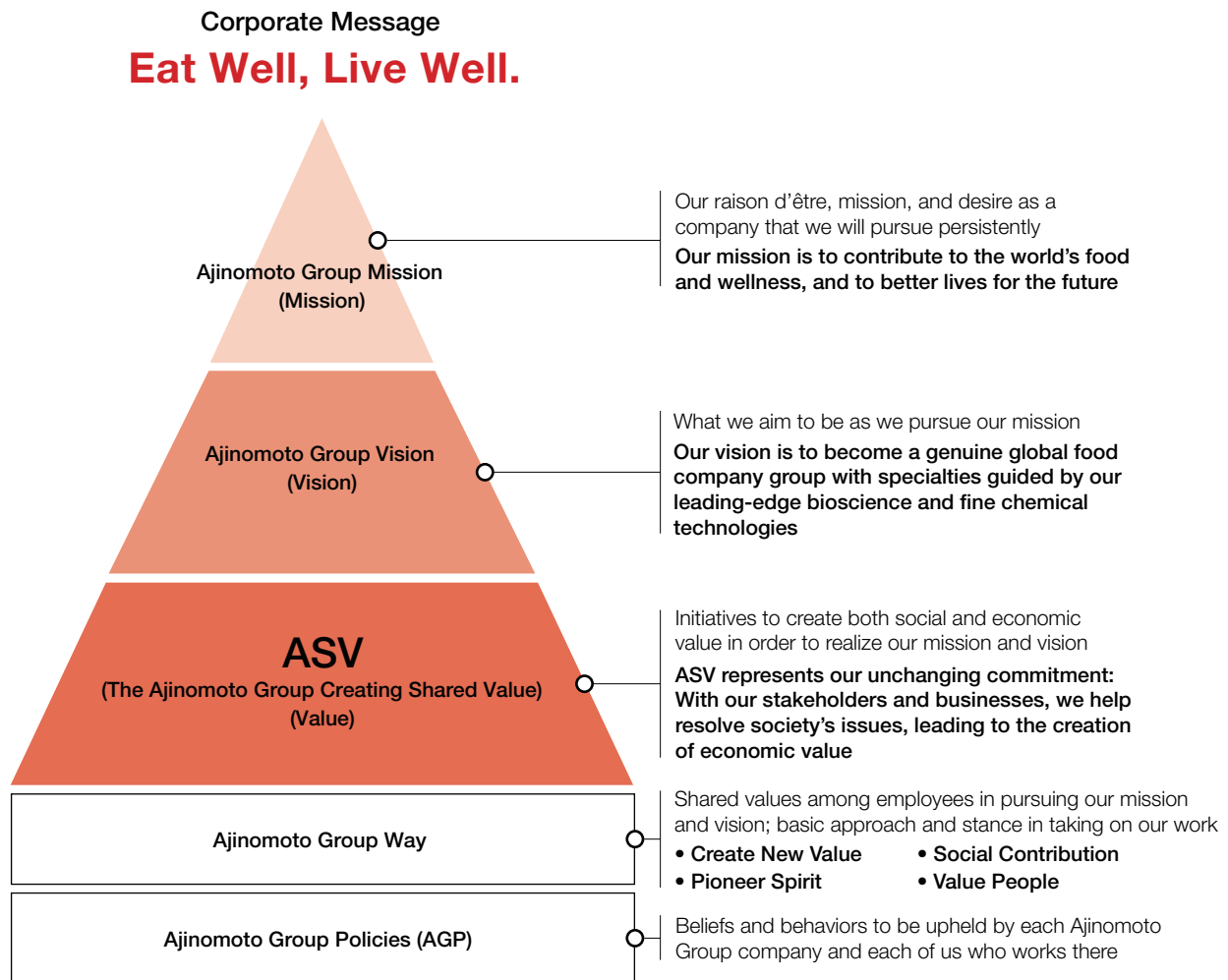




Ajinomoto Group  
Sustainability  
Data Book 2019

## Our Philosophy

Since its founding, the Ajinomoto Group (“the Group”) has been consistently engaging in initiatives to resolve social issues through its business. By improving economic value through the creation of shared value with society and local communities, these initiatives have contributed to the Group’s growth. These kinds of initiatives have been named ASV (The Ajinomoto Group Creating Shared Value). ASV has been positioned at the core of the Group’s corporate philosophy “Our Philosophy” to realize the mission and vision adopted under this philosophy.



## Editorial Policy

This sustainability data book is a supplement to the integrated report, organized by the materiality items.

Through this report, the Group hopes to deepen the understanding of all of its stakeholders, starting with shareholders and other investors, regarding its approach to realizing sustainable growth.

### Organizational Scope

This report covers the activities of the Group, comprising, unless otherwise noted, Ajinomoto Co., Inc. (“the Company”) and its Group companies (as of March 31, 2019), including consolidated subsidiaries and other Group companies subject to reporting under the equity method. Where sufficient information for the entire Group was unavailable, the limitation in scope is explicitly defined.

### Period Covered by This Report

Fiscal 2018 (April 1, 2018 to March 31, 2019)

When appropriate, however, exceptions to this general rule are made, as when citing past circumstances and data or using recent examples for illustration purposes.

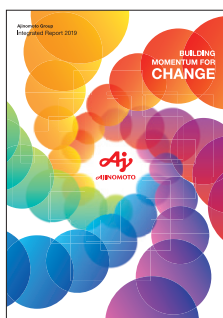
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### Integrated Report 2019

URL

<https://www.ajinomoto.com/en/ir/library/annual.html>



More detailed information is available on our corporate website.

URL

<https://www.ajinomoto.com/en/activity/>



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# Framework for ESG and sustainability

The Ajinomoto Group has been striving to foster a Group-wide understanding of ASV as the core of corporate strategies for realizing its vision over the medium- to long-term. In its FY2017-2019 (for FY2020) Medium-Term Management Plan (“17-19 MTP”), the Group set non-financial targets in line with international initiatives such as the SDGs and Paris Agreement, and is now working to quantify these objectives while managing progress through PDCA.

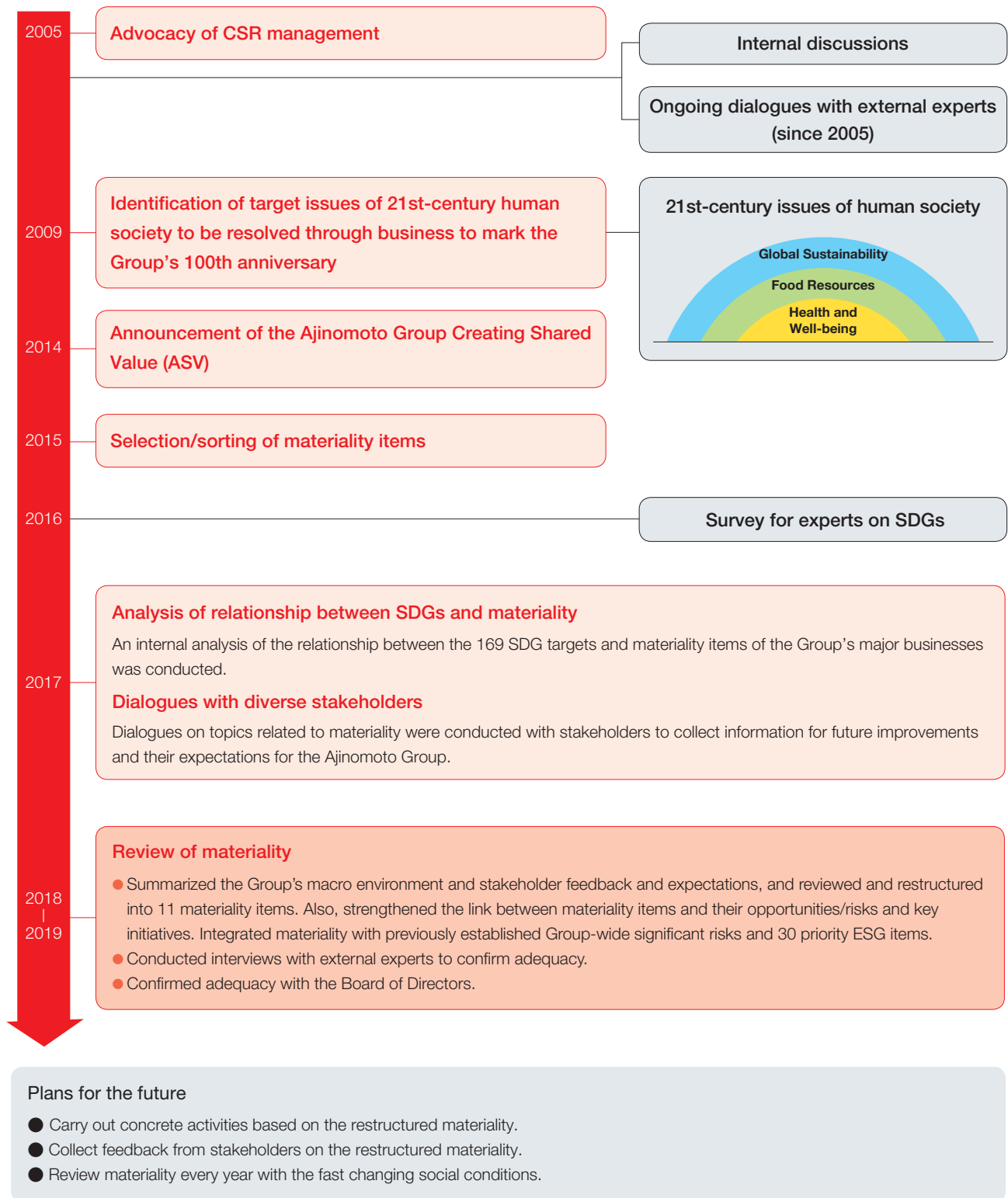
For ESG and sustainability management, the Group has been building and implementing a management system modeled after ISO 9001, ISO 14001 and other standards, based on the Ajinomoto Group Policies (AGP) and relevant internal rules, and has been also keeping processes optimized on a continual basis.

In addition, the Management Risk Committee was placed directly under the Executive Committee to establish measures across organizations for managing risks and opportunities, including climate change and social issues, at the management level of the entire Group. The committee is chaired by the executive officer in charge of the Corporate Planning Department, and the chair summarizes the discussions at committee meetings and reports to the Executive Committee and Board of Directors at least once a year.

From fiscal 2018 to 2019, the Management Risk Committee organized separate working groups on the subjects of plastic waste, sustainable procurement (human rights, animal welfare and the environment), and Task Force on Climate-related Financial Disclosures (TCFD), to work on formulating policies and project planning.

# Identification of material issues

To develop its business activities, the Ajinomoto Group identifies the materiality items that have a substantial impact on the Group's ability to create value through ASV and determines their order of importance and priority.



# Ajinomoto Group materiality

In 2019, the Ajinomoto Group revised its materiality items based on the recent social conditions and the views and expectations of its stakeholders. In addition, the Group aims to create value by identifying opportunities and risks from the materiality items and developing corresponding initiatives.

**Macro environment surrounding the Ajinomoto Group**

**Growing world population<sup>[1]</sup>**  
 2018 2050  
**7.6 billion ▶ 9.8 billion**  
 Food production needed by 2050 compared to 2005-2007 **+60%**<sup>[2]</sup>  
 · Rising demand for food, water, and energy

**Global population aging**  
 Population over 65<sup>[3]</sup>  
 2015 2050  
**0.6 billion ▶ 1.5 billion**  
 · Rising needs for extending healthy life expectancy  
 · Rising demand for healthcare

**Climate change**  
 Global average temperature by 2100<sup>[4]</sup> **+4.8°C**  
 · Accelerated decarbonization  
 · Physical damage from natural disasters  
 · Unstable materials sourcing  
 · Breakdown in supply chain  
 · Impact on health

**Rapid urbanization**  
 Urban population by 2050<sup>[5]</sup>  
 2018 2050  
**55% ▶ 68%**  
 · New flow of goods  
 · Rising middle-income class  
 · Intense competition





**Digital innovation**  
 · Digital disruption (New business opportunities and competitors)  
 · Changes of methods to provide information, products, and services  
 · Accelerated use of AI and IoT

[1] United Nations (UN), 2017  
 [2] Food and Agriculture Organization of the UN, 2014  
 [3] UN, 2015  
 [4] Intergovernmental Panel on Climate Change, 2013  
 [5] 2018 Revision of World Urbanization Prospects, UN

▶ For details, please see the Ajinomoto Group Materiality.  
 ▶ Integrated Report 2019 P11-12

Ajinomoto Group corporate message  
**Eat Well, Live Well.**

**Materiality items**

<p><b>Health and well-being</b></p> <p>Realize wellness for people around the world</p> <p>Related SDGs</p> 	<p><b>Assurance of product safety</b></p> <p><b>Contribution to health and nutritional issues</b></p> <p><b>Rapid response to consumer lifestyle changes</b></p>	<p>▼ P9 P32</p>
<p><b>Food resources</b></p> <p>Maximize limited food resources and provide more value</p> <p>Related SDGs</p> 	<p><b>Sustainable materials sourcing</b></p> <p><b>Reduction of food loss and waste</b></p>	<p>▼ P33 P48</p>
<p><b>Global sustainability</b></p> <p>Reduce impact of business activities for global sustainability</p> <p>Related SDGs</p> 	<p><b>Climate change adaptation and mitigation</b></p> <p><b>Contribution to a circular economy</b></p> <p><b>Conservation of water resources</b></p>	<p>▼ P49 P61</p>
<p><b>Business foundation</b></p> <p>Create a corporate group that grows sustainably</p> <p>Related SDGs</p> 	<p><b>Diverse talent</b></p> <p><b>Strong corporate governance</b></p> <p><b>Preparation for intense global competition</b></p>	<p>▼ P66 P90</p>

# List of stakeholders

The Ajinomoto Group aims to maintain ongoing dialogues with various stakeholders and incorporate their feedbacks into its corporate activities, in order to sustainably create value as a “Genuine Global Specialty Company.”

Stakeholders	Key engagement opportunities
Customers/Consumers	<ul style="list-style-type: none"> <li>● Customer call centers</li> <li>● <b>AJINOMOTO Park</b> recipe &amp; community website</li> <li>● Factory tours</li> </ul>
Shareholders/Investors	<ul style="list-style-type: none"> <li>● General meeting of shareholders</li> <li>● Analysts' meetings on financial results</li> <li>● Briefings on Integrated Report Topics for institutional investors</li> <li>● Online company briefings for individual investors</li> </ul>
Suppliers	<ul style="list-style-type: none"> <li>● Food defense explanatory meetings and audits</li> <li>● Sedex briefings</li> </ul>
Employees	<ul style="list-style-type: none"> <li>● By-rank/division training</li> <li>● Engagement Survey</li> <li>● AGP worksite meetings</li> <li>● Whistleblower hotline</li> <li>● Harassment advisory service</li> </ul>
Local Communities	<ul style="list-style-type: none"> <li>● Factory dialogues with neighborhood residents</li> <li>● Participation in and sponsorship of community events</li> <li>● Recovery assistance for communities affected by natural disasters</li> <li>● Activities through the foundation (in four countries)</li> </ul>
NPOs/NGOs and external experts	<ul style="list-style-type: none"> <li>● Hearings for identification of material issues</li> <li>● Keynote speech by the President and CEO at the Sustainable Brands conference</li> <li>● Meeting between CDP CEO Paul Simpson and the Corporate Vice President</li> <li>● AIN program for supporting NPOs/NGOs working in the food and nutrition field<sup>[1]</sup></li> </ul> <p>[1] Supports through a foundation</p>

# Expectations and recommendations from external stakeholders

**To continue responding to varying sustainability requirements in different parts of the world, the Ajinomoto Group collected opinions from local experts on the Group's overall approach to sustainability and specific initiatives regarding human rights, the environment and other issues.**

I think there is an opportunity for the Ajinomoto Group take leadership in driving cross-sector partnership for changing perceptions of food as a contributor to healthy lifestyles – collaborations with partners through the lifecycle value of food and the food supply/ value chain to identify ways to optimize the entire food chain as it meets new and diverse needs. This could include consumers, suppliers and customers and also other companies in the same space-manufacturers using the Group's ingredients and healthcare companies advancing healthy nutrition. The entire food/consumer ecosystem needs to be mapped to drive optimization for targeted needs.

I'd also like to see more science behind the value of amino acids in food and the regenerative properties – how can the Group prove the value of the core proposition through research in current lifestyle settings.



**Elaine Cohen**

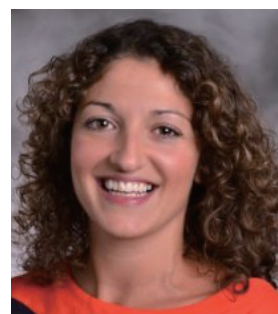
Founder and CEO  
Beyond Business Ltd.

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With its new materiality framework, the Ajinomoto Group continues to crystalize the connection between material ESG items and the Group's overall business strategy – a positive, forward-looking development. As risks and opportunities associated with specific materiality items are explored, I look forward to reading the Group's financial impact analysis.

For example, as single-use plastic bans proliferate, rethinking containers and packaging will become increasingly important. In line with the TCFD recommendations, I believe that using climate-related scenario analysis as a lens to inform climate change adaptation efforts will further focus and streamline the Group's business strategy and initiatives.

In the future reports, I hope to see measurable, time-bound targets for all the material items.



**Celine Solsken  
Ruben-Salama**

Principal  
FOR THE LONG-TERM, LLC  
Lecturer and Faculty Advisor  
M.S. Sustainability Management  
Program, Columbia University (NY)

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The Ajinomoto Group is at the forefront of executing good practices of corporate sustainability and governance, living up to high expectations of social responsibility and sustainable development. In my perspective, the approach that the Group should look forward to is developing impact strategy in order to connect between actual initiatives and measurable social impact. I hope to see the Group conducts more localized multi-stakeholder initiatives to better address specific issues for each country/region of its operations.

The Group could organize outreach activities that are related to various stakeholder groups along the value chain, including capacity building for lower tier suppliers, education for underprivileged people in agricultural sector, etc. Internally, moving towards "happy workplace" should be one of the top priorities for the Group especially in the era that Generation Y and Z are coming into workforce.



**Vasu Srivibha**

Chief Impact Officer  
Sasin School of Management  
Chulalongkorn University  
(Thailand)



## Dialogues and Collaboration with Stakeholders

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In the future, I hope to see the Ajinomoto Group work on more initiatives toward the SDG Goal 17: Partnerships for the Goals. Creating partnerships is not for a specific problem area, rather it is a process and stance in tackling all issues. As a global company, how does the Group promote cross-border initiatives, and how does it co-create value not just within the industry and the Group but also with NGOs and local communities? I believe that this is an extremely important point that improves the quality and outcome of its activities, and leads to higher corporate value as a source of innovation.



**Junko Edahiro**

President, e's Inc.  
Professor, Graduate School  
of Leadership and Innovation,  
Shizenkan University  
President, Institute for Studies in  
Happiness, Economy, and Society  
(SHES)

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While it may not be aligned with the medium-term plan timeline, I would like the Ajinomoto Group to show its long-term (2030) business vision from here on. The Group may, for example, set highly challenging goals such as closing the loop for carbon (fossil resources) or food resources. As a leader in the food industry, I hope that the Group will take the lead in transforming our world by revolutionizing the Japanese food industry and creating cross-sectoral collective impact.



**Hidemi Tomita**

Director  
Lloyd's Register Japan Co. Ltd.

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Providing a workplace where employees can feel safe and engaged in their work is the foundation of companies, and is of the highest priority in terms of securing the best human resources. With greater human resource mobility as Japanese companies move away from traditional lifetime employment, investment in human resources will likely be even more important in the future. I have heard that Japanese companies are sensitive to the herd instinct, and that it is sometimes difficult for one company alone to go one step further to work on sustainability. As the Ajinomoto Group aims to become a Global Top 10 Class Food Company, I hope that it will reconsider its corporate ideals and become a leader in sustainability in Japan and globally. Achieving all these will help ensure future corporate sustainability, including profitability.



**Takeshi Shimotaya**

Executive Director  
The Global Alliance for  
Sustainable Supply Chain

# Health and Well-being

Realize wellness for people around the world

What we demand from food, such as safety and security, good nutritional balance and connection between people, continuously change with the times and the country or region. To meet the diverse food needs and lifestyle changes, the Ajinomoto Group aims to provide healthy, delicious, high-quality products and services.

□ : Initiatives reported in the Ajinomoto Group Integrated Report 2019

■ Related SDGs



## Assurance of product safety P11

<b>Specific examples</b>	<ul style="list-style-type: none"> <li>· Product quality and safety</li> <li>· Fair disclosure and labeling</li> </ul>	<ul style="list-style-type: none"> <li>· New technology application</li> <li>· Religious standards</li> </ul>
<b>Related opportunities and risks</b> (○ Opportunity ● Risk)	<ul style="list-style-type: none"> <li>○ Brand trust gained by increasing customer satisfaction</li> <li>○ Trust gained through fair disclosure to stakeholders</li> <li>● Impact on business of growing negative rumors regarding umami and MSG</li> <li>● Lower customer confidence due to product quality complaints or incidents</li> </ul>	
<b>Key initiatives by the Ajinomoto Group</b>	<ul style="list-style-type: none"> <li>· Properly sharing information on package and website</li> <li>· Reflecting customer feedback on developing and improving products and services</li> <li>□ Enhancing communication to share the benefits of umami and MSG</li> <li>· Thorough quality assurance and human resource training based on the Ajinomoto System of Quality Assurance (ASQUA)</li> </ul>	

## Contribution to health and nutritional issues P18

<b>Specific examples</b>	<ul style="list-style-type: none"> <li>· Undernutrition and overnutrition (customer welfare)</li> <li>· Nutrition for infants, young women, and seniors</li> <li>· Well-being</li> </ul>	<ul style="list-style-type: none"> <li>· Regenerative medicine</li> <li>· Preventive medicine</li> </ul>
<b>Related opportunities and risks</b> (○ Opportunity ● Risk)	<ul style="list-style-type: none"> <li>○ Rising health awareness and needs of consumers</li> <li>○ Brand trust</li> <li>○ Enhancing corporate value</li> </ul>	
<b>Key initiatives by the Ajinomoto Group</b>	<ul style="list-style-type: none"> <li>□ Offering tasty food and amino acid products as well as menus that nourish health and well-being</li> <li>· Low-salt, low-sugar and low-fat products</li> <li>· Promoting protein intake</li> <li>· Contributing to disease prevention with "AminoIndex technology"</li> <li>□ Developing nutritional standards that Group products should meet</li> <li>· Customized programs to each consumer for improving nutrition (personal nutrition)</li> </ul>	

## Rapid response to consumer lifestyle changes P30

<b>Specific examples</b>	<ul style="list-style-type: none"> <li>· Fair marketing and advertising</li> <li>· Product access and affordability</li> </ul>	<ul style="list-style-type: none"> <li>· Response to diversification of values (smart cooking, joy of eating)</li> <li>· Eating alone, eating personalized meals</li> </ul>
<b>Related opportunities and risks</b> (○ Opportunity ● Risk)	<ul style="list-style-type: none"> <li>○ Enhancing corporate reputation by offering the joy of eating together</li> <li>○ New value creation using digital technology</li> <li>● Loss of growth opportunities due to delayed response to consumer lifestyle changes or diversifying values</li> <li>● Impact on seasonings business due to less cooking time and skills</li> </ul>	
<b>Key initiatives by the Ajinomoto Group</b>	<ul style="list-style-type: none"> <li>· Creating strong communities and social bonds through food</li> <li>□ Advanced marketing efforts by leveraging big data and consumer data</li> <li>· Building strategies to deal with smaller markets (due to urbanization, etc.)</li> <li>· Properly delivering products, services and information to customers</li> <li>□ Expanding products and services to meet the need for convenience, such as smart cooking</li> </ul>	

## Approach

### Targets

GRI203-DMA

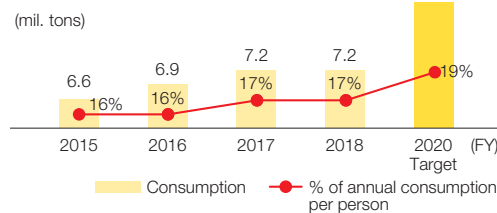
Since its founding, the Ajinomoto Group has aspired to promote health by making nutritionally rich, delicious food that make good use of umami widely available and has spread this message across the world. Aside from making proteins and vegetables tastier through the umami seasoning *AJI-NO-MOTO*<sup>®</sup> and other products, the Group offers well-balanced meals and menus that suit the food culture and help meet various food and nutritional issues and needs of each country and region for a richer daily diet.

By pursuing a balance between deliciousness and nutrition, the Group has constantly aimed to help people live well by nourishing both mind and body. Smart cooking, which lets anyone cook easily and encourages people to enjoy cooking even if they are busy, creates spare time and helps support diverse lifestyles. Increasing opportunities for eating together to connect people and families, and offering beverage and other products, also create more relaxation and peaceful time. Based on the corporate message “Eat Well, Live Well.”, the Group aims for continuous contribution to greater wellness for people by creating value with communities and society through its business.

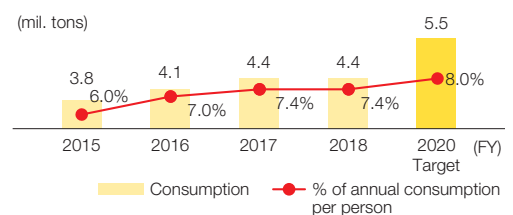
## FY2020 Targets for Health and Well-being

### Better nutritional balance by eating more protein and vegetables with umami

#### Volume of meat consumption through the Group's products<sup>[1]</sup>

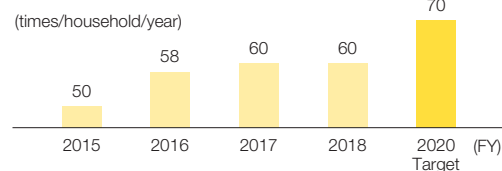


#### Volume of vegetable consumption through the Group's products<sup>[1]</sup>



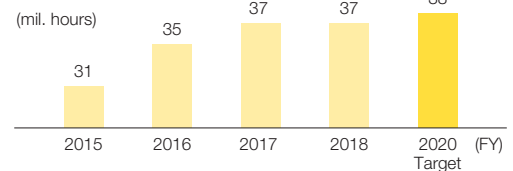
### More eating together

#### Contribution to people eating together through the Group's products<sup>[1]</sup>



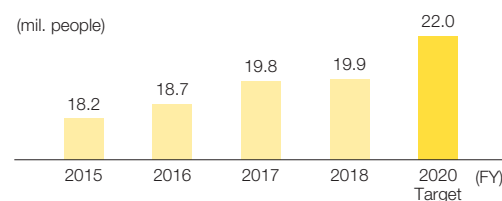
### Realizing smart and delicious cooking

#### Spare time created through the Group's products (Japan)<sup>[2]</sup>



### Realizing comfortable lifestyles for people

#### Contribution to comfortable lifestyles through amino acid products (AminoScience)<sup>[3]</sup>



[1] Japan: Five types of menu-specific seasoning *Cook Do*<sup>®</sup> products and frozen *Gyoza* (Japanese-style dumplings), *Five Stars* (Thailand, Brazil, Indonesia, Vietnam, the Philippines): flavor seasonings

[2] Japan: Frozen foods (*Gyoza*, *Yawaraka Wakadori Kara-Age* (fried chicken), *The★CHA-HAN* (fried rice)) and three types of *Knorr*<sup>®</sup> *Cup Soup*

[3] Amino acids for pharmaceutical and health food use, *aminoVITAL*<sup>®</sup>, *No Mikata*<sup>®</sup>, *Glyna*<sup>®</sup>, etc.

# Quality management

## Approach

GRI416-DMA  
 GRI417-DMA

► Group Shared  
 Policy on Quality

► Group Shared  
 Policy on Food  
 Safety

Since its founding, the Ajinomoto Group constantly strives to put the customer first by its commitment to the safety of products and services. Assurance of product safety has been identified as one of the Group's material issues.

To provide product safety, it is essential to have comprehensive quality assurance systems and proper disclosure. In addition, the Group listens carefully and responds to customer needs to deliver products and services that earn the trust of customers and ensure their satisfaction.

## Ajinomoto System of Quality Assurance (ASQUA)

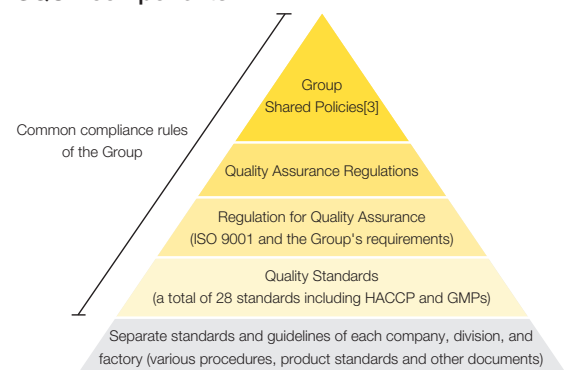
The Ajinomoto Group has its own quality assurance system, ASQUA. As of March 2019, ASQUA has been applied to 105 Group companies.

Its core content is based on ISO 9001, the international quality management system standard, and supplemented by manufacturing management standards such as Hazard Analysis and Critical Control Points (HACCP)<sup>[1]</sup>, Good Manufacturing Practices (GMPs)<sup>[2]</sup>, and the Group's own rules and requirements. ASQUA is also composed of common compliance rules of the Group as well as rules established by each internal organization.

### ASQUA framework



### ASQUA components



### Quality standards

- |   |  |   |   |
|---|--|---|---|
| 1. Document Control (1)                                 | 6. Manufacturing (10)                              | 7. Preservation and Transportation (2)              | 10. Accommodating Religious Beliefs (2) |
| 2. Educational Training (1)                             | •Food GMP*   | •Preservation and Transportation of Products        | •Halal[5] Control                       |
| 3. Establishing Specifications, Examination (3)         | •GMP for Food Additives*                           | •Management of Warehouse                            | •Kosher[6] Control                      |
| •Establishing Quality Specification                     | •GMP for Personal Care Ingredients*                |   |   |
| •Establishing Packaging Material Specification          | •GMP for Active Pharmaceutical Ingredients*        | 8. Quality Information (2)                          |   |
| •Establishing Examination Frequency                     | •GMP for Pharmaceutical Drug Products*             | •Quality Information Management                     |   |
| 4. Quality Assessment (1)                               | •GMP for Feed Use Amino Acids*                     | •Traceability                                       |   |
| 5. Purchasing (2)                                       | •HACCP   | 9. Handling of "Voice of Customer" (4)              |   |
| •Quality Control of Ingredients                         | •Food Defense[4]                                   | •Responding to Complaint                            |   |
| •Quality Control of Subcontracted and Procured Products | •Product Labeling                                  | •Determination of Responding to Quality Emergencies |   |
|   | •Safety and Sanitation of Food Packaging Materials | •Handling of "Voice of Customer"                    |   |
|   | *Adapted to suit specific products                 | •Effective Reflection of "Voice of Customer"        |   |

[1] Management standards for manufacturing foods in a safe and sanitary manner

[2] Standards relating to manufacturing management

[3] Group Shared Policy on Quality, Group Shared Policy on Food Safety

[4] Measures to prevent deliberate tampering with products. Monitoring is carried out at every stage from raw material procurement to product sales.

[5] Halal means permissible and legitimate in Arabic. The word indicates things and actions that are allowable to use and handle under Islamic law. Halal also refers to foods that followers of Islam are permitted to eat.

[6] Kosher means fitting or appropriate in Hebrew, or foods that followers of the Jewish faith are permitted to eat.

## Assurance of Product Safety

### Framework

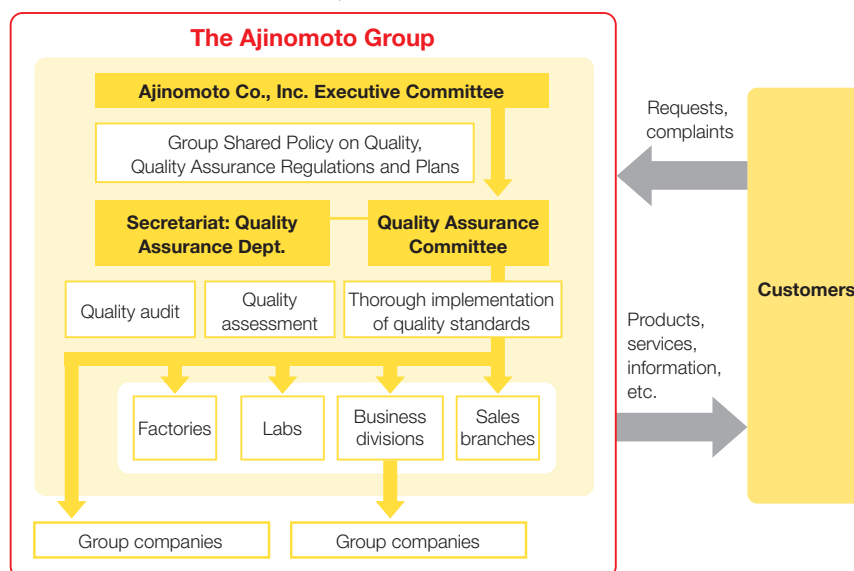
GRI416-DMA  
 GRI417-DMA

### Promotion Framework for Quality Assurance

The Ajinomoto Group established the Quality Assurance Committee under the Executive Committee to deliberate on policies and various measures regarding quality assurance.

The Quality Assurance Committee drafts basic policies and plans based on customer feedback, and promotes their Group-wide implementation once approved by the Executive Committee. The status is reviewed by the Quality Assurance Committee every six months.

#### Promotion framework for ASQUA



### Initiatives for Third-Party Certification

The Ajinomoto Group encourages the acquisition and maintenance of third-party certification of ISO 9001. As of March 2019, 60 out of 82 eligible Group companies have acquired ISO 9001 certification. For the eligible companies not yet certified (many of which are newly acquired or established companies), the Group is working to build quality assurance systems for certification. In cases such as receiving customer requests, the Group also acquires certification of other standards such as FSSC 22000 approved by the Global Food Safety Initiative (GFSI).

### FY2017-2019 Ajinomoto Group Medium-Term Plan for Quality Assurance

For quality assurance, the Group is focused on working on the following topics for the period of the 17-19 MTP. Refer to related sections for details of each initiative.

Guidelines	Key targets
Keep faith with customers	Reduce product quality claims and problems, and work harder to prevent them
Fulfill customers' expectations	Secure attractive quality improvements and gain customer trust through interactive communication with customers
Aim for adequate management	Pursue through ASQUA-based quality assurance activities
	Develop human resources to improve quality assurance levels

### Performance

GRI416-DMA  
GRI417-DMA

▶ Integrated Report  
2019 P41-42

## Human Resources Development to Raise Quality Assurance Levels

The Ajinomoto Group focuses on human resources development to further improve quality assurance levels. Each year, the Group reviews its quality training plan, and implements systematic programs to meet the needs of individual organizations. Continuing with its efforts from the previous fiscal year, the Group also expanded its e-learning training programs in fiscal 2018.

### Main programs in fiscal 2018

- Japan
  - Programs for Group employees by Ajinomoto Co., Inc.
  - Programs for quality assurance managers for posting to overseas offices
  - “Ajinomoto Management and Technical Conference on Quality” for Group company executives and employees: Approx. 400 participants
  - ISO 9001 food product business operations training for newly transferred employees (e-learning)
- Overseas
  - ASEAN Quality Assurance Seminar, EU Quality Management System (QMS) Meeting, China Quality School.
  - Regional Quality Assurance Management (RQM) Training Course for general manager candidates of quality assurance divisions in regional headquarters (e-learning)
  - QMS Training Course for managers responsible for quality assurance in Group companies (e-learning)

## TOPIC

### Convey the right information on umami and MSG worldwide

The umami substance monosodium glutamate (MSG) has been the object of vague unease and concerns about safety since the 1960s. As a global leader that first commercialized MSG products in the world, the Ajinomoto Group believes in the need to convey the right information and communicate its benefits to consumers, especially now when there is heightened interest in food safety and health.

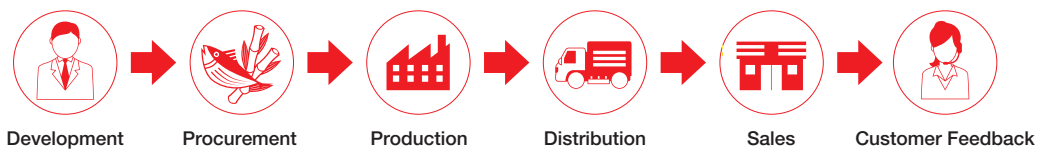
As part of these efforts, the Group held the World Umami Forum (WUF) in New York City in September 2018. Experts on food and nutrition, history, and science delivered talks, and a cooking competition on the use of umami was held. At the panel discussion on misconceptions regarding MSG, five experts in various fields corrected these misconceptions and talked about the importance of education and providing correct information going forward.

In Japan, a media conference was also held in April 2019 on social issues in food product labeling, particularly on the correct understanding of umami seasoning (MSG) and its benefits. Outside experts on food additives also engaged in in-depth discussions on its benefits and to dispel misconceptions about MSG. In the post-event survey, more than 90% of participants said that it was informative. Moving forward, the Group is considering holding seminars and other activities that leverage the networks of dietitians and chefs, and actively expanding communications to disseminate correct information on umami and MSG.

# Quality assurance across the supply chain

## Quality Assurance Initiatives at Each Step by ASQUA

The Ajinomoto Group practices strict quality assurance by globally applying the Ajinomoto System of Quality Assurance (ASQUA) at each step from product development to customer communication. These efforts are guided by the Group Shared Policy on Quality and the Group Shared Policy on Food Safety.



### Development

To deliver safe, high-quality products, the Ajinomoto Group strictly implements quality assessments in each phase of the product development process in accordance with the ASQUA Standard for Quality Assessment. Only products that pass all of these assessments reach customers.

### Raw material procurement

The Ajinomoto Group selects suppliers according to the ASQUA Standard for Quality Control of Ingredients. The quality of raw materials purchased from suppliers is strictly controlled through lot-by-lot inspections.

The Group works with its suppliers to improve quality and reduce quality risks through measures such as regular appraisals, quality audits, information sessions and surveys. Through closer cooperation with suppliers, the Group is making continuous quality improvements. 13 suppliers were newly selected/engaged in fiscal 2018.

### Supplier audits in fiscal 2018

Audited organization	Audited items	Number of audits
Group Procurement Center, Ajinomoto Co., Inc.	Raw materials	166
	Packaging materials	67
Ajinomoto Frozen Foods Co., Inc.	Raw materials	83

#### Framework

GRI102-9  
 GRI102-10  
 GRI414-DMA  
 GRI414-1  
 GRI416-DMA

▶ Group Shared Policy on Quality

▶ Group Shared Policy on Food Safety

#### Framework / Performance

GRI102-9  
 GRI308-1  
 GRI416-DMA  
 GRI416-1

## Assurance of Product Safety

### Performance

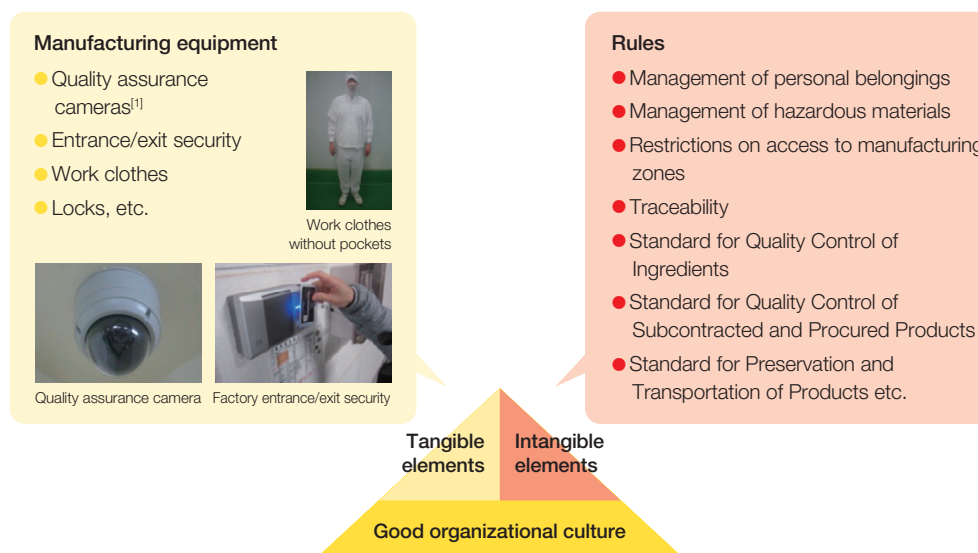
GRI102-9  
GRI414-2  
GRI416-DMA  
GRI416-1  
GRI416-2  
GRI417-2

### Production

#### ■ Structural enhancement for food safety

The Ajinomoto Group believes that creating a workplace culture that is open and based on the trust of its employees is the key to making its food safety system more robust. In addition, the Group is reviewing and improving its tangible elements such as production facilities, and intangible elements such as quality standard and guidelines, to minimize the risk of intentional product tampering and strengthen quality assurance across the supply chain.

#### Diagram of food safety assurance concept



[1] Cameras to monitor for accidents and errors in the factory. Quality assurance cameras help to gain customer confidence.

#### ■ Measures to prevent manipulation of quality-related data

In order to prevent manipulation of data related to product quality, the Ajinomoto Group is working to improve its workplace culture to foster employee compliance and awareness of quality assurance from the customer's perspective. The validity of data related to development, production, and the functional features of food products is evaluated and judged objectively and fairly at quality assessment meetings and by committees of internal experts. To ensure the proper operation of these systems, they are continually verified by means of internal quality audits and third-party certification audits.

In addition, systems that can store analysis data on manufactured pharmaceuticals and active pharmaceutical ingredients without manipulation are required as a global standard; the Group is strengthening management based on such standards and applying them to its other businesses.

#### ■ Initiatives to reduce quality-related claims and incidents

The Ajinomoto Group carefully investigates each quality-related complaint and incident to identify the cause and prevent recurrence. Details of any quality-related incident and information on preventative measures are promptly communicated to Group companies both home and abroad to prevent recurrences.

In fiscal 2018, there were two recalls due to quality and another two due to mislabeling.

#### Number of recalls and collections from distribution by the Ajinomoto Group

FY2014	FY2015	FY2016	FY2017	FY2018
0	3	6	4	4

▶ P32



## Assurance of Product Safety

### Framework

GRI102-9  
GRI416-DMA

### Performance

GRI102-9  
GRI416-DMA  
GRI417-DMA  
GRI417-1

▶ Ajinomoto Group  
Quality Assurance

### Framework

GRI102-9  
GRI416-DMA  
GRI417-DMA  
GRI417-1

### Distribution

Product quality, which includes factors such as freshness, temperature and moisture, is strictly controlled during storage and transportation from factories until it reaches customers. These activities follow ASQUA standards (in Japan only) on the management of storage, transportation, warehouses, and other operations.

### Sales

The Ajinomoto Group shares helpful information on its packaging and websites, so customers can purchase and use its products with greater peace of mind.

#### ■ Product packages

The packages of retail products marketed by the major Group companies in Japan indicate not only all legally required information but also the following kinds of quality-related information (except when space is limited, etc.).

- Method of storage (once opened)
- Product usage warnings
- Explanations of raw materials that may be unfamiliar to customers and prompt a large number of inquiries
- Easy-to-identify list of allergens (both mandatory and recommended)
- Easy-to-identify labeling of packaging materials
- Customer service contact

#### ■ Websites

Group company websites provide information tailored to their local customers, including product information, recipes and product FAQs. The websites of Ajinomoto Co., Inc., Ajinomoto Frozen Foods Co., Inc. and Ajinomoto AGF, Inc. provide clear and accessible information on their respective quality assurance systems and other quality-related topics.

The Ajinomoto Group corporate website<sup>[1]</sup> now includes a section that highlights the Group's quality assurance activities in seven languages, and provides more extensive information. In fiscal 2018, Spanish was added to the previous offering of six languages.

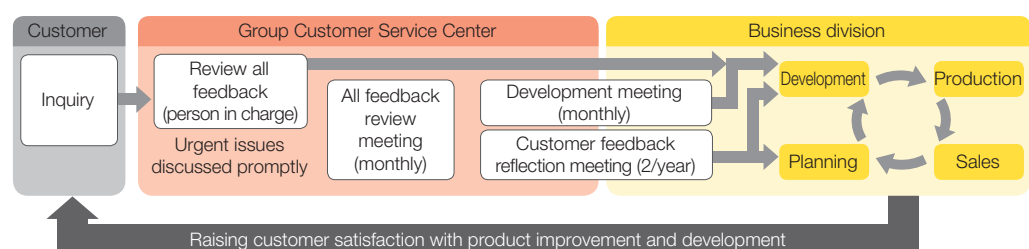
[1] The Company manages two sites: a corporate website, which focuses on Ajinomoto Group activities, and a product website, which presents information on the Company's products.

### Customer feedback

#### ■ Initiatives to reflect customer feedback

The Ajinomoto Group welcomes feedback from customers, which is used to develop attractive products and services and make improvement according to the ASQUA standard. In fiscal 2018, the operation based on the same standard, used at the Group companies in Japan as well as Brazil, Thailand, Vietnam and Indonesia, was rolled out in Peru.

### Product development system reflecting Voice of Customer (VOC) at the Group Customer Service Center<sup>[2]</sup>



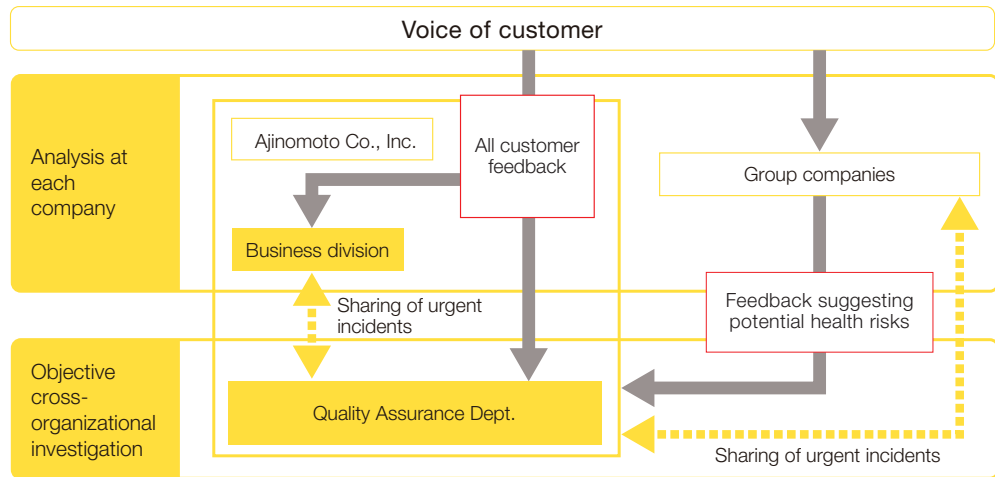
[2] In April 2019, the customer service offices of Ajinomoto Co., Inc., Ajinomoto Frozen Foods, Co., Inc. and Ajinomoto AGF Co., Inc. were integrated to form the Group Customer Service Center.

## Assurance of Product Safety

### ■ Enhanced monitoring of customer feedback

Any customer feedback shall be analyzed by a Group company, and any such feedback, that concerns a serious issue that may lead to health risks or a violation of law, is also checked and analyzed by Ajinomoto Co., Inc. promptly, objectively and in a cross-organizational manner. The system ensures that any case deemed to be urgent is shared with relevant departments immediately. In fiscal 2018, the system was extended to the US and Malaysia in addition to Group companies in Japan, Thailand, Brazil, Indonesia, Vietnam and Peru.

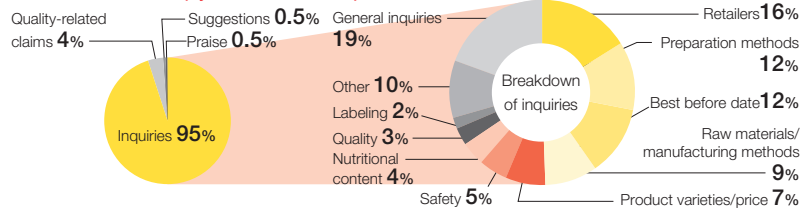
### Customer feedback monitoring system for preventing health damage



### Breakdown of VOC in fiscal 2018

- VOC received by Ajinomoto Co., Inc.: 29,300 (90% of the total in fiscal 2017)
- VOC received by five Ajinomoto Group food product companies in Japan: 61,600 (91% of the total in fiscal 2017)

#### Breakdown of VOC (Ajinomoto Co., Inc.)



### ■ Efforts to improve customer satisfaction

Five food product Group companies in Japan regularly conduct a survey to confirm and improve customer satisfaction with the quality of responses to their quality-related claims. The investigation, business, and customer service divisions work to share and improve the results of the survey. The fiscal 2018 survey by Ajinomoto Co., Inc. indicated that 95% of customers were satisfied with the response to issues they raised, 81% were satisfied with the survey report, and 93% will continue to use the Company's products.

Performance

# Contribution to nutritional issues

## Approach

One nutritional issue faced globally is the “double burden of malnutrition,” the coexistence of overnutrition and undernutrition, which can occur in a country or region as well as in an individual. To help resolve this complex issue, the Ajinomoto Group will leverage its food industry expertise in synthesizing the functional benefits of amino acids with various technologies, while utilizing networks developed through other activities to strengthen Group-wide nutritional improvement initiatives.

## Framework

► Integrated Report  
 2019 P43

► Group Shared  
 Policy on Nutrition

## Food and Nutrition Management

In July 2017, the Ajinomoto Group established the Group Shared Policy on Nutrition and the Nutrition Strategy Guideline based on the policy. These provide a foundation for the Group’s business activities to promote “health and well-being.” Since fiscal 2018, a cross-organizational task force headed by a Corporate Senior Vice President has been formulating a comprehensive nutrition strategy with specific commitments along with a system to ensure the strategy is effectively executed.

## Performance

GRI203-2

## Ajinomoto Group Nutrient Profiling System (ANPS)

The Ajinomoto Group is developing its own nutrient profiling system (Ajinomoto Group Nutrient Profiling System: ANPS) as a tool for developing healthy food products and menus. The ANPS will clarify upper and lower intake limit of sensitive and positive nutrients in food based on values recommended by the World Health Organization (WHO) and other independent bodies. Sodium, added sugars, and saturated fat are being considered as sensitive nutrients, and vegetables, fruits, and protein as positive nutrients.

One unique feature of ANPS is that it’s designed to be used for menus as well as product reformulation. For menus, the Group is considering setting its own indicators of deliciousness, such as umami, in addition to the above-mentioned nutrient items. For products, the Group is developing ANPS based on existing NPSs (e.g., HSR<sup>[1]</sup>) recommended by international research institutes and experts.

The Group is piloting ANPS in certain regions and, as improvements are made, plans to roll out the system worldwide starting in fiscal 2020.

### Overview of the Ajinomoto Group Nutrient Profiling System (ANPS)

ANPS for menus	Nutrients to reduce to avoid overconsumption: Sodium, added sugars, saturated fat Nutrients to actively consume: Vegetables, fruits, protein (Note: Addition of “deliciousness” indicators (umami, etc.) under consideration)
ANPS for products	Nutrients to reduce to avoid overconsumption: Sodium, added sugars, saturated fat Nutrients to actively consume: Vegetables, fruits, protein (Note: Modifications based on existing NPSs under consideration)

[1] Developed through an industry-academic-government partnership in Australia, the Health Star Rating rates packaged foods by number of stars based on their nutritional profiles.  
<http://www.healthstarrating.gov.au>

## Contribution to Health and Nutritional Issues

Performance

GRI203-2

► P22









### Nutrition Improvement Initiatives by Region

Improving the nutritional balance of consumers' day-to-day diet is critical for addressing issues related to the underconsumption of protein and vegetables and overconsumption of sugar, fat and salt.

Since its founding, the Ajinomoto Group has refined its leading-edge bioscience and fine chemical technologies with research centered on amino acids. The Group continues to propose easy-to-make, delicious and nutritionally balanced meals that leverage its proprietary "deliciousness technologies" and expertise in nutrition designing. For example, the Group offers seasonings to help with eating adequate protein and vegetables; low-salt, low-sugar and low-fat seasonings and processed foods; and supplements for nutrients lacking in meals. It also actively shares basic knowledge and recipes for eating a balanced diet using available ingredients and considering traditional ways of cooking to each country or region worldwide.

■ Major initiatives

- Development and marketing of products that help nutritional improvement

	Measures to reduce salt, sugar, fat	Measures to increase protein, micronutrients, etc.
Japan	<p>Salt reduction </p> <p>Salt, Japanese flavor seasonings, consomme soup stocks, cup soups, etc.</p> <p>Sugar reduction  Fat reduction </p> <p>Sweeteners, powdered drinks, etc.            Mayonnaise, non-dairy powdered creamer, etc.</p>	<p></p> <p>Japanese flavor seasonings, soups, menu-specific seasonings, amino acid supplements, etc.</p> <p>Amino acid prime mix</p>
Southeast Asia	—	<p></p> <p>Powdered drinks, amino acid supplements, flavor seasonings, medical foods, etc.</p> <p>Amino acid prime mix</p>
North America	<p>Salt reduction </p> <p>Frozen foods</p>	<p></p> <p>Medical foods, amino acid supplements, frozen foods etc.</p> <p>Amino acid prime mix</p>
South America	<p>Sugar reduction </p> <p>Powdered drinks</p>	<p></p> <p>Amino acid supplements, flavor seasonings, soups, etc.</p> <p>Amino acid prime mix</p>
Europe	—	<p></p> <p>Medical foods, frozen foods, etc.</p> <p>Amino acid prime mix</p>

## Contribution to Health and Nutritional Issues

- ▶ P20
- ▶ P21
- ▶ P22
- ▶ P23
- ▶ P27
- ▶ P29

GRI102-12

### Performance

GRI203-2

- ▶ *Victory Project*® (Japanese)
- ▶ *Kachimeshi*® websites (Japanese)
- ▶ "AJINOMOTO×SPORTS" (Japanese)
- ▶ *Kachimeshi*® Recipe (Japanese)

### ● Meal suggestions, information provision

	Initiatives
Japan	· <i>Kachimeshi</i> ® · <i>Victory Project</i> ® (collaboration with JOC and JPC) · <i>Love Vege</i> ® (project to promote vegetable consumption) · "Salt reduction / Optimal salt" · Food education · Measures to address and undernutrition among young women and seniors · <i>AminoIndex</i> ™
Southeast Asia	· Nutritionally balanced meal planning · Food education and school lunch assistance · <i>Kachimeshi</i> ® · Supporting top athletes
North America	· Promoting reduction of salt with umami · Providing information on medical foods (food therapy)
South America	· Promoting reduction of salt with umami · <i>Kachimeshi</i> ® · <i>Victory Project</i>
Europe/Africa	· Disseminating information on initiatives to address undernutrition

## TOPIC

### Meeting with opinion leaders to end malnutrition in Asia

Ajinomoto Co., Inc. is the only Japanese corporate member of the SUN Business Network (SBN), a network of businesses that are part of Scaling Up Nutrition (SUN), a global movement to end malnutrition led by countries and supported by the UN, civic groups, and businesses. The Company also voluntarily participates as a member of the SBN Advisory Group.

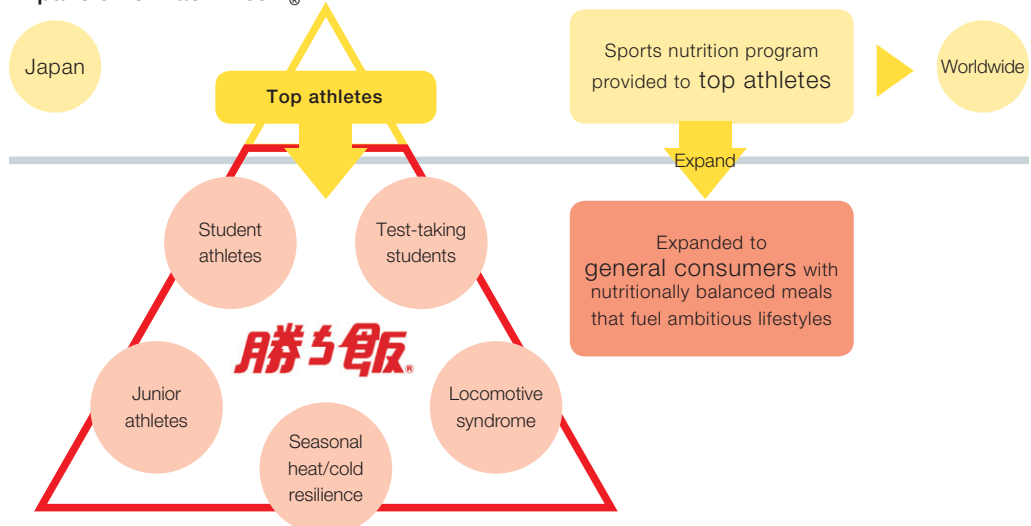
At the SBN Asia Country Gathering held in February 2019, the Company shared examples of Ajinomoto Group initiatives in nutrition improvement and talked with opinion leaders from across the region.

### Support for healthy living and conditioning with *Kachimeshi*®

Since 2003, Ajinomoto Co., Inc. has provided conditioning support in the form of food and amino acids to world-class athletes through the *Victory Project*®, a partnership with the Japanese Olympic Committee. The Company has concentrated this knowledge into *Kachimeshi*® for general consumers in Japan. This program supports healthy living and conditioning by sharing health and nutrition information as well as easy, delicious meal plans arranged by theme at stores of major retailers, restaurants, and company cafeterias.

Outside Japan, in fiscal 2018, the Ajinomoto Group started nutrition support activities for top athletes in Southeast Asia, and entered into partnership with the Brazilian Olympic Committee. The Group will support top athletes in each country with a *Kachimeshi*® program adapted to local ingredients and dietary culture.

### Expansion of *Kachimeshi*®



## Contribution to Health and Nutritional Issues

### Performance

GRI203-2

#### Support for national nutrition initiative in the Philippines

In 2018, AJINOMOTO PHILIPPINES CORPORATION (APC) developed a two-week menu consisting of 37 recipes as a part of *Pinggang Pinoy*<sup>®</sup>, a nutrition improvement initiative of the Philippine government and initiated an education program “*Mag-Pinggang Pinoy*<sup>®</sup> *Tayo!*” In addition, APC developed 40 nutritionally balanced healthy recipes that incorporate food groups recommended in the government dietary standards.

The initiatives began by extracting the most popular foods from those prepared and eaten in the Philippines and then identifying through analysis those nutrients that tend to be under and overconsumed relative to national dietary standards. The nutritional analysis utilized a-Menu, the Ajinomoto Group’s own database on local daily meals and nutritional balance data. Based on the analysis, the company supports the government initiative by developing delicious, nutritionally balanced, affordable and easy-to-cook recipes and communicating through social media and product packages ways consumers can solve nutritional issues while enjoying their daily meals.



Recipe book

### TOPIC

#### Nutritionally balanced meal ideas for every region

- Ajinomoto Co., Inc.’s Tokyo Branch is partnering with the local government (Shinjuku City, Tokyo) and retailers to suggest *Kachimeshi*<sup>®</sup> meals targeting a higher intake of vegetables for city residents. In fiscal 2018, in addition to these recipe suggestions, the Company also held a locomotive syndrome screening event at supermarkets.
- Ajinomoto (Malaysia) Berhad encourages vegetable intake and low sodium diet among consumer by using umami seasoning *AJI-NO-MOTO*<sup>®</sup> in various promotional activities such as “Mix, Mix, Ready” campaigns and scientific exhibition to promote healthy living.
- AJINOMOTO CO., (THAILAND) LTD. published cookbooks for food distributors and consumers, offering ideas for preparing easy, nutritious recipes (number of subscribers: 13,000).



Japan



Malaysia



Thailand

### Performance

GRI203-2

► P19

## Efforts to Resolve Excessive Intake

### Salt reduction

The Ajinomoto Group offers products and recipes that use umami to help consumers reduce their salt intake while still enjoying the deliciousness and satisfaction of food.

In 2018, *Ajinomoto* KK *Consommé (low-salt)* won the gold award in the 4th Reduced-Salt Food Product Awards<sup>[1]</sup> hosted by the Japanese Society of Hypertension (JSH). Since 2014, Ajinomoto Co., Inc. has been partnering with local government and distributors to promote reduced and proper salt intake in Japan's Tohoku region. Iwate Prefecture, where the Company promotes reduced-salt products at stores and holds salt-reduction seminars for dieticians and others on Salt Reduction / Optimal Salt Day each month, has reduced salt intake by 10 to 20% over a four-year period (2012, 2016 National Health and Nutrition Survey). This salt-reduction initiative with government and distributors is being expanded to 32 prefectures, with the suggestion of reduced-salt recipes using local ingredients and salt-reduction seminars serving to raise awareness in each community.

[1] Awarded to reduced-salt food products listed on the JSH website that are recognized as making an outstanding contribution to reduced salt intake.

### Sugar reduction

The Ajinomoto Group has utilized its amino acid production technologies in the use of two amino acid sweeteners, aspartame and advantame, which are roughly 200 and 20,000-40,000 times sweeter than sugar, respectively. Selective use of high-intensity sweeteners can meet consumers' sugar-reduction needs without sacrificing the taste of sweetness, and the Group provides these sweetness applications to businesses across the food and beverage industry. The Group also markets products developed to support sugar reduction and appropriate sugar intake. These include *Pal Sweet*®, a smooth-tasting low-calorie sweetener with zero sugar, *Refresco FIT*, a powdered juice that uses aspartame and is sold in Brazil and *PAL SWEET DIET*® for B to B that enhances the taste of food with natural sweetness.

### Fat reduction

The Ajinomoto Group has identified substances that impart a rich taste and deep flavor to cooking, and calls this function "kokumi." It is increasingly understood that kokumi serves to compensate for the sensation of fat in foods. Utilizing this function, the Group has developed and markets *Pure Select*®, *Koku Uma*®, *Mayonnaise*, which has the same rich taste as regular mayonnaise due to a proprietary manufacturing method and 65% fewer calories (compared to the Company's regular mayonnaise), as well as a low-fat-type *Marim*® creaming power with 50% less fat.

## Contribution to Health and Nutritional Issues

### Performance

GRI203-2

▶ The Ajinomoto Foundation

▶ Sustainability Data Book 2018 P26

### Efforts to End Malnutrition

#### Contribution to nutritional issues in infants and toddlers

The Ajinomoto Group is helping to eliminate malnutrition in weaning children in the Republic of Ghana through donation to the Ajinomoto Foundation's Ghana Nutrition Improvement Project.

#### Contribution to nutritional issues from early childhood to adolescence

The Ajinomoto Group is actively working to resolve the nutritional issues of children and adolescents in many countries and regions.

In Vietnam, many children suffer from stunted growth and low body weight especially in rural areas, while a growing number of children in urban areas are overweight and obese. To resolve these issues, AJINOMOTO VIETNAM CO., LTD. launched the School Meal Project in 2012 to apply ideas from Japan's school lunch system. Working with central government ministries, including the Ministry of Education and Training, and the Ministry of Health, the company has been carrying out a range of activities to deploy well-balanced school meals nationwide. The project has developed and provided school-meal menu books and food and nutrition education materials; developed and implemented a menu-making software (adopted in 3,048 schools in fiscal 2018); set up model kitchens which has accepted tours from over 500 schools and organizations with over 1,700 guests from all over Vietnam. The project offered nutritionally balanced school meals to 1.286 million elementary school children by the end of fiscal 2018.

In Indonesia, the high percentage of children with low body weight, stunted growth and anemia is a serious social problem. PT AJINOMOTO INDONESIA implemented a school meal project in partnership with the Department of Nutrition at Institut Pertanian Bogor University. The ten-month program provided nutritionally-balanced school lunches and taught diet and nutrition to teenage students, and has led to more balanced nutritional intakes, lifestyle changes and the improvement of anemic conditions of the students.



(left)  
Children eating school lunch (Vietnam)  
(right)  
Model kitchen (Vietnam)



Students eating school lunch (Indonesia)

#### Dealing with nutritional issues in young women (Japan)

In Japan, weight loss has become noticeably more common among women in their 20s and 30s. Unhealthy weight loss has been linked to poor health, risk of obesity in future offspring, risk of diabetes due to insufficient muscle mass and risk of falling and bone fracture in old age. To address the nutritional issues in young women, Ajinomoto Co., Inc. has been conveying the importance of eating a well-balanced diet to professionals at conferences and seminars.



Luncheon seminar of the Japan Academy of Midwifery

#### Nutrition seminar for midwife (Indonesia)

PT AJINOMOTO INDONESIA, Indonesia Midwives Association and the Indonesian Association of Fitness and Sports Nutritionist jointly hosted nutrition seminars for midwife. The six seminars attended by 1,500 women discussed balanced nutrition and food safety for pregnant women, MSG safety regulation and the role of midwife in the first 1,000 days of life.



Nutrition seminar for midwife



## Contribution to Health and Nutritional Issues

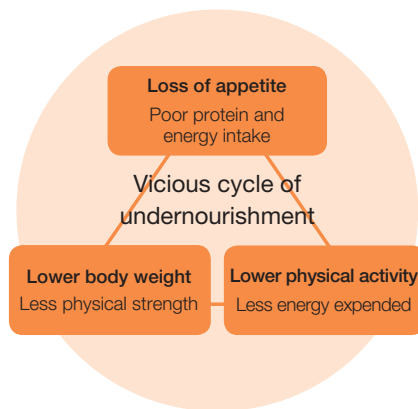
Performance

GRI203-2

### Dealing with nutritional issues in seniors (Japan)

Seniors may not be able to eat adequately due to declining physical functions and loss of appetite as they age. Less food intake causes body weight to decrease and muscular and physical strength to deteriorate, which may then lead to lower physical activity, less appetite and a vicious cycle of undernourishment. To prevent this, Ajinomoto Co., Inc. leverages its protein and amino acid nutrition expertise, and strives to publicly disseminate nutritional knowledge to people with health problems. The Company will continue to partner with specialists, providing information for immediate use to healthcare providers, registered dietitians and pharmacists as guidance tools as well as conducting training to foster deeper understanding.

#### Vicious cycle of undernourishment

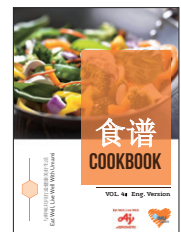


#### Three keys to prevent undernourishment



### Elderly Dietary Improvement Project (Malaysia)

Ajinomoto (Malaysia) Berhad partnered with the International Medical University to promote healthy dietary intake that enhance the well-being of elderly people. Fifty-four elderly people participated in the program which enabled them to enjoy delicious and balanced meals with lower sodium intake through umami application. In addition, two cookbooks which contains 56 nutritionally-balanced and low sodium menus, each with 45% less sodium were created for the seniors' continuous usage.



### Collaboration to support local health (Japan)

In collaboration with the local government and drugstores, Ajinomoto Co., Inc. is working to improve the nutrition of seniors. Using the Eat Well Check Sheet 10 developed internally, the Company analyzes the number of checks and responses to a questionnaire on dietary lifestyle, offers appropriate advice from registered dietitians based on the results, and suggests appropriate products to support the health of the elderly.



Eat Well Check Sheet 10

## TOPIC

### Distribute the latest food and health topics to nutrition experts (Japan)

Ajinomoto Co., Inc. released its food and health communication website "Ajicollab" for dietitians and registered dietitians in April 2019. The Company will further promote the dissemination and enlightenment of health and nutritional knowledge, by disseminating information on food and amino acids based on science in a timely manner.

▶ Ajicollab  
 (Japanese)

### Approach

### Functions and Technological Applications of Amino Acids

Given that umami-producing glutamic acid is an amino acid, the Ajinomoto Group has expanded its business by developing leading-edge bioscience and fine chemical technologies through research centered on amino acids. By providing products and services that utilize the functions of amino acids with unique technological applications, the Group contributes to realize greater wellness for people all around the world.

#### Amino acids and health

Roughly 20% of the human body is composed of proteins. These proteins—more than 100,000 of them—are formed of long, uniquely assembled chains of just 20 kinds of amino acids. For this reason, amino acids serve critical, life-sustaining functions. They are the building blocks of muscle, skin, hair, and blood. They help protect and regulate the body as hormones, enzymes, and antibodies. And they also provide energy for movement.

Of the amino acids that compose proteins, nine cannot be synthesized within the body and must be obtained through food or other means. These “essential amino acids” all have the effect of stimulating muscle development, and leucine in particular promotes protein synthesis and limits protein breakdown by acting as a switch to signal muscle development. Evidence has shown that consuming amino acids high in leucine, even in small amounts, triggers muscle synthesis more than consuming protein itself.

#### Evidence-based nutritional and health value propositions

Based on world-class scientific expertise on amino acids, the Ajinomoto Group develops and markets products that support comfortable lifestyles for consumers, and also provides amino acid formulations and product design solutions to business customers. Adding various amino acid functions to food products broadens the health and nutritional value of amino acids by making it possible for consumers to conveniently obtain amino acids in their diet. The Group calls this B2B2C approach the downstream strategy (brand + inside strategy) and is implementing it in and outside Japan.

Based on this strategy, the Group offers to business customers Amino Acid Prime Mix, a new line of optimally formulated amino acid ingredients for food and beverage products.

### Performance

GRI203-2

► Sustainability Data  
Book 2018 P30

## Contribution to Health and Nutritional Issues

### Amino Acid Prime Mix ingredients

**Essential amino acid mix with 40% leucine**

**Function** Maintains and improves muscle mass and strength

● Nine essential amino acids

Leucine

Signal to stimulate muscle protein development

Of nine amino acids, leucine works as a signal to stimulate muscle development. This 40% leucine formulation supports efficient integration of essential amino acids in the body for enhanced muscle mass and strength.

**Cystine and theanine<sup>[1]</sup> mix**

**Function** Boosts immunity

Cystine

Theanine

Glutathione

Pathogen

M: Macrophage  
 NK: NK cell  
 B: B cell

Cystine and theanine support the production of glutathione<sup>[2]</sup>, an antioxidant. Glutathione boosts one's ability to fight pathogens by helping to activate the innate and acquired immune systems.

**Arginine and glutamate mix**

**Function** Improves gastric motility and appetite

**Arginine**

Expands the stomach to temporarily hold food

Small intestine

\*Hypothesized mechanism

**Glutamate**

Activates the stomach, sending food to the small intestine

Small intestine

\*Hypothesized mechanism

Arginine and glutamate work to alleviate stomach discomfort from food by promoting gastric motility.

**Histidine and vitamin B6 mix**

**Function** Alleviates fatigue, improves work efficiency

Histidine

Histamine

Histidine decarboxylation

Oral consumption

Digestion Absorption

Transfer to blood

In brain

In blood

Histidine thus alleviates fatigue and improves efficiency in tasks requiring simple memory and decision-making. Vitamin B6 aids histidine action.

[1] An amino acid found in tea leaves. A derivative of glutamic acid, theanine when consumed is broken down into glutamic acid and ethylamine in the body.

[2] An important antioxidant for many living organisms, glutathione is formed by joining three amino acids, glutamic acid, cysteine, and glycine, in that order. The amino acid cystine alone increases glutathione levels, but adding the glutamic acid derivative theanine increases glutathione levels even more significantly.

## Contribution to Health and Nutritional Issues

GRI203-2

### TOPIC

#### Improving QOL with medical food products leveraging amino acid functions

Driven by its founding desire to improve nutrition with delicious food, the Ajinomoto Group utilizes its expertise in amino acids and food to contribute to a better quality of life for people facing various health challenges.

Ajinomoto Cambrooke, Inc. (previously Cambrooke Therapeutics, Inc.), manufactures and markets medical food products for patients with amino acid metabolism disorders. Most medical foods offered to patients with metabolism disorders are lacking in palatability and variety. However, since 2017, when Ajinomoto Cambrooke Inc. became a Group subsidiary, the company has been offering a diverse lineup of more delicious and nutrient-dense products by applying the Group's knowledge of the nutritional and physiological functions of amino acids as well as its "deliciousness technologies." In 2018, the company expanded operations from North America and Europe into China.

Since its founding in 2000, Ajinomoto Cambrooke Inc. has emphasized in-person communication between patients, their families and medical experts and has held seminars and other events for patients in the countries and regions where it operates. In fiscal 2018, the company held cooking classes for patients in four major cities in Australia, and around 120 people participated.

By leveraging Group strengths, the Group will continue to bring the joy of food to more patients and help improve QOL for them and their families.



Ajinomoto Cambrooke's medical foods for China

An example of menu made in cooking classes

# Contribution to medicine

Performance

GRI203-2

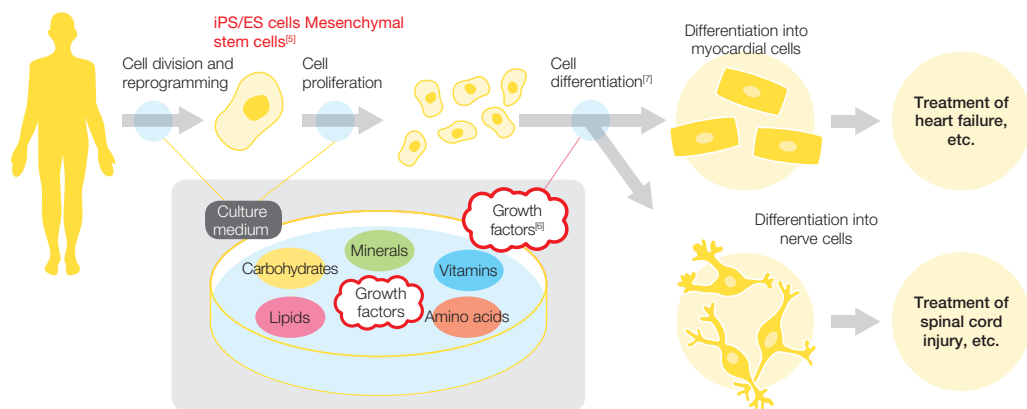
► Sustainability Data  
Book 2018 P31-32

## Making Regenerative Medicine<sup>[1]</sup> a Reality

### Commercial cell culture medium for regenerative medicine<sup>[2]</sup>

Regenerative medicine is one of the most active fields of research worldwide as a radical treatment that may solve the problems associated with organ transplantation. The Ajinomoto Group is a supplier of pharmaceutical-grade amino acids, a key ingredient in cell culture media. In 2014, the Group successfully developed *StemFit*® AK03, an iPS<sup>[3]</sup>/ES<sup>[4]</sup> cell culture medium that is free of animal-derived ingredients, which was introduced to the market in 2016 as *StemFit*® AK03N. With Ajinomoto Kohjin Bio Co., Ltd., a joint venture established with Kohjin Bio Co., Ltd. in 2018 for the contract manufacturing of clinical culture media used in regenerative medicine, the Group will continue to play an active role in regenerative medicine and drug development through the manufacturing and supply of cell culture media.

### Role of cell culture medium in regenerative medicine



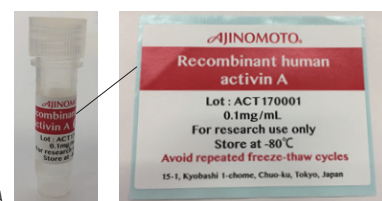
- [1] Medical treatment of dysfunctional, non-functional or defective tissues where artificially reproduced functional cells or tissues are transplanted to regenerate the tissues and their functions.
- [2] A nutrient solution that contains a balanced mixture of amino acids, carbohydrates, lipids, vitamins, minerals and growth factors required for cell growth.
- [3] Pluripotent stem cells generated from human body cells by adding a number of factors to reprogram them into pluripotency (ability to differentiate into different tissues and organ cells) and almost infinite proliferative capacity.
- [4] Pluripotent stem cells derived from the inner cell mass of a human blastocyst that is capable of differentiating into various tissue and organ cells that make up the body.
- [5] A type of stem cells discovered in 1970 that exist in the body and have the capacity for self-proliferation and multipotency. Mesenchymal stem cells differentiate into mesenchymal cells such as bone, cardiac and other cells.
- [6] Proteins that promote the proliferation and differentiation of specific cells in human and animal bodies.
- [7] The conversion of iPS/ES cells into cells of different tissues and organs that make up the body.

► Press release

## TOPIC

### Supplier of the Japan's first growth factors for clinical research to laboratories

In October 2018, Ajinomoto Co., Inc. obtained a confirmation letter from the Pharmaceuticals and Medical Devices Agency (PMDA), the Japanese drug regulatory and review agency under the Ministry of Health, Labour and Welfare, stating that its *Recombinant human activin A*, a growth factor indispensable in the cell differentiation process in regenerative medicine, does not contain any raw materials to which the Standards for Biological Ingredients are applicable. Following this confirmation, the Company started supplying this growth factor, the first in Japan for clinical research use, to research institutions.



Recombinant human activin A

## Contribution to Health and Nutritional Issues

### Performance

GRI203-2

▶ Sustainability  
 Data Book 2018  
 P33-34

▶ Information about  
*AminoIndex™*  
 (Japanese)

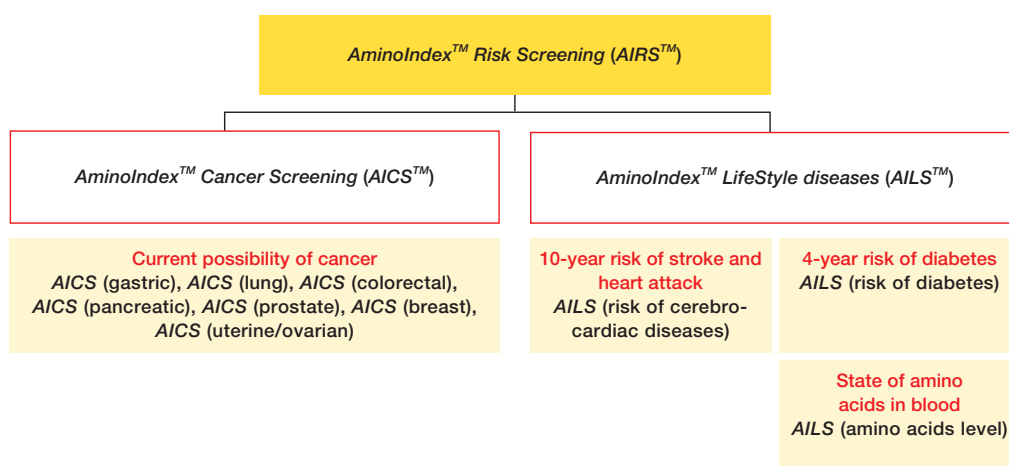
▶ Press release

### “AminoIndex Technology”

Ajinomoto Co., Inc. developed “AminoIndex Technology,” a tool to assess the state of health and disease risks by statistically analyzing the changes in the balance of amino acid concentrations in blood brought on by diseases. In 2011, the Company launched *AminoIndex™ Cancer Screening (AICS™)* as a commercial application of this technology. This was followed by *AminoIndex™ LifeStyle diseases (AILS™)*, which assesses the risk of developing diabetes within four years, and the two were combined in 2017 into *AminoIndex™ Risk Screening (AIRS™)*. In April 2019, *AILS™* was expanded to include the assessment of the stroke and heart-attack risks within 10 years. This means that a single blood test can now assess the risk of developing the three major diseases: cancer, stroke and heart attack.

The Ajinomoto Group will continue researching and developing tests that can help the prevention and early diagnosis of different diseases to support customers in their pursuit of long, healthy lives.

#### Key features of *AminoIndex™ Risk Screening (AIRS™)*



### TOPIC

#### MEXT Ministerial Commendation for Science and Technology in Development Category<sup>[1]</sup>

Ajinomoto Co., Inc. was awarded the Prize for Science and Technology (Development Category) in the Commendation for Science and Technology by the Ministry of Education, Culture, Sports, Science and Technology of Japan for 2019 in recognition of its achievement in the development of a new method of disease risk testing using the plasma amino acid profile (“AminoIndex Technology”).

[1] Prizes awarded to individuals who have made an outstanding achievement in scientific or technological research and development, with the aim of motivating those working in the field of science and technology and thereby raising the standard of science and technology in Japan. The Prize for Science and Technology (Development Category) is awarded to individuals who have undertaken a groundbreaking research, development or invention that contributes to the development of Japanese society, economy or people’s lives and has been applied to practical use.

Approach

## Response to diversification of values

The Ajinomoto Group offers products tailored to each location, with understanding and respect for food culture and values of each country and region, as well as diversified preferences and food needs. The Group proposes well-balanced, nutritional menus from local ingredients and classic dishes, and also suggests ways to create a mealtime setting better. To address unique local nutrition issues and provide emotional and physical nourishment, the Group contributes to healthy, comfortable lifestyles by proposing a total package that combines information, products and services.

### The joy of cooking together, eating together

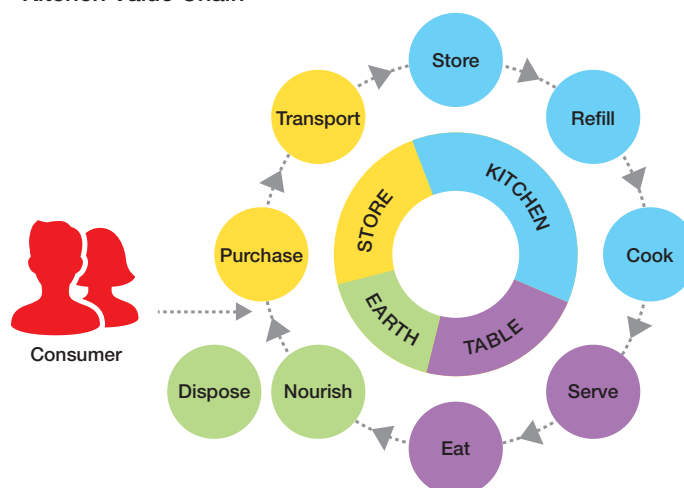
Eating habits are changing as lifestyles diversify with the rise of single-person and DINKs and DEWKs. Families have fewer opportunities to sit together at the dining table and more people are eating alone or, even when with others, eating personalized meals. Busyness is also leaving people less time to prepare or eat meals.

Meals are not only for getting nourishment, they are also an important place for communication. The Ajinomoto Group creates spare time for living through smart cooking, innovations that enable enjoyable and efficient meal preparation, and spreads the joy of eating together by connecting people and family through meal. By making it possible to prepare and enjoy meal together, the Group delivers health and well-being to people around the world.

### Provision of value that anticipates lifestyle changes

The Ajinomoto Group interfaces with consumers in various touch points between product purchase and disposal, including stores, kitchens, and the dining table. The Group calls this series of connection points the “Kitchen Value Chain.” To ensure that consumers are satisfied at each point, the Group develops products with a focus on such qualities as deliciousness, ease of preparation, and the usefulness and eco-friendliness of packaging materials, as evaluated from the standpoints of kansei engineering, ergonomics, and human psychology. Utilizing our unique consumer analysis and application capabilities, the Group seeks to provide enhanced consumer value that anticipates consumers’ lifestyles as they become more diverse and personalized.

#### “Kitchen Value Chain”



## Rapid Response to Consumer Lifestyle Changes

### Approach

GRI203-2

#### Better product accessibility

Delivering attractive, satisfying products at prices affordable to anyone, anywhere, anytime is crucial to marketing products globally.

For example, the smallest volume of umami seasoning *AJI-NO-MOTO*<sup>®</sup> is sold at a standard 5.5 grams for 10 naira (about US\$0.03) in Nigeria and 0.75 Egyptian pounds (about US\$0.04) in Egypt, a quantity and price that makes it easy to purchase and use.<sup>[1]</sup>

The Ajinomoto Group also builds its own distribution networks and delivers products to supermarkets, as well as to grocery stores in local markets, even in areas where distribution systems are less developed, such as rural parts of developing and emerging countries. Depending on the country or region, the Group adopts a cash payment model in which local staff sell actual product for cash. Visiting the market or stores directly enables closer communication with store owners and consumers, allowing the brand to grow deeper roots in the community.

#### Smallest packages of *AJI-NO-MOTO*<sup>®</sup>



Nigeria

Egypt

[1] Product prices in US dollars are based on conversion rates as of the end of June, 2019.



# Appropriate marketing and communications

## Approach

GRI417-DMA

▶ Ajinomoto Group Policies (AGP)

▶ Product website (Japanese)

▶ Group Shared Policy on Marketing Communications

## Performance

GRI417-3

▶ P15

### Responsible Communication with Consumers

The Ajinomoto Group markets its products in more than 130 countries and regions. Each region experiences “deliciousness” differently and has its own customs related to preparing and eating food. Each also has particular ways of communicating that are considered appropriate, and communicating in accordance with this local culture is crucial to conveying the value of a product or service. Given this, the Ajinomoto Group Policies clearly state a commitment to engaging in responsible marketing communications as a two-way activity with customers.

Group companies in Japan post social media guidelines on their respective websites, thereby disclosing the rules with which employees must comply when using social media. The packages of food-related products marketed by the major Group companies in Japan indicate not only all legally required information but also voluntary information, such lists of allergens and explanations of raw materials potentially unfamiliar to customers.

### Responsible marketing and advertising

Given the spread of digital media and the potential for closer two-way communication with consumers, the Ajinomoto Group states a commitment to practicing responsible marketing communications in its Group Shared Policy on Marketing Communications.

The policy acknowledges that extra caution is needed in marketing communications toward children. The Group pledges to be responsible by, for example, endeavoring not to exploit the inexperience or imagination of children and not to use language that can mislead children.

### Incidents of non-compliance

In Japan, the Group was not subject of public announcements by the Japan Consumer Affairs Agency for violating the Act against Unjustifiable Premiums and Misleading Representations at any time in fiscal 2018.

# Food Resources

## Maximize limited food resources and provide more value

Nature's bounty, as raw materials, are essential for making products. The Ajinomoto Group will sustainably procure agricultural, livestock and fishery resources, as well as follow manufacturing practices that make full use of raw materials without waste. The Group will also work together with consumers toward reducing food loss throughout society.

### Related SDGs



□ : Initiatives reported in the Ajinomoto Group Integrated Report 2019

### Sustainable materials sourcing

P35

#### Specific examples

- Biodiversity impacts
- Deforestation control
- Eradication of child and forced labor
- Supply chain management
- Sustainable land use
- Animal welfare
- Animal and plant nutrition

#### Related opportunities and risks

(○ Opportunity ● Risk)

- Increased risk of raw material procurement failure due to delays in addressing social and environmental issues across the supply chain
- Increased risk of raw material procurement failure due to climate change

#### Key initiatives by the Ajinomoto Group

- Management of fair operating practices (traceability, etc.)
- Promoting sustainability to suppliers
- Human rights due diligence
- Identifying important raw materials and engaging in responsible procurement (paper, palm oil, skipjack, etc.)
- Ensuring fair competition and providing thorough employee training
- Contributing to sustainable agriculture by using co-products

### Reduction of food loss and waste

P46

#### Specific examples

- Efficient use of materials
- Consumer edification (sustainable consumption, etc.)
- Waste reduction in the distribution process

#### Related opportunities and risks

(○ Opportunity ● Risk)

- Cost reduction through initiatives to reduce product returns and waste
- Depletion of food resources

#### Key initiatives by the Ajinomoto Group

- Using raw materials in manufacturing process without waste
- Upgraded, optimal supply-chain management using digital technology
- Reducing product returns and waste by extending product best-before dates, etc.
- Reducing food loss and waste during product use by consumers
- Proposing eco-friendly lifestyles for enjoying food without leftovers

## Approach

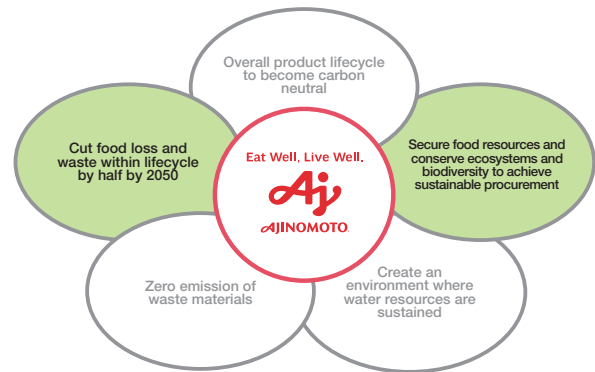
### Targets

GRI301-DMA  
 GRI304-DMA  
 GRI307-DMA  
 GRI308-DMA

The Ajinomoto Group provides products and services that utilize nature's bounty such as agricultural, livestock, and fishery products around the world, and recognizes that its business activities considerably affect the global environment as it is affected by the environment. That is why the Group aims to pursue sustainable production and consumption when managing business, by efficiently using valuable resources and addressing environmental and social issues such as human rights and occupational safety in supply chains.

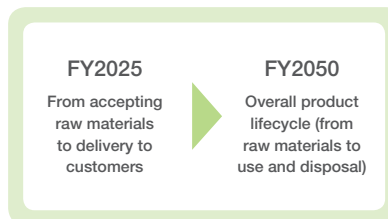
### Ajinomoto Group Long-Term Environmental Vision: Environmental Targets

Together with communities and customers, the Ajinomoto Group contributes to the global environment through initiatives that are ahead of international targets, from manufacturing to consumption. The medium- to long-term environmental targets encompass the entire product lifecycle, and address cutting food loss and waste, improving security of food resources, and conserving the natural environment as well as initiatives in production (factories).



#### Cut food loss and waste within lifecycle by half by 2050

**50%**  
 reduction  
 Food loss and waste  
 (vs. FY2016)



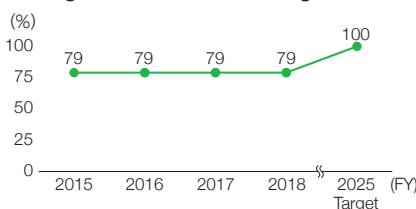
#### Key plans

- Use of raw materials in manufacturing process without waste
- Reduction of distribution and product returns by extending best-before dates, changing labels to month-year form, and changing delivery rules
- Reduction of waste during product use by customers
- Proposal of eco-friendly lifestyles to consumers for enjoying food without leftovers

#### Secure food resources and conserve ecosystems and biodiversity to achieve sustainable procurement

**100%**  
 Ratio of factories installing resource-saving fermentation technologies

Ratio of factories installing resource-saving fermentation technologies

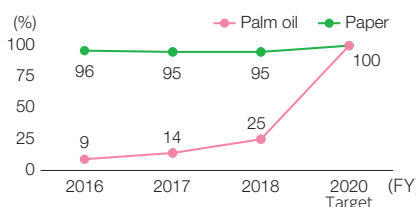


#### Key plans

- Introduction of technologies that conserve raw materials and energy
- In-house production of raw materials for fermentation
- Biomass use

**100%**  
 Sustainable procurement

Ratio of sustainable procurement



#### Key plans

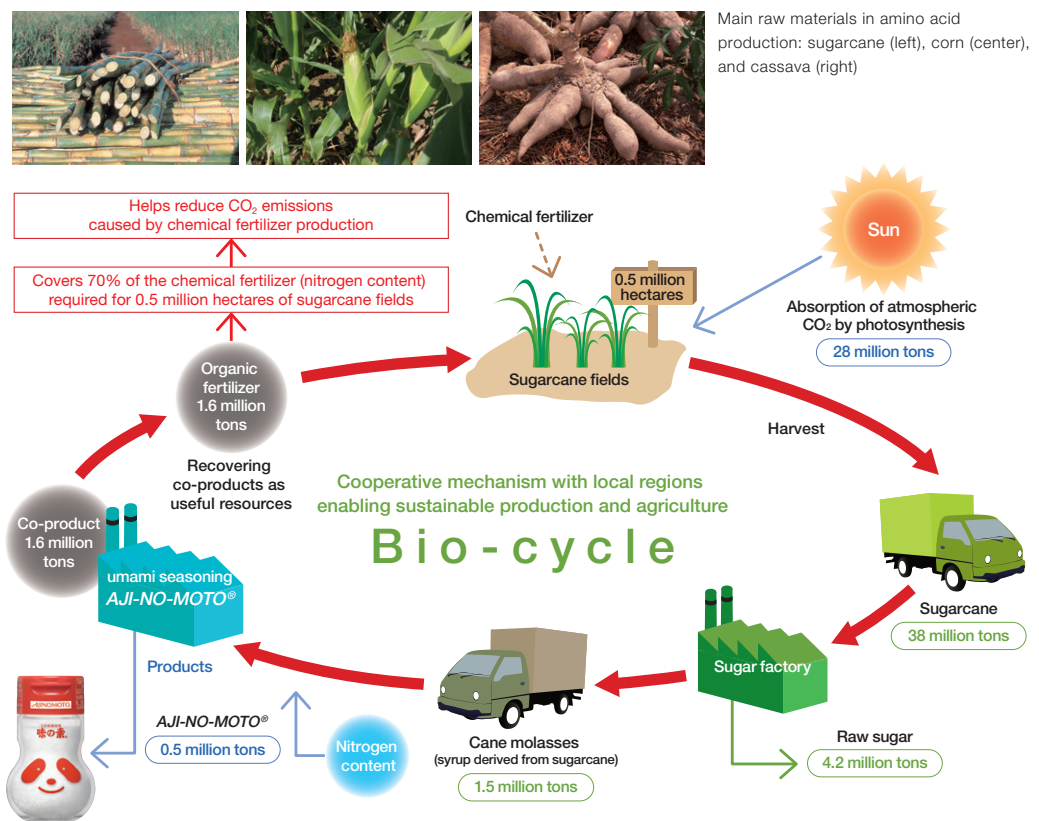
- Establishment of traceability
- Procurement of certified raw materials
- Creation of sustainable procurement standards and framework with suppliers

# Impact reduction in production of amino acids

Approach

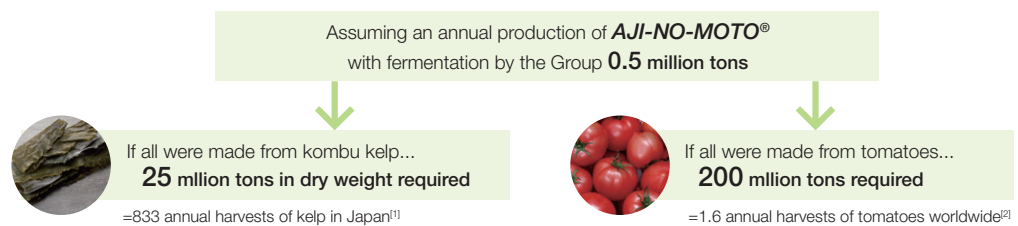
## Bio-cycles: A Contribution to Sustainable Agriculture

The Ajinomoto Group produces the amino acids through fermentation processes from crops that are easily available in each region. Nearly 100% of the nutritionally rich by-products (co-products) that remain after extracting amino acids in the fermentation process are then used as fertilizer and feed. The Group considers such recycling-based amino acid fermentation processes that procure sustainable agricultural production while enriching regional agriculture as “bio-cycles.” These bio-cycles are a means of simultaneously contributing to reliable supplies of food resources and realizing sustainable agriculture. For this reason, the Group is introducing these cycles at its fermentation factories worldwide.



The chart assumes worldwide annual production of approximately 0.5 million tons of the umami seasoning AJI-NO-MOTO® by the Group using only sugarcane. The values of sugarcane grown and sugar production are commonly used global figures, and the values of resources used for producing AJI-NO-MOTO® are based on actual statistics from the Group.

### If fermentation were not used to make amino acids...



[1] Calculated based on the average extraction of glutamate of 2.24 grams per 100 grams of kombu kelp  
 [2] Calculated based on the average extraction of glutamate of 0.14 grams per 100 grams of ripe tomatoes

## Sustainable Materials Sourcing

### Approach

GRI301-DMA

### Performance

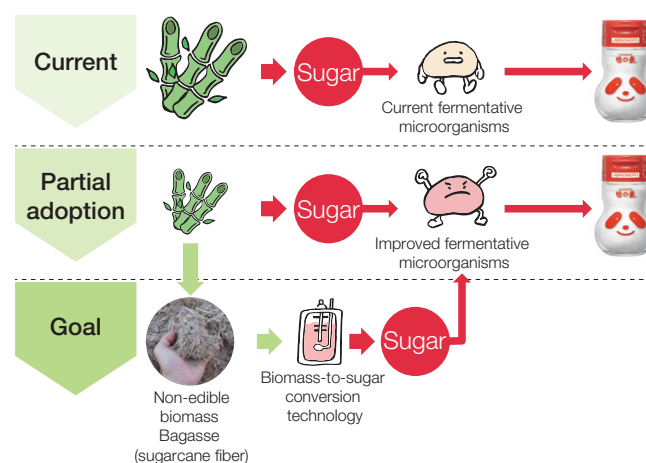
## Resource-saving Fermentation Technologies

Demand for the crops used in amino acid production is rising as they are important food resources and also used as biofuels and industrial materials. As a leading amino acid manufacturer, the Ajinomoto Group has a social responsibility to continuously developing lower-impact production methods.

Leveraging its proprietary leading-edge bioscience and fine chemical technologies, the Group has been actively working over the years to develop efficient “resource-saving fermentation technologies.”

Two examples of resource-saving fermentation technologies are those that reduce raw materials and energy use to enhance fermentation productivity, and those that employ rice husks, wood chips, and other unused local biomass as energy sources. These technologies help secure food resources while reducing the use of raw materials, water use and carbon emissions. The Group also pursues development of technologies that make use of non-edible biomass such as bagasse (sugarcane fiber) and corn stalks without competing with food resources.

To accelerate R&D and further improve these technologies, the Group is partnering with various entities with cutting-edge technologies in Japan and abroad, including venture companies, universities, and research institutes.



## Technology Roadmap

Around 80% of amino acid production factories slated for introduction of resource-saving fermentation technologies have introduced raw materials and energy-reducing technologies as of the end of fiscal 2018. The Group will complete technology introduction of all target factories by fiscal 2025, beyond which it will pursue further technology development and deployment.

In addition, the Group will raise the ratio of renewable energy to 28% by fiscal 2020, by reducing CO<sub>2</sub> mainly through shifting to cogeneration systems<sup>[1]</sup> and biomass boilers and introducing greenhouse gas emissions trading.

[1] Systems that generate and supply electricity and steam simultaneously

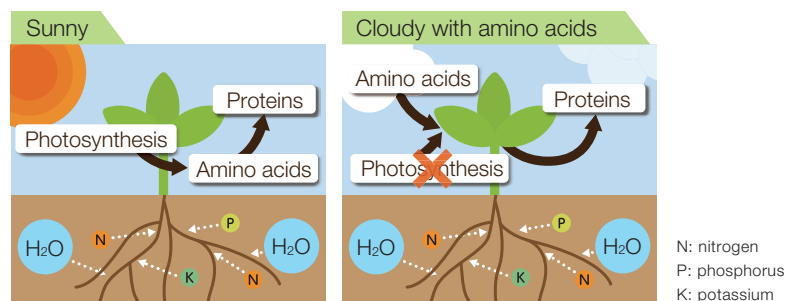
# Contribution to sustainable agriculture

Approach

## High Value-added Fertilizers Made with Co-products

Plants synthesize amino acids from absorbed nitrogen and sugars gained through photosynthesis, then use amino acids to synthesize proteins necessary for growth. Even under insufficient photosynthesis conditions caused by cloudy weather or low temperatures, plant growth can be stimulated by supplying amino acids as fertilizer.

For more than 40 years, the Ajinomoto Group has been effectively utilizing the nutrient-rich co-products of amino acid production as organic-type fertilizer. By fortifying these co-products with suitable amounts of phosphoric acid and potassium, for example, the Group has developed fertilizers with higher added value. Continued experiments and researches have been revealing these amino acid enriched fertilizers to have an enhancing effect on root development, plant growth, and harvest yields.



Performance

## High Value-added Fertilizers Used Around the World

### Utilization of co-products in Brazil

AJINOMOTO DO BRASIL IND. E COM. DE ALIMENTOS LTDA. ("ABR") sells *AJIFOL*<sup>®</sup> and other products made from fermentation co-products mainly to coffee and fruit producers. ABR's fertilizers have been used by farmers for more than a decade and are recognized for their effectiveness. More coffee farmers with sustainability goals have been taking steps to shift from chemical fertilizers to ABR's fertilizers at full scale.



### Utilization of co-products in Côte d'Ivoire

With Côte d'Ivoire's population expected to double by 2050, the Africa Rice Center<sup>[1]</sup>, an international research organization, is undertaking a project to increase the country's self-sufficiency in rice as a food staple. AJINOMOTO FOODS EUROPE S.A.S. (France) and AJINOMOTO AFRIQUE DE L'OUEST S.A. have been participating in this project in Côte d'Ivoire since 2017. Using test samples of factory co-products from France, their research has shown benefits for more efficient rice development without negative impacts on the soil. Through this project, they aim to contribute to food security and improved nutrition for local people.



[1] The Africa Rice Center (ARC) is a leading pan-African rice research organization committed to improving livelihoods in Africa through strong science and effective partnerships. ARC was created in 1971 by 11 African countries. Today its membership comprises 27 countries.

## Sustainable Materials Sourcing

### Utilization of co-products in Thailand

In Thailand, the bio-cycle using co-product is evolving. High value-added fertilizers made with co-products are sold to contract farmers, whose cabbage is then purchased by the Ajinomoto Group and used as an ingredient in gyoza (Japanese-style dumplings), creating a win-win scenario. For the Group, it ensures cabbage traceability and a stable supply of high-quality, big cabbage. For the farmers, the improved productivity and stable harvests bring higher, reliable income, while the fertilizer helps maintain land fertility better than existing chemical fertilizers.



# Sustainable procurement of raw materials

## Approach

GRI201-2  
 GRI204-DMA  
 GRI301-DMA  
 GRI414-DMA

- ▶ Ajinomoto Group Palm Oil Procurement Guidelines
- ▶ Ajinomoto Group Paper Procurement Guidelines
- ▶ Participation in RSPO
- ▶ Participation in CSPU

## Performance

### Identification of Critical Raw Materials

The Ajinomoto Group identifies critical raw materials that are derived from agriculture, forestry, and fishing requiring more focused action. The identification process involves determining all the raw materials used in operations, which are then analyzed by internal divisions and external experts including NGOs. Assessment is based on an overall perspective that includes several factors such as dependency on all the materials used, the availability of alternative materials, and relevance to global environmental sustainability. Critical raw materials are reviewed annually to reflect changes in business, the global environment, and other factors.

Recognizing that deforestation has a substantial impact on climate change, biodiversity, and also to human rights issues, the Group has stepped up measures related to palm oil, paper, and other agriculture and forestry resources. The Group promotes to procure certified raw materials, ensure the partnership with various initiatives as well as to establish its own traceability systems and implementation of audits based on the Ajinomoto Group Palm Oil Procurement Guidelines and Paper Procurement Guidelines.

### Raw materials critical to the Ajinomoto Group

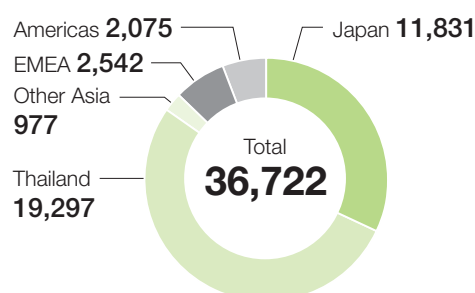
Agriculture and forestry resources	<ul style="list-style-type: none"> <li>· Palm oil, an ingredient in processed foods and specialty chemicals</li> <li>· Paper, used as office paper and in containers and packaging for processed consumer foods</li> <li>· Sugar crops, used in fermentation process of amino acids</li> <li>· Coffee beans</li> </ul>
Fisheries resources	<ul style="list-style-type: none"> <li>· Skipjack, an ingredient in <i>HON-DASHI</i><sup>®</sup> and in bonito flakes</li> <li>· Shrimp, an ingredient in frozen foods, etc.</li> </ul>

### Sustainable Palm Oil

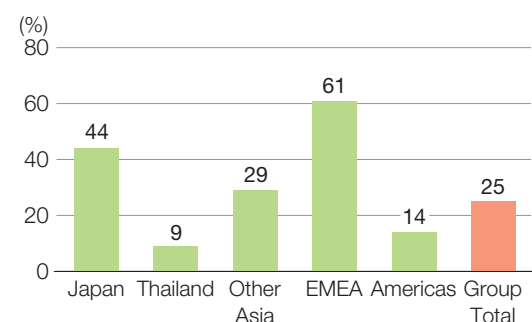
The Ajinomoto Group uses palm oil in a variety of products and applications, from processed foods such as cup soup, instant noodles, and coffee creamer, to specialty chemicals made in regions spanning Japan, Southeast Asia, Europe and South America. Since certain products use palm kernel oil, which is harder to procure in certified form, and certain regions have limited supplies of certified palm oil, the Group defines palm oil that is either certified by the Roundtable on Sustainable Palm Oil (RSPO) or that is traceable to sustainable sources as sustainable.

With a target to procure 100% sustainable palm oil by fiscal 2020, certified palm oil accounted for 25% of use in fiscal 2018. The use of palm oil with verified traceability is still being aggregated. In Thailand, where it is difficult to procure certified oil, the Group began tracing its own supply chain up to the palm oil mills in fiscal 2018.

#### FY2018 palm oil procurement by the Ajinomoto Group (tons)



#### FY2018 certified palm oil procurement ratio





## Sustainable Materials Sourcing

### Performance

GRI204-DMA  
 GRI301-2  
 GRI301-3

### Approach

GRI204-DMA

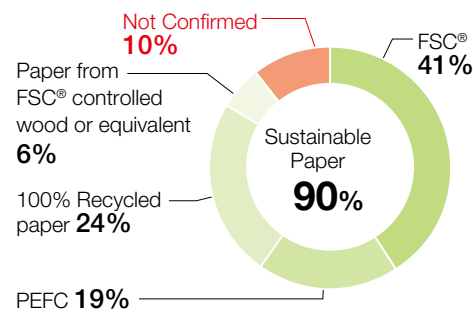
### Performance

### Promoting Use of Sustainable Paper

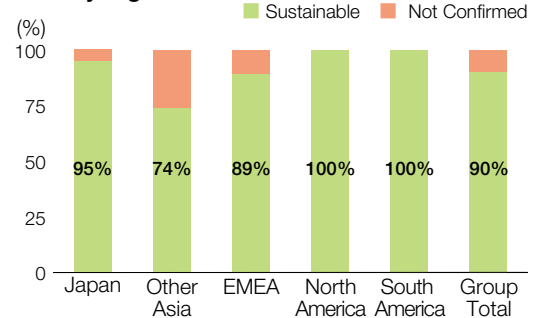
The Group is promoting procurement of paper containers and packaging based on its Paper Procurement Guidelines. The guidelines define paper that is “sustainable” as paper that is not derived from deforestation in areas of high conservation value and paper that is procured from providers that produce it through proper procedures in accordance with laws and regulations of the production areas and with international human rights standards. Sustainable paper includes paper certified by the Forest Stewardship Council® (FSC®) as well as recycled paper and paper made from FSC® Controlled Wood.

With a target to procure 100% sustainable paper by fiscal 2020, in fiscal 2018, sustainable paper use out of the total container and packaging paper use was 90% within the Group.

**FY2018 sustainable paper procurement ratio**



**FY2018 sustainable paper procurement ratio by region**



### Sustainable Procurement of Coffee Beans

Coffee beans are grown in areas of the world rich in biodiversity, often by small farms.

The Ajinomoto Group has been striving to procure coffee beans produced at farms that adhere to standards set by the 4C certification system, which aims to improve environmental conditions at coffee farms and better the lives of farm workers while encouraging sustainability in production and distribution.

In fiscal 2018, procurement rate of coffee beans produced at farms that adhere to 4C's set standards was approx. 40%.



### Performance

### Coffee Cultivation Test Using High Value-added Fertilizer

The Ajinomoto Group has been conducting test in different coffee-producing regions with the goal of using high value-added fertilizer made with fermentation co-products to grow coffee. Eventually, the coffee would be purchased and used to make Group products in a circular economy.

#### Activities in Colombia

The Group conducted a test using *AJIFOL*<sup>®</sup> foliar fertilizer to enhance resistance to coffee rust and other diseases. Having confirmed significant benefits, the project is moving to the stage of verifying its effectiveness on the level of gene expression.

#### Activities in Vietnam

The Group continued verification testing on plots using *AJIFOL*<sup>®</sup> and *AMI-AMI*<sup>®</sup> and gave training and technical guidance to local farmers. Fiscal 2019 plans include installing irrigation facilities and expanding the area of fertilizer application.

#### Activities in Indonesia

Tests aimed at yield improvement noted a deeper, improved coffee leaf color particularly in plots sprayed with *AJIFOL*<sup>®</sup>. The Group plans to continue this research.

#### Activities in Brazil

A two-year trial of applying *AJIFOL*<sup>®</sup> to increase coffee yield resulted in yields and bean size on par with conventional fertilizers, with no observable difference in appearance. Now that the test is complete, the Group is considering continued use in normal coffee cultivation.



## Sustainable Materials Sourcing

### Framework

GRI204-DMA  
 GRI308-DMA  
 GRI407-DMA  
 GRI414-DMA

### Performance

GRI204-DMA  
 GRI407-DMA

▶ Group Shared  
 Policy for  
 Suppliers

▶ P81

GRI204-DMA  
 GRI408-DMA  
 GRI408-1  
 GRI409-DMA  
 GRI409-1  
 GRI411-DMA  
 GRI412-DMA  
 GRI412-1  
 GRI414-2

▶ Group Shared  
 Policy on Human  
 Rights

## Supply Chain Management

Ajinomoto Co., Inc. draws up the procurement policies for the whole Group. Group companies then create plans and strategies and implement based on such policies. The Ajinomoto Group Global Procurement Conference is held as needed to share procurement policies and best practices within the Group.

## Supply Chain Initiatives

The Ajinomoto Group seeks understanding and cooperation from suppliers for securing human rights compliance and social responsibility in the supply chain by communicating its sustainability-related expectations of suppliers through the Group Shared Policy for Suppliers.

In addition, in May 2018, the Group joined Sedex, a collaborative platform for sharing responsible sourcing data on supply chains (where suppliers and buyers can disclose and view information related to business practices and sustainability). In fiscal 2018, the Group held explanatory meetings and issued written notices to primary suppliers in Japan in preparation for requesting that they join and share data through Sedex. The Group plans to evaluate and communicate with suppliers using Sedex from fiscal 2019 onward, and it will also collect information from suppliers that do not join by asking them to respond to a self-assessment questionnaire similar to that used by Sedex.

- Participation in fiscal 2018 supplier information sessions: 340 suppliers, 548 people

## Supplier Hotline

The Ajinomoto Group established a supplier hotline in June 2018. The hotline complements those for Group executives and employees and have been used to receive reports from suppliers to facilitate the early detection and correction of the Ajinomoto Group executive and employee behaviors that are potentially in violation of the law or the Ajinomoto Group Policies (AGP). Ultimately, the hotline will also be used to detect human rights, environmental and other violations in the supply chain.

## Human Rights Due Diligence

The Ajinomoto Group is showing its aim for creating a mechanism for human rights due diligence and implementing it on an ongoing basis in the Group Shared Policy on Human Rights. Based on the policy, the Human Rights Advisory Committee, composed of both functional and business divisions related to human rights, is studying and raising awareness on global human rights issues, while also building a mechanism for managing human rights through human rights due diligence.

In fiscal 2018, the Group conducted a human rights impact assessment (human rights due diligence investigation by third party and interviews with various stakeholders) on particularly labor-intensive shrimp and chicken processors in Thailand. The results found no serious issues in both shrimp and chicken processors.

## Sustainable Materials Sourcing

### Approach

GRI204-DMA

▶ Group Shared Policy on Better Mutual Relationship with Animals

### Performance

GRI204-DMA  
 GRI416-DMA  
 GRI416-1

▶ P55

## Animal Welfare

Animal-derived ingredients such as meat, eggs, and extracts are essential to Ajinomoto Group food products. Meanwhile, interest in animal welfare (animal husbandry practices that seek to provide a healthy life by minimizing stress and satisfying behavioral needs during the animals' lifetime) in the raising of livestock is on the rise.

The Group has published a Group Shared Policy on Better Mutual Relationship with Animals and is working to promote animal welfare in its value chain.

## Livestock Traceability Survey

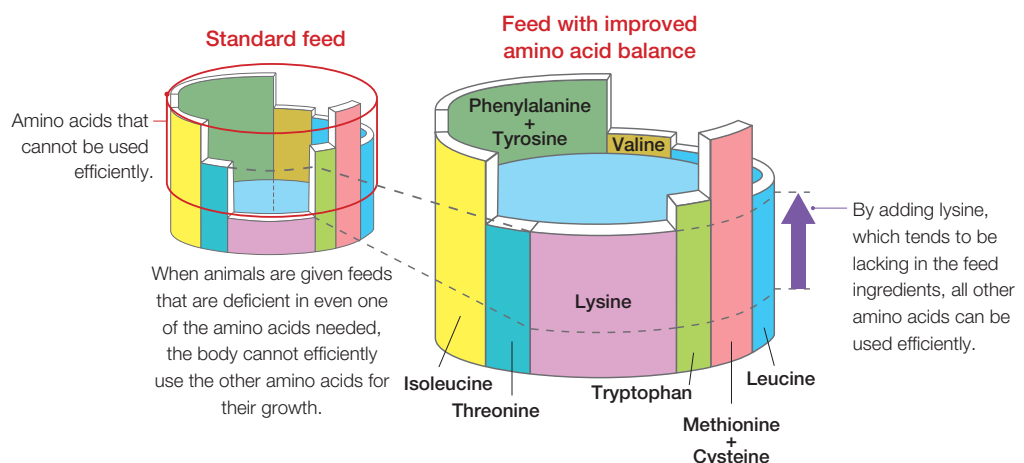
In fiscal 2018, Ajinomoto Co., Inc. shared the Group Shared Policy on Better Mutual Relationship with Animals with all primary suppliers in Japan, and began a traceability survey of its supply chain with 23 meat and meat extract suppliers in Japan. Information on the status of suppliers' compliance with country-of-origin regulations and guidelines and ability to trace product back to farms is being collected and used to identify issues and categorize risks. Ajinomoto Frozen Foods Co., Inc. is also preparing to conduct a similar survey.

From fiscal 2019 onward, the Group will implement the above-mentioned survey at Ajinomoto Frozen Foods Co., Inc. and also collect information on chicken eggs, meat, and other raw materials gaining increased interest from an animal welfare perspective. Overseas, the Group will keep track of the status of legal development and target raw materials, and plan to share policies among suppliers.

## Feed-use Amino Acids as Solution to Animal Nutrition Issues

Proteins, indispensable compounds for all animals, consist of approximately 20 different amino acids, several of which cannot be synthesized internally in sufficient quantities. These amino acids can be supplemented through the animal's feed.

Adding feed-use amino acids can improve the essential amino acid profile of feeds that consist mainly of wheat and/or corn and thus are poorly balanced. The improved amino acid balance not only can increase feed efficiency and promote growth, but also can reduce environmental impact by reducing excreted nitrogen.



# Conservation of ecosystems and biodiversity

## Approach

GRI304-DMA

▶ Group Shared  
Policy on  
Environment

## Performance

▶ Joint Skipjack  
Tagging Survey  
(Japanese)

### Biodiversity Approach

The Ajinomoto Group expresses its approach to ecosystems and biodiversity in the Group Shared Policy on Environment and Ajinomoto Group Long-Term Environmental Vision, and works as a Group to achieve its goals based on these vision and policies.

### Fishery

Ajinomoto Co., Inc. is committed to conserving resources and working toward sustainable use, as a company that uses skipjack as an ingredient in its major flavor seasoning product, *HON-DASHI*<sup>®</sup>. Since 2009, the Company has conducted the joint skipjack tagging survey with the National Research Institute of Far Seas Fisheries (NRIFSF) in Japan. In 2015 the Company began a joint survey with Tokyo University of Marine Science and Technology and other universities, and in 2018 launched a consortium from the survey's parent organization.

In recent years, skipjack catches have fallen significantly in waters around Japan, resulting in difficult times for skipjack fishery. To contribute to sustainable regional development and the skipjack fishing industry which supports Japan's food culture, the Company has been actively sharing the knowledge of skipjack ecology gained from surveys with industry stakeholders.

In fiscal 2019, the Company will continue to advance the study of skipjack ecology, better resource management, and the establishment of international resource management rules.

#### Fiscal 2018 survey results

- Wide-area survey using archival electronic tags  
Progress: Published paper on findings, including identification of three migration routes
- Coastal survey using ultrasonic waves  
Progress: Continued skipjack behavior survey using pinger tags

# Sustainable land use

Approach

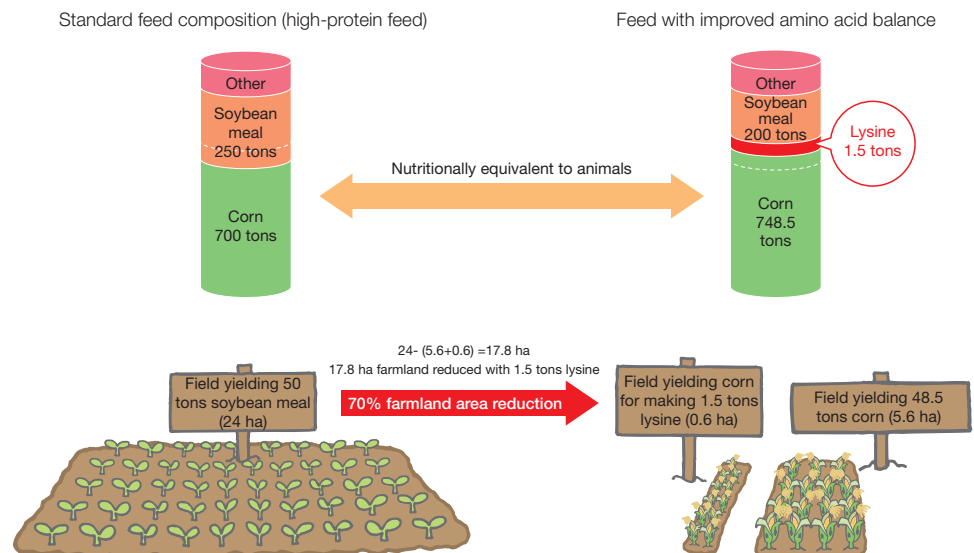
## More Effective Land Use with Feed-use Amino Acids

The effective use of farmland is needed more than ever as climate change has raised concerns over the loss of arable land and declining agricultural productivity.

Although soybean meal is generally used for livestock feed, 50 tons of soybean meal can be replaced with 48.5 tons of corn and 1.5 tons of lysine. Because significantly more corn can be grown per area of land than soy, replacing soybean meal with lysine can reduce the amount of farmland used to grow fodder crops.

In theory, the land-conserving impact of converting 50 tons of soybean meal to 48.5 tons of corn and 1.5 tons of lysine is roughly 18 hectares. Using lysine can thus prevent new land from being cleared for soybean cultivation or leave more existing farmland for human food production.

### Reduction of farmland area through lysine use



# Food loss and waste reduction target

**Performance**

GRI306-DMA  
 GRI306-2

The Ajinomoto Group aims to reduce food loss and waste in fiscal 2016 over the entire product lifecycle, from raw materials to customers use and disposal, by half by 2050. As its first initiative, the Group is targeting reduction of food loss and waste in fiscal 2016 generated by the Group, from accepting raw materials until delivery to customers, by half by fiscal 2025.

In fiscal 2018, the Group posted a 28% increase to 33 kilo tons against the 10% reduction target. The major reasons for the increase are due to the disposal of discontinued products and more accurate aggregations at overseas Group company plants.

**Target for food loss and waste reduction**

	Result		Target		
	FY2017	FY2018	FY2019	FY2020	FY2025
Reduction rate of food loss from receipt of raw materials through to customer delivery (vs. FY2016)	4% increase	28% increase	15%	20%	50%

The major food losses and wastes generated by the Group are as follows:

1. Raw materials and materials in process: Disposal due to product revisions, production item changes, expired use-by dates, production incidents, etc.
2. Products: Inventory caused by expiration due to product revisions or production/sales management errors, product returns due to erroneous shipment, damaged goods at warehouse or at time of delivery, disposal of sample items
3. Loss from standard factory operations: Waste generated by standard operations, such as line cleaning for product switching and sampling inspection

**Reduction through Manufacturing, Distribution and Sales Collaboration**

Food loss and waste in Japan is about 6.43 million tons annually (Ministry of Agriculture, Forestry and Fisheries of Japan [MAFF] estimate for fiscal 2016), which is around twice the amount of global food aid of about 3.2 million tons (2016 United Nations World Food Programme survey). Since 2011, Ajinomoto Co., Inc. has been collaborating with Japanese government and all manufacturing, distributing and sales sectors to study changing the best-before date label to month-year, extending best-before dates, and optimizing delivery dates.

Ajinomoto Co., Inc. and Ajinomoto AGF, Inc. extended best-before dates and completed the turnover from day-month-year to month-year labels for major products for home use in August 2018.

The Ajinomoto Group will continue to collaborate with government agencies and all manufacturing, distribution and sales sectors to further reduce food loss and waste throughout the supply chain.

**Advantages of changing the best-before date label to month-year for the entire supply chain**

- Reduction of number of lots to be managed
- Minimization of storage space
- Simplification of warehouse and store operations

## Reduction of Food Loss and Waste

### Performance

### Unique Technology to Address Food Loss and Waste (Japan)

Food loss and waste from the food service industry and retail stores is turning into a major concern as eating out and home meal replacements (meals prepared outside the home and purchased for home consumption) become more commonplace.

Using enzyme technology and proprietary formula, Ajinomoto Co., Inc. offers the food service and home meal replacement industries *Okome Fukkura Choriryo*, which retains the texture of freshly cooked rice for a long period of time, and *Kara-Age / Oniku Juicy Choriryo*, which retains the flavor of deepfried chicken and other meat dishes even after cooling. The Company will continue to develop products to help reduce food loss and waste.



*Okome Fukkura Choriryo*



*Kara-age / Oniku Juicy Choriryo*



## Green living together with consumers

### Approach

- ▶ P59
- ▶ *Aji-na Eco mark* (Japanese)
- ▶ *Eco-Uma Recipe* (Japanese)

### Performance

In Japan, food loss and waste from households accounts for around half of all food losses at about 2.89 million tons annually (MAFF estimate for fiscal 2015). The Ajinomoto Group is working to reduce household food loss and waste by promoting the practice of eco-friendly eating (choosing eco-friendly products and enjoying food without wasting ingredients) through everyday dishes and meals.

To help consumers to instantly recognize and select eco-friendly products whenever possible, the Group introduced its unique eco marks (*Aji-na Eco* and *Hotto-suru Eco* marks) in 2010. The Group has also promoted eco-friendly, delicious and smart ideas and recipes (*Eco-Uma Recipe*) for everyday cooking at events and websites since 2009.

### Environmental Learning Programs with Companies, Government, NPOs, NGOs and Educational Institutions

In 2011, Ajinomoto Co., Inc., together with Kao Corporation and E-Square Inc., launched the Society for Sustainable Food and Life Styles and has since continued its research activities. As part of these efforts, the Society has partnered with Kawasaki City in Kanagawa Prefecture, where both Kao Corporation and Ajinomoto Co., Inc. manufacturing factories are located, to conduct the environmental learning program “Summer Challenge: Exploring the Earth’s Future through Food and Daily Living” for the city’s fifth graders and their parent since fiscal 2016.

The three-day immersion program incorporates ideas that help lead to eco-friendly practices at home, through tours of the city’s environmental learning facilities and waste disposal facilities, factory tours of Kao Corporation and Ajinomoto Co., Inc., workshops for learning more about the SDGs and the environment, eco-friendly home cooking of curry, and a daily environmental journal homework for a month.



# Global Sustainability

## Reduce impact of business activities for global sustainability

The Ajinomoto Group is committed to reducing its environmental impact through business activities. The Group will continue to help create a sustainable circular economy through the purposeful actions of each individual.

### Related SDGs



□ : Initiatives reported in the Ajinomoto Group Integrated Report 2019

### Climate change adaptation and mitigation

P53

#### Specific examples

- Greenhouse gas emissions (Scope 1, 2, and 3)
- Energy management
- Fuel management
- Air quality

#### Related opportunities and risks

(○ Opportunity  
● Risk)

- Collaboration with outside organizations on decarbonization
- Higher production costs due to delays in initiatives to eliminate carbon emissions or increased carbon tax burden
- Procurement risk of sustainable raw materials
- Damaged corporate value due to delayed response to climate change

#### Key initiatives by the Ajinomoto Group

- Long-term effort to turning the overall product lifecycle carbon neutral
- Initiatives to reduce energy use during production and transportation
- Shifting to renewable energy
- · Disclosing information in line with the Task Force on Climate-related Financial Disclosures (TCFD) (scenario analysis, etc.)
- Lowering environmental impact by feed-use amino acids (reduction of soil and water pollution)

### Contribution to a circular economy

P56

#### Specific examples

- Waste reduction and 3Rs (Reduce, Reuse, Recycle)
- Product packaging
- Waste and hazardous materials management
- Reduction of environmental impact from containers and packaging
- Lifecycle impact of products and services

#### Related opportunities and risks

(○ Opportunity  
● Risk)

- Development of environmentally-friendly materials
- Damaged corporate value due to delays in waste reduction or recycling efforts

#### Key initiatives by the Ajinomoto Group

- Supplying highly biodegradable amino acid-based detergent
- · Promoting the 3Rs of containers and packaging (reduction of plastic waste, etc.)
- Using biodegradable plastic/plant-derived raw materials/certified paper
- Promoting use of environmentally-friendly product labels

### Conservation of water resources

P60

#### Specific examples

- Water and wastewater management
- Agriculture and livestock water use

#### Related opportunities and risks

(○ Opportunity  
● Risk)

- Production stagnation due to droughts, floods or water quality deterioration
- Raw material procurement failure due to water resource depletion

#### Key initiatives by the Ajinomoto Group

- Maintaining forests for water sources
- Developing wastewater treatment technology

## Approach

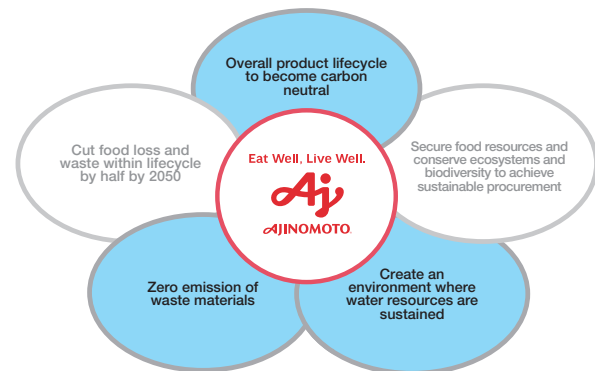
### Targets

GRI302-DMA  
 GRI303-DMA  
 GRI305-DMA  
 GRI306-DMA  
 GRI307-DMA  
 GRI308-DMA

The Ajinomoto Group business is built on top of a healthy global environment and rich ecosystems. In order to continue being an integral part of society, the Group needs to conduct business activities that help transform society into an environmentally-friendly, low-carbon, circular economy. The Group will continue contributing to global sustainability by determining of environmental impact across the entire lifecycle and initiatives to reduce such impact.

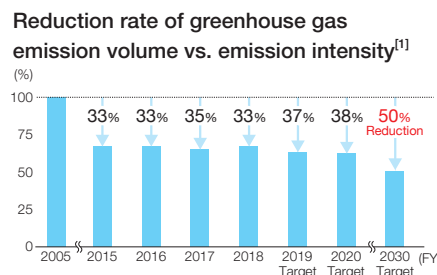
## Ajinomoto Group Long-Term Environmental Vision: Environmental Targets

Together with communities and customers, the Ajinomoto Group contributes to the global environment through initiatives that are ahead of international targets, from manufacturing to consumption. The medium- to long-term environmental targets encompass the overall product lifecycle to become carbon neutral, creation of an environment where water resources are sustained, and zero emissions of waste materials.



### Overall product lifecycle to become carbon neutral

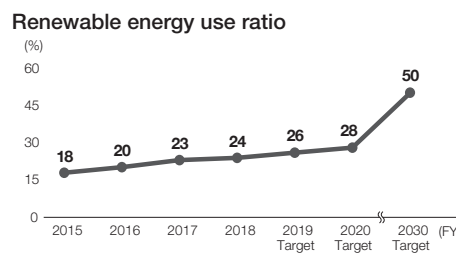
**50%**  
 reduction  
 Greenhouse gas  
 emission volume  
 vs. emission intensity  
 (vs. FY2005)



#### Key plans

- Continuous implementation of energy saving activities that have been ongoing for more than 10 years
- Capacity increase and stable operation of own biomass boilers and cogeneration
- Promotion of renewable energy use

**50%**  
 Renewable energy use



[1] Intensity is the amount of each factor of production (raw material, power, labor, etc.) needed to produce a certain amount of product

### Fluorocarbon elimination

**100%**  
 Use of natural or new  
 refrigerants below  
 GWP 150

**FY2025**  
 Fluorocarbon  
 elimination  
 at new facilities  
**100%**

**FY2030**  
 Extremely small  
 volume of HFCs<sup>[2]</sup>

[2] Hydrofluorocarbons

#### Key plans

To minimize HFCs possession by FY2030

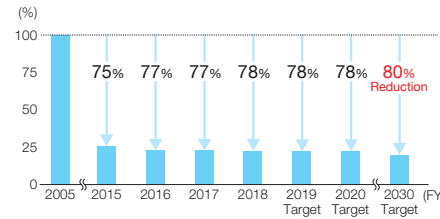
- Introduction of natural refrigerants at Ajinomoto Frozen Foods Co., Inc., Ajinomoto Food Manufacturing Co., Ltd., AJINOMOTO BAKERY CO., LTD. and others
- Introduction of new refrigerants below GWP 150 at Ajinomoto Co., Inc., PT AJINOMOTO INDONESIA and others

# Approach

## Create an environment where water resources are sustained

**80%**  
 reduction  
 Water usage vs. production  
 volume unit  
 (vs. FY2005)

Reduction rate of water usage vs.  
 production volume unit



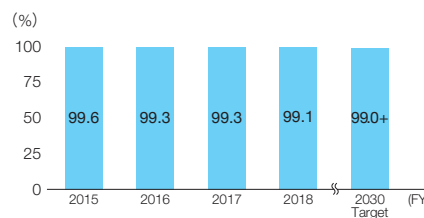
### Key plans

- Continuous implementation of activities to cut water use and discharge that are ongoing for more than 10 years
- Setting of quality standards for water discharge (BOD, TN) (direct discharge into public areas)

## Zero emission of waste materials

Maintain  
**99%**  
 or higher  
 Resource recovery ratio

Resource recovery ratio of waste  
 generated by business activities

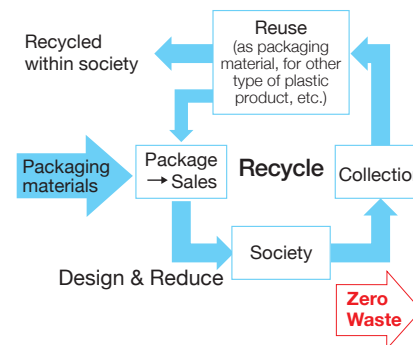


### Key plans

- Continuous efforts on reducing environmental impact that are ongoing for more than 10 years
- Resource recovery from waste materials, effective use of by-products

**zero**  
 Plastic waste volume

Vision for FY2030



### Key plans

- Reduction of plastic usage
- Development of packaging materials geared to recycling
- Contribution to establish recycling-based social systems

\* Arrow size represents volume of plastic.

## Approach

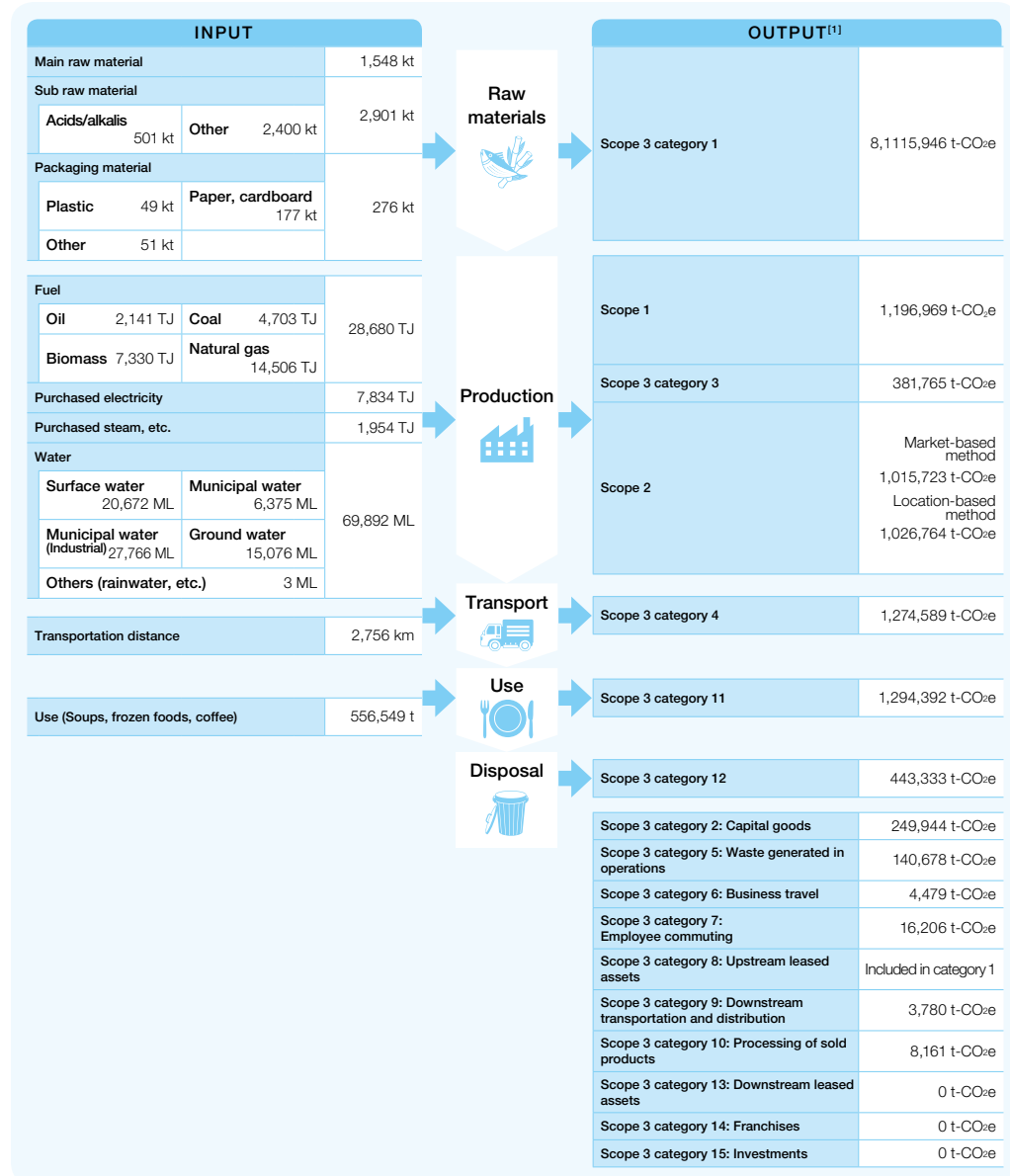
# Material balance

### Performance

GRI102-56  
GRI301-1  
GRI302-1  
GRI302-2  
GRI302-3  
GRI302-4  
GRI302-5  
GRI305-1  
GRI305-2  
GRI305-3  
GRI305-4

► Environmental Data Assurance Statement

► Environmental Data Products carbon footprint



### Data calculation

Scope of reporting: 123 major business that have a significant overall environmental impact within the Ajinomoto Group as defined in the consolidated financial accounting system

Reporting period: April 1, 2018 to March 31, 2019

The Ajinomoto Group refers to ISO 14064-1 and uses the latest CO<sub>2</sub>e emission factor to calculate the CO<sub>2</sub>e emissions in the above material balance chart. The calculated CO<sub>2</sub>e emissions are independently verified in accordance with ISO 14064-3 requirements by Lloyd's Register Quality Assurance Limited.

[1] Scope 1: Direct greenhouse gas emissions from sources that are owned or controlled by the organization (burning fuel, industrial processes, vehicle use, etc.)

Scope 2: Indirect emissions from the generation of purchased electricity, heat, or steam consumed by the company.

Scope 3: Other indirect emissions (product use, disposal and transport, employee commuting and business travel, investment, etc.)

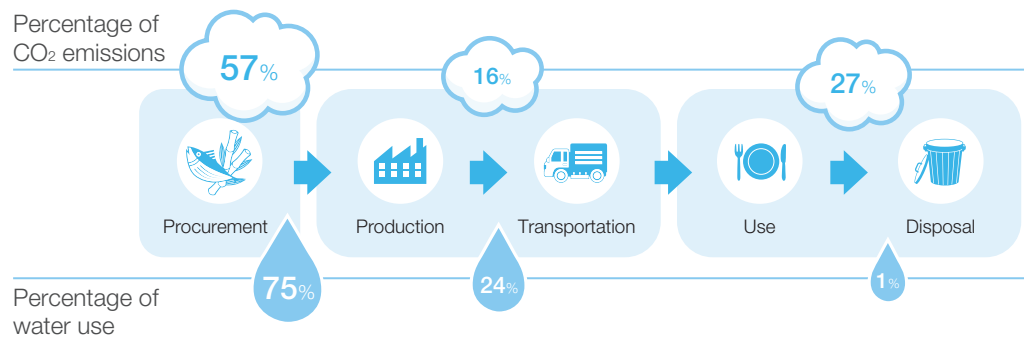
# Reduction of greenhouse gas emissions in the value chain

## Performance

GRI302-1  
GRI302-3  
GRI302-4  
GRI305-4  
GRI305-5

► Environmental Data

From a lifecycle perspective, raw material procurement represents the most significant portion of the Ajinomoto Group's environmental impact.



The percentage of CO<sub>2</sub> emissions are based on CO<sub>2</sub> emissions of fiscal 2018 input and output balance shown in the Environmental Data. The percentage of water use is calculated by Trucost based on primary raw materials, amount used in production, and transportation and storage scenarios.

## Medium and Long-term Environmental Targets and Results

The Ajinomoto Group aims to reduce the greenhouse gas emission volume vs. emission intensity by 50% from fiscal 2005, the base year, and achieve 50% renewable energy use ratio by fiscal 2030. To achieve these targets, the Group set annual targets for fiscal 2018 to 2020 as shown below. Greenhouse gas emission volume vs. emission intensity was reduced by 33% in fiscal 2018 compared to the baseline year of fiscal 2005, falling short by three percentage points of the original target and a two-point decline from a year prior. The main factors were the interruption of lysine production in Brazil and an increase in greenhouse gas emissions due to the full-scale operation of coal boilers in Indonesia.

Renewable energy use reached 24% in fiscal 2018, surpassing the previous year and meeting the target.

### Target and result for greenhouse gas emission reduction

	FY2018		FY2019 Target	FY2020 Target	FY2030 Target
	Target	Result			
Reduction rate of greenhouse gas emission volume vs. emission intensity (vs. FY2005)	36%	33%	37%	38%	50%
Renewable energy use ratio	24%	24%	26%	28%	50%

### Reduction of greenhouse gas emissions

	FY2005 (Base year)	FY2014	FY2015	FY2016	FY2017	FY2018
Greenhouse gas emission (kilo tons) <sup>[1]</sup>	2,357	2,211	2,234	2,330	2,299	2,310
Greenhouse gas emission volume vs. emission intensity (per ton of product)	1.31	0.94	0.88	0.88	0.86	0.88
Reduction rate	—	28%	33%	33%	35%	33%
Reference value: Total amount of production (kilo tons)	1,800	2,347	2,532	2,657	2,684	2,627

[1] Calculated based on internal CO<sub>2</sub> emission factors for environmental management purposes.

Performance

GRI302-1  
 GRI305-4  
 GRI305-5  
 GRI305-6

**Impact Reduction through On-site Ammonia Production**

The Ajinomoto Group uses purchased ammonia in amino acid fermentation processes. Currently, this ammonia is manufactured at large-scale, high-pressure plants and then shipped to factories that need it, a system that necessitates large quantities of energy.

To address this issue, in 2017 Ajinomoto Co., Inc., in partnership with Professor Hideo Hosono at Tokyo Institute of Technology, etc. established Tsubame BHB Co., Ltd. and is working toward practical application of an innovative ammonia production technology. Using a new catalyst invented by Prof. Hosono's team, the Company aims to build an on-site, volume-flexible production model and pursue commercialization in years 2021 to 2022.

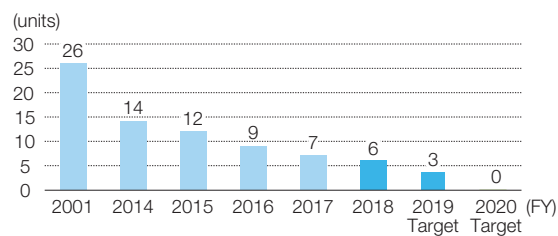
**Management of Fluorocarbons**

The Ajinomoto Group aims to completely switch from using fluorocarbons (HCFCs<sup>[1]</sup>, HFCs) as refrigerants in newly purchased chillers and such to using natural refrigerants or refrigerants with low GWP (Global Warming Potential) of less than 150 by fiscal 2025 and minimize ownership of HFCs by fiscal 2030. To achieve these targets, in fiscal 2018 the Group revised its fluorocarbon reduction long-term target, better clarifying applicable facilities and deadlines for new installations or replacements.

The Group's seven frozen food factories in Japan have converted 24 units to natural refrigerants as of the end of fiscal 2018 and plan to switch the remaining six units to non-fluorocarbon equipment by the end of fiscal 2020.

[1] Hydrochlorofluorocarbons. Manufacture of HCFCs, which are ozone-depleting substances, will be phased out in developed countries by 2020 and in developing countries by 2030.

**Number of freezers using fluorocarbons (frozen food factories in Japan)**



# Climate Change Adaptation and Mitigation

## Performance

GRI302-2  
 GRI302-3  
 GRI302-4

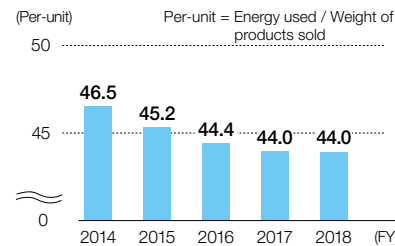
▶ Press release  
 (Japanese)

## Initiatives in Transportation

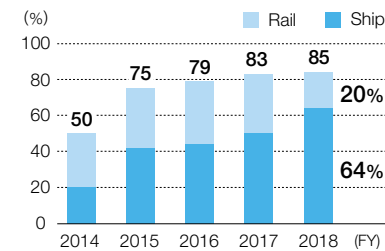
Japan's Energy Conservation Act obliges specified consignors to make effort to reduce per-unit energy use (crude oil equivalent) of their cargo logistics by at least 1% per year on average over five years and report the result to the government. This applies individually to Ajinomoto Co., Inc., Ajinomoto Frozen Foods Co., Inc., and Ajinomoto AGF, Inc. For the three companies combined, per-unit energy use declined 1.4% per year on average in the five years to fiscal 2018. In fiscal 2018 alone, the result was about the same as the previous year due mainly to the increase in per-unit energy use by two manufacturing subsidiaries of Ajinomoto Frozen Foods Co., Inc. merged in July 2018.

The Ajinomoto Group has been pursuing modal shift<sup>[1]</sup> since 1995 in an effort to simultaneously enhance transport capacity and make logistics more environmentally friendly. In fiscal 2018, although railway use markedly decreased due to the division of some railways caused by torrential rains in western Japan, increased shipping use from Fukuoka to Mie and western Japan and joint trunk line use in Hokkaido through F-LINE CORPORATION have increased the modal shift percentage of Ajinomoto Co., Inc. for long-distance transport to 85% overall.

### Per-unit energy use in logistics<sup>[2]</sup>



### Modal shift percentage of Ajinomoto Co., Inc. 500 km or more



[1] Changing to modes of transport with lower environmental impact, including rail and ship transport. Railway container and ship transport produce one-eleventh and one-eighth of the CO<sub>2</sub> emissions of trucking, respectively.

[2] Combined results of Ajinomoto Co., Inc., Ajinomoto Frozen Foods Co., Inc., and Ajinomoto AGF, Inc.

## Performance

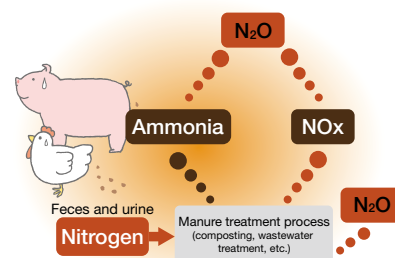
GRI302-5

▶ P43

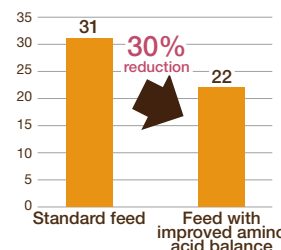
## Reducing Nitrogen Emissions by Livestock with Feed-use Amino Acids

Feeds with poor amino acid balance lead to an oversupply of unnecessary amino acids, which are not utilized by the animals and are excreted in large quantities as nitrogen compounds. During the waste treatment process, they turn into nitrous oxide (N<sub>2</sub>O), which increases environmental impact with approximately 300 times the global warming potential of CO<sub>2</sub>. Feed-use amino acids improve the balance of feeds, reduce excretion and reduce excreted nitrogen compounds by about 30%. Amino acids thus help to reduce the life-cycle CO<sub>2</sub> (LC-CO<sub>2</sub>) emissions of feeds while also helping to diminish odor caused by ammonia derived from nitrogen compounds as well as reduce soil, surface water and groundwater pollution.

### N<sub>2</sub>O cycle



### Nitrogen emissions per pig (g/day)



Source: Takada et al., Japanese Society of Animal Science (2009)



## Reduction of waste across product lifecycles

### Performance

GRI301-3  
GRI306-2

The Ajinomoto Group is working to minimize waste to ensure optimal use of all resources. The Group is also committed to effectively utilizing waste and by-products, with the aim of recovering 99% or higher of it as resources.

In amino acid production, the Group seeks to improve production efficiency by recovering by-products as resources and introducing new technologies. In food production, it is also making a range of efforts, such as improving the precision of sales forecasts and conducting fine-tuned procurement, to minimize wasted raw materials and the amount of packaging materials used.

In fiscal 2018, generation and landfilling of hazardous waste increased from the previous year due to increased production volume and a resulting increase in biomass boiler residue. Generation and disposal of non-hazardous waste other than by-products both declined slightly from the previous year.

### Volume of waste and by-products and resource recovery ratio

(tons)

	FY2014	FY2015	FY2016	FY2017	FY2018
Hazardous waste (waste acid, waste alkali, waste oil, cinder)					
Generation	60,304	60,431	59,217	59,162	69,991
Recycling	59,719	59,457	58,890	58,862	68,422
Incineration	35	14	54	24	40
Landfill	550	959	274	276	1,529
Non-hazardous waste					
By-products					
Generation	2,295,432	2,435,544	2,337,284	2,395,249	2,194,566
Composting	2,293,952	2,434,281	2,335,451	2,394,976	2,194,470
Incineration	144	0	0	0	0
Landfill	1,336	1,263	1,832	273	96
Others					
Generation	132,462	140,464	178,861	178,989	174,651
Recycling	123,330	131,258	163,414	161,455	153,388
Incineration	1,116	1,293	3,021	2,066	2,821
Landfill	8,016	7,913	12,426	15,467	18,442
Total generation	2,488,199	2,636,439	2,575,361	2,633,400	2,439,208
Total recycling	2,477,001	2,624,997	2,557,755	2,615,293	2,416,280
Total waste	11,197	11,442	17,606	18,107	22,928
Resource recovery ratio	99.5%	99.6%	99.3%	99.3%	99.1%

## Contribution to a Circular Economy

### Approach

GRI301-3

▶ Integrated Report  
 2019 P59

### Framework

### Performance

▶ Participation in  
 Initiatives

## Container and Packaging Design for Environment

The Ajinomoto Group is advancing the container and packaging design for environment in accordance with the ISO 18600 series and JIS Z 0130 and strives to advance the 3Rs by minimizing the amount of packaging material used without detracting from its original functions and implementing ways to easily separate and sort by material for recycling. The Group also works to reduce the amount of generated food loss and waste by extending best-before dates using containers and packaging that better maintain product freshness and adopting single-serve packaging that leaves no food waste.

### Approach to plastic packaging materials and goals

In recent years, the problem of plastic waste and microplastics in the ocean have become a pressing global issue. In November 2018, the Ajinomoto Group expressed its aim of achieving zero plastic waste by fiscal 2030 (The roadmap to 2030 will be announced together with the next medium-term management plan). The Group used approximately 70,000 tons of plastic in fiscal 2018, 40% of which are used in Japan and 60% overseas. While reducing the amount of plastic use, the Group will also work on the development of new materials and technologies that will turn plastics from waste into resources.

- Continuing to reduce plastic usage

In addition to reducing the use of plastic in packaging, the Group considers the use of new alternative materials becoming available as technology develops.

- Creating recyclable materials & systems

- (1) Develop packaging materials geared to recycling

The Group develops mono-material plastic packaging and alternative recyclable packaging materials.

- (2) Help establish recycling-oriented social systems

The Group establishes recycling-oriented social systems, particularly in developing countries and regions where systems are still in the early stages.

## Inter-Group Efforts Toward Container and Packaging Design for Environment

The products of the Ajinomoto Group require many different kinds of containers and packaging. To let each Group company in Japan share their efforts to create container and packaging design for environment and receive feedbacks, the Group holds events such as the Ajinomoto Group Food Conference and the Packaging Designers' Liaison Meeting.

## Cooperation with Outside Organizations

The Ajinomoto Group cooperates with recycling councils of container and packaging and public organizations in Japan to encourage consumer awareness of the 3Rs.

- Examples

- Participation in Eco-Products Exhibition
- Containers and Packaging Reduction Declaration in the committee of the National Capital Region Nine Government Summit Council
- Presentation of 3Rs best practices to Plastic Packaging Recycling Council
- Presentation of 3Rs best practices to Paper Packaging Recycling Council
- Participation in innovation exhibition by CLOMA<sup>[1]</sup>

[1] Clean Ocean Material Alliance

## Contribution to a Circular Economy

### Performance

GRI301-3

### Environmental Assessment of Containers and Packaging

Before releasing new or revised products, the Ajinomoto Group conducts an environmental assessment based on a checklist to confirm compliance with product-specific regulations and compatibility with Group environmental targets (Table 1). In addition, Ajinomoto Co., Inc. assesses the content of revisions using the points-based Eco-Index for Containers and Packaging (Table 2)

**Table 1: Environmental assessment checklist**

Objective		Check item
Compliance	Waste 3Rs	Compliance with environmental laws and regulations
	Food loss reduction	Prevention of product degradation and damage
	Risk	Prevention of usage of potentially hazardous materials
Compatibility with Group environmental targets	Waste 3Rs	Usage of material(s) compatible with 3Rs
	Sustainable procurement	Usage of sustainable material(s)
	Food loss reduction	Usage of material(s) that help reduce food loss
	Greenhouse gas emissions reduction	Improvement of loading efficiency in transport
	Consumer awareness of green living	Display of environmental labels

**Table 2: Eco-Index for containers and packaging**

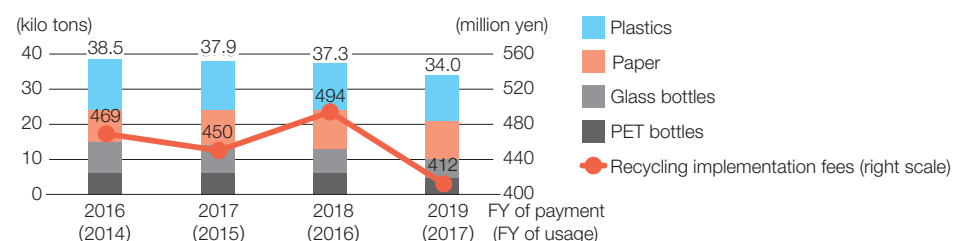
Objective	Assessment item (example)	Assessment standard (example)	Points
Waste 3Rs	Plastic container/packaging weight reduction	At least 450 kg reduced per year	+2
	Space per packaging volume	<15%	+1
	Compatibility with recycling systems	Easily recyclable materials used throughout	+1
Greenhouse gas emissions reduction	LC-CO <sub>2</sub> emissions reduction	Reduced over conventional product	+1
	Transport efficiency	Loading efficiency ≥80%	+1
Sustainable procurement	Usage of eco-friendly materials	Usage of forest-certified paper	+1
Consumer awareness of green living	Environmental labeling	Display of the <i>Aji-na Eco</i> mark	+1
Food loss reduction	Food loss reduction	Extension of shelf life	+1
		Adoption of single-serve packaging	+1

To comply with the Containers and Packaging Recycling Act in Japan, the recycling of containers and packaging waste from households is consigned to the Japan Containers and Packaging Recycling Association. In fiscal 2017, the three Group companies in Japan<sup>[1]</sup> used 34,000 tons of containers and packaging subject to recycling requirements, down to 91.4% of the previous year. Based on this usage, recycling fee payment for fiscal 2019 was 412 million yen, down to 83.4% of the previous year.

The use of plastic containers/packaging and PET bottles decreased to 94.8% and 89.2% over the previous year, respectively, due to the decrease in sales volume. The use of glass bottles was 72.4% over the previous year due to the end of sales of bottle products for gift. The decrease in recycling fee is due to decrease in the recycling contract unit cost of plastic containers/packaging and PET bottles that increased in the previous year (93.9% and 21.7% over the previous year, respectively) in addition to decrease in their usage.

[1] Total amount for three group companies in Japan (Ajinomoto Co., Inc., Ajinomoto Frozen Foods Co., Inc., Ajinomoto AGF, Inc.)

### Amount of used household product containers and packaging and recycling fees



## Contribution to a Circular Economy

### Performance

GRI303-1

### Performance

GRI301-3  
 GRI417-1

▶ P48

▶ *Aji-na Eco* mark  
 (Japanese)

## Expanding the Supply of Highly Biodegradable Amino Acid-Based Surfactants

Ajinomoto Co., Inc. has provided amino acid-based personal care ingredients to more than 5,000 companies in 55 countries since it launched the world's first amino acid-based surfactant, made from glutamic acid in 1972.

Amino acid-based surfactants are environmentally friendly because of their high biodegradability, and they are also mild to skin. Due to growing concern about the global environment in recent years, the market for amino acid-based surfactants has rapidly expanded, and the Ajinomoto Group has been strengthening its supply system to meet the global demand.

Namely, the Group will construct a new plant for glutamic acid-derived *Amisoft*<sup>®</sup> (liquid) in Brazil, which is slated to start operating in 2020. In conjunction with this investment, a portion of *Amisoft*<sup>®</sup> (liquid) production in Japan will be transferred to Brazil, and the production facilities in Japan will be redirected to production of glycine-derived *Amilite*<sup>®</sup> (liquid). This will increase the production capacity of *Amisoft*<sup>®</sup> (liquid) by approximately 60%, and for *Amilite*<sup>®</sup> by approximately 30% (total of all product forms), and help resolve the supply shortages in amino acid-based surfactants.

## Ajinomoto Group Eco-labels: *Aji-na Eco* and *Hotto-suru Eco*

To respond to consumers' needs to purchase environmentally friendly products and to know whether a product is eco-friendly at a glance, the Ajinomoto Group has labeled products with its original *Aji-na Eco* and *Hotto-suru Eco* marks since 2010. The Group also strives to effectively communicate changes made to product packages that are difficult for consumers to notice, such as weight, thickness, size and materials used.



As of July 2019

### What is *Aji-na Eco* ?

*Aji-na Eco* is a term describing the smart and ecological products or information provided by the Group, and the logo mark expresses the image of our Earth green, the pleasure of eating, and a global environment made even better through food.



As of July 2019

### What is *Hotto-suru Eco* ?

*Hotto-suru Eco* indicates Ajinomoto AGF, Inc. products with environmental features. The logo mark expresses the comfort felt when drinking one's favorite beverage, colored in Earth green. The *Hotto-suru Eco* label was introduced in 2015.

### ■ Types of *Aji-na Eco* and *Hotto-suru Eco* marks

- Plant-based plastic
- Recycled plastic
- Sustainable timber
- Recycled paper
- Reduced packaging
- Refillable
- No tray
- Easy recycling and disposal
- No box
- Passive defrosting

# Conservation of water resources in production

## Performance

GRI303-3  
GRI303-4  
GRI303-5

► Environmental Data

The Ajinomoto Group aims to reduce the rate of water usage vs. production volume unit by 80% from fiscal 2005, the base year, by fiscal 2030. The Group is targeting a 78% reduction from baseline for the three-year period from fiscal 2018 to 2020 to manage progress toward the fiscal 2030 target.

In fiscal 2018, the Group reduced water withdrawal by about 150 million tons. The Group also reduced the rate of water usage vs. production volume unit by about 78% compared to the fiscal 2005 baseline, thus achieving its target. Each production site has continued water-saving efforts from the previous fiscal year.

## Target and result for conservation of water resources

	FY2018		FY2019 Target	FY2020 Target	FY2030 Target
	Target	Result			
Reduction rate of water usage vs. production volume unit	78%	78%	78%	78%	80%

## Water use

(megaliters)

	FY2005 (Base year)	FY2014	FY2015	FY2016	FY2017	FY2018
Total water withdrawal <sup>[1]</sup>	221,863	78,653	76,912	74,041	74,844	69,892
Fresh surface water	180,363	28,422	25,272	23,559	24,433	20,672
Brackish surface water/ seawater	0	0	0	0	0	0
Fresh groundwater- renewable	0	0	0	0	0	0
Fresh groundwater-non- renewable	-	16,293	16,972	15,859	16,371	15,076
Produced water	0	0	0	0	0	0
Municipal water (including industrial water)	41,500	33,938	34,668	34,623	34,041	34,144
Water usage vs. production volume unit (per ton of product)	123	34	30	28	28	27
Reduction rate	-	73%	75%	77%	77%	78%
Reference value: Production volume (kilo tons)	1,800	2,347	2,532	2,657	2,684	2,627
Total water discharge	201,300	66,386	60,873	59,701	60,464	55,800
Fresh surface water	53,000	29,897	27,418	27,419	29,813	29,231
Brackish surface water/ seawater	0	0	0	0	0	0
Groundwater	0	0	0	0	0	0
Third-party destinations	4,300	9,224	10,171	9,909	9,827	9,540
Total water use recycled or reused	144,000	27,265	23,284	22,373	20,824	17,029
Proportion of water use recycled or reused	65%	35%	30%	30%	28%	24%
Total water use	20,563	12,267	16,039	14,340	14,380	14,092
BOD (tons)	550	304	268	269	294	312
Nitrogen (tons)	3,200	404	424	445	394	501

[1] Water withdrawals are disclosed based on volumes measured/invoiced in accordance with national or regional laws or converted from pump power use/pipe water speed. Water discharge volume and quality are both disclosed based on accumulated values measured in accordance with national or regional law.

## Conservation of Water Resources

### Performance

GRI303-1

▶ Forest of Blendy® :  
 Conservation of  
 forests and the  
 water (Japanese)

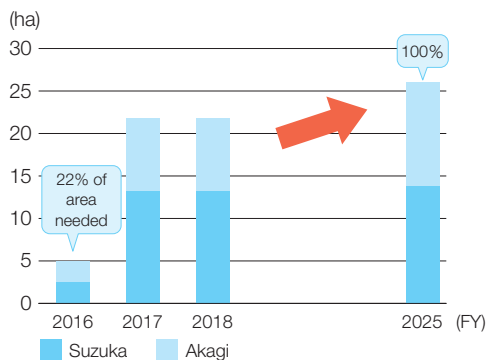
# Forest conservation at water sources

Ajinomoto AGF, Inc. production bases, AGF Suzuka, Inc. and AGF Kanto, Inc., withdraw water from the Suzuka River and Arato River (a tributary of the Tone River). Their sources are conserved by forests located in the foothills of the Suzuka Mountains and the south foothills of Mount Akagi, respectively. The companies are continuously engaged in the Forest of *Blendy*® initiative aimed at conserving these forests.

By fiscal 2025, Ajinomoto AGF, Inc. aims to expand the area of these forests five-fold compared to their March 2017 size, and supply all water used in *Blendy*® bottled coffee and other production from Forest of *Blendy*® groundwater (recharge volume). As of the end of fiscal 2018, the two forests' contracted areas combined covered approximately 22 ha, about 4.2 times the original size.

In fiscal 2019, the company plans to expand and enhance the forest maintenance activities.

### Planned expansion of Forest of *Blendy*®



# Environmental Management

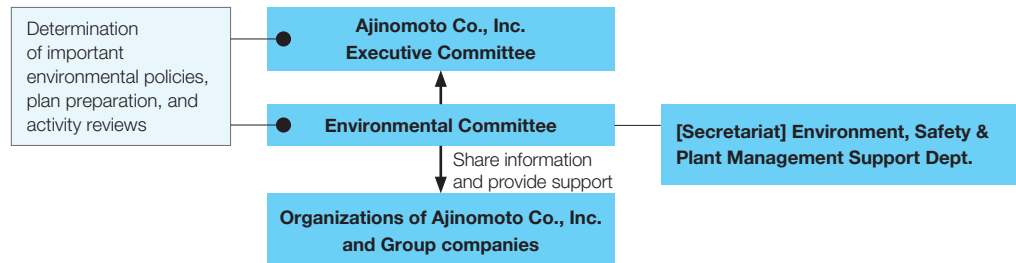
## Framework

GRI301-DMA  
GRI302-DMA  
GRI303-DMA  
GRI304-DMA  
GRI305-DMA  
GRI306-DMA  
GRI307-DMA  
GRI308-DMA

## Promotion Framework

The Ajinomoto Group established the Environmental Committee under the Executive Committee to decide important environmental policies, prepare plans and conduct activity reviews.

## Ajinomoto Group's environmental management system (EMS)



## Status of ISO 14001 certification

As of March 2019, the Ajinomoto Group has acquired ISO 14001 certification at 49 out of 98 subject Group companies. Those not yet certified are advancing management based on the ISO 14001 approach. Note that the number of ISO 14001-certified Group companies decreased compared with the previous fiscal year-end due to corporate consolidation and other factors.

## Environmental assessments

When the Ajinomoto Group launches new products and businesses, or changes the use of conventional raw materials or production processes, it assesses the environmental impact of business plans before they are conducted, and takes necessary measures to minimize future risks. At Ajinomoto Co., Inc., environmental assessments are performed by departments in charge in accordance with internal rules, and their results are reviewed from a Group-level perspective by the Environment, Safety & Plant Management Support Dept. Group companies also carry out their own assessments based on company rules and regulations.

## Environmental assessment items

1. Legal compliance	
2. Seven types of typical pollution	Air pollution, water pollution, noise, odor, soil contamination, etc.
3. Global environmental issues	Saving energy, renewable energy use, fluorocarbons, distribution efficiency, etc.
4. Food loss and waste reduction	Extension of best-before dates, MMYT labeling, etc.
5. Sustainable procurement	Biodiversity conservation, certified ingredients, certified paper, bioplastics, etc.
6. Water resources	Water use and wastewater reduction
7. Waste disposal	Proper waste disposal, responsibilities of waste generator, etc.
8. Creation of a recycling-oriented society	3Rs, excess packaging, effective use of by-products, waste generation reduction, etc.
9. Management of hazardous substances	New chemical substances, PCB, asbestos, etc.
10. Effects of buildings	Right to sunlight, radio wave disturbance, etc.
11. Consumer awareness of green living	Environmental labeling

## Environmental audits

The Ajinomoto Group conducts external audits for compliance with ISO 14001. In addition, audits for sites having issues are also conducted by the Environment, Safety & Plant Management Support Dept. based on the Environmental Audit Outline. There were no sites subject to environmental audits in fiscal 2018.

### Performance

GRI306-3  
GRI307-1

### Response to Environmental Laws and Accidents

The Ajinomoto Group has quickly addressed any legal violations or accidents related to the environment. In fiscal 2018, there were four violations of the Air Pollution Control Act of Japan, Effluent Standards, and other environmental laws, and proper corrective actions and legal measures based on administrative guidance have been performed. There were also seven accidents that affected the environment outside the worksite (two complaints related to offensive odor and herbicide spray, two fluorocarbon leaks, two diesel oil leaks, and one liquid product leak). None of these had serious environmental effects. The accidents were immediately reported to authorities and investigated for their causes to take necessary measures.

### Environmental Education

#### Specialized education

The Ajinomoto Group conducts environmental education for employees to acquire the expertise and skills for environmentally responsible business operations.

In Japan, the Group provides ongoing education to the environmental officers, managers and members in each organization, as well as environmental assessment training for members of business and research departments developing new businesses and products. The Group also conducts environmental law seminars for staff in charge to stay up-to-date with the frequent revisions in environmental regulations and ensure compliance.

#### ■ Main programs in fiscal 2018

- Two-day training course for internal environmental auditors: Twice, 41 participants
- One-day training course for internal environmental auditors: Twice, 23 participants
- Environmental law seminar: Five times, 119 participants

#### General education

In Japan, the Environment, Safety & Plant Management Support Dept. collaborates with human resources, general affairs, risk management and other departments to provide ongoing education tailored to each employee grade and ensure everyone understands the Group's environmental management.

#### ■ Main programs in fiscal 2018

- Compliance training
- Training for technology-related staff before posting overseas
- Training for future overseas production engineers



## Approach

GRI102-12  
 GRI201-2

▶ Integrated Report  
 2019 P58

## Endorsing the TCFD, Joining the TCFD Consortium

Ajinomoto Co., Inc. has endorsed the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) established by the Financial Stability Board<sup>[1]</sup>, and has announced its participation in the TCFD Consortium<sup>[2]</sup> launched in May 2019. Moving forward, the Ajinomoto Group will evaluate the risks and opportunities of climate change on business, and actively disclose relevant information in four areas: governance, strategy, risk management and metrics and targets, based on TCFD recommendations.

### Information disclosure in four areas based on TCFD recommendations

<b>Governance</b>	<p>The Management Risk Committee and Environmental Committee under the Executive Committee review the appropriate responses to the risks and opportunities related to climate change.</p> <p>The Management Risk Committee identifies the risks and opportunities related to climate change and considers the appropriate responses to them. The Environmental Committee develops the environmental targets and plans and monitors performance in keeping with the environmental management system. These are all reported to the Executive Committee at least once a year, which are then reported to the Board of Directors and included in the corporate strategy.</p> <p>The Board of Directors makes decisions on capital investments from an overall perspective, taking into account the environmental assessment results, including the impact of climate change.</p>
<b>Strategy</b>	<p>The Ajinomoto Group's business domains of products range from seasonings and coffee to frozen foods, and its business activities extend into Life Support and Healthcare. The geographic range of its operations spans the globe. Climate change can impact the Group's operations in many ways, such as a major natural disaster halting its business activities, affecting its ability to procure raw materials and fuel, and altering consumption of its products.</p> <p>For production in the short, medium and long term, the Group reviews the physical risks of climate change such as droughts, floods, rising sea levels and changes in yield of major raw materials, as well as transition risks such as rising energy prices, tight supply and demand, and price increases due to competition for major raw materials with other food sources and biofuels.</p> <p>From fiscal 2018, the Group included scenario analysis of the impacts of climate change on business and established a framework for a more quantitative assessment of the risks based on the TCFD recommendations.</p> <p>As a result of the scenario analysis, the Group will review counterstrategies against the physical and transition risks identified above, such as switching to energy sources with low GHG emissions.</p>
<b>Risk management</b>	<p>In light of the circumstances surrounding the Group, including global politics, economics, social conditions and climate change, the Management Risk Committee determines the overall level of risks based on the impact on business and likelihood of occurrence, selects the significant risks Group-wide and considers strategies to address them.</p> <p>Climate-related risks are regarded as part of Group-wide significant risks, and the impacts of physical risks and transition risks, such as legal risks and market risks, are evaluated based on published reports and expert advice.</p> <p>The Committee's review and recommendations are reported to the Executive Committee and the Board of Directors at least once a year.</p>
<b>Metrics and targets</b>	<p>In its medium and long-term environmental targets, the Group aims to reduce GHG emission volume vs. emission intensity by 50% and water usage vs. production volume unit by 80% compared to fiscal 2005 by fiscal 2030.</p> <p>In addition, CO<sub>2</sub> emissions and water consumption have been measured and disclosed since 1996.</p>

[1] An international organization of representatives of central banks, financial supervisory agencies, and finance ministries.

[2] A consortium for investors and companies supporting the TCFD to jointly develop and use industry-specific scenario analysis and quantification techniques.

### Performance

GRI201-2

▶ Integrated Report  
2019 P58

### Summary of Scenario Analysis Conducted in Fiscal 2018

In fiscal 2018, the Ajinomoto Group conducted a scenario analysis of potential impact from the climate change risk until 2050 for Southeast Asia using the model of umami seasoning *AJI-NO-MOTO*<sup>®</sup>, one of the Group's major products, under the scenario of a 2°C rise in average global temperature in 2100. The analysis examined droughts, floods, rising sea levels and changes in yield of main raw materials as physical risks, as well as rising energy prices, tight supply and demand, and price increases due to competition for major raw materials with other food sources and biofuels as transition risks.

For physical risks, the Group had anticipated that main raw materials will be affected by the rising frequency of floods, droughts and pests, but the scenario analysis showed that the impact of the physical risks on profits is not large in Southeast Asia, where the main production plant of *AJI-NO-MOTO*<sup>®</sup> is located.

On the other hand, the analysis revealed that rising energy prices and carbon tax increases in case of a shift to a lower carbon economy as the impact of climate change worsens may have a significant impact on the production costs of *AJI-NO-MOTO*<sup>®</sup> and business profits. The Group aims to fast-track ongoing measures, such as the switch to renewable energy and low-GHG energy sources and the development of production technologies using non-edible raw materials to curb rising production costs of *AJI-NO-MOTO*<sup>®</sup> while contributing to global sustainability in case of rising raw material prices and carbon tax increases due to climate change.

# Business Foundation

## Create a corporate group that grows sustainably

The Ajinomoto Group will continue to grow as a company with sustained competitiveness by evolving into a global organization with a strong governance base, acquiring and developing diverse human resources for innovation, and providing work styles that bring out the potentials of each employee.

□ : Initiatives reported in the Ajinomoto Group Integrated Report 2019

■ Related SDGs



### Diverse talent P68

**Specific examples**

- Employee engagement
- Diversity and inclusion
- Employee health, safety, and well-being
- Accident and safety management
- Labor relations
- Fair labor practices
- Compensation and benefits
- Recruitment, development and retention

---

**Related opportunities and risks**  
(○ Opportunity ● Risk)

- Company growth by improving employee engagement
- Creation of an innovative environment
- Rising costs due to intense competition for human resources

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**Key initiatives by the Ajinomoto Group**

- Promoting PDCA cycle using the engagement survey
- Reforming organizational culture to promote diversity
- Training and promotion of female employees
- Promoting health management
- Human rights awareness training
- Occupational safety and health management

### Strong corporate governance P80

**Specific examples**

- Compliance
- Competitive behavior
- Intellectual property protection
- Political activities and contributions
- Business ethics and transparency of payments
- IT management
- Systemic risk management
- Data security and customer privacy
- Regulatory capture and political influence
- Environment, social impacts on assets and operations
- Succession planning
- Management transparency
- Human rights and community relations

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**Related opportunities and risks**  
(○ Opportunity ● Risk)

- Enhancing corporate value
- Appropriate risk-taking
- Decreased competitiveness due to inability to adapt to digital technology advances
- Decreased competitiveness due to vulnerabilities in IT management structure
- Confusion in organizational management and reduced business profitability due to unstable political, economic, and social conditions such as financial crises, trade issues, etc.
- Impact of intellectual property risks on business
- Impact of sudden foreign exchange and interest rate fluctuations on business
- Higher tax burden due to changes in tax and tax effect

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**Key initiatives by the Ajinomoto Group**

- Raising awareness of the Ajinomoto Group Policies among all Group employees
- Establishing whistleblower hotline
- Strengthening corporate governance system
- Selecting Group-wide significant risks and considering appropriate responses
- Managing intellectual property risk
- Strengthening information security through the creation of Information Security Regulations

### Preparation for intense global competition

**Specific examples**

- Business selection and focusing
- Early creation of innovation
- Open innovation
- Enhancement of basic infrastructure

---

**Related opportunities and risks**  
(○ Opportunity ● Risk)

- Business foundation reform through digital disruption
- Value creation from external collaboration
- Specialty creation through technological innovation
- Establishment of competitive advantage by forecasting future changes
- Impact of digital disruption on main businesses
- Emergence of competitors in areas with low entry barriers

---

**Key initiatives by the Ajinomoto Group**

- Value chain restructuring (production system reorganization)
- Promoting digital transformation
- Rapidly commercializing research findings (R&D system reorganization)
- Competitive intelligence (medium- to long-term initiatives)
- Promoting open & linked innovation
- ▶ [https://www.ajinomoto.com/en/rd/open\\_linked\\_innovation/](https://www.ajinomoto.com/en/rd/open_linked_innovation/)

## Approach

### Target

GRI401-DMA  
 GRI404-DMA  
 GRI405-DMA  
 GRI405-1

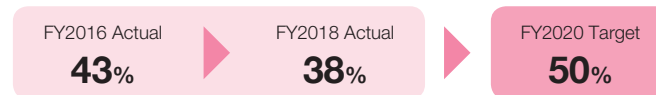
▶ Personnel and  
 Labor-Related Data

The Ajinomoto Group will continue to create an environment where employees and the business grow in sync with sustained competitiveness. Through dialogues and collaboration with stakeholders, the Group will also work to enforce a strong and thorough corporate governance.

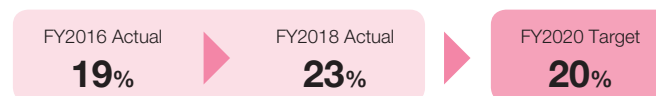
## Fiscal 2020 Targets for Human Resources and Work Styles

### Creating large and diverse talent pool

#### Ratio of locally hired overseas executives



#### Ratio of female managers



#### Key plans

- Development of 300 next-generation global managers and highly specialized talents
- Increase in internal promotion and proactive hiring of mid-career female managers through updating HR policies, etc.
- Proactive hiring of mid-career specialists

### Raising employee engagement

#### Percentage of employees feeling highly engaged in their work <sup>[1]</sup>



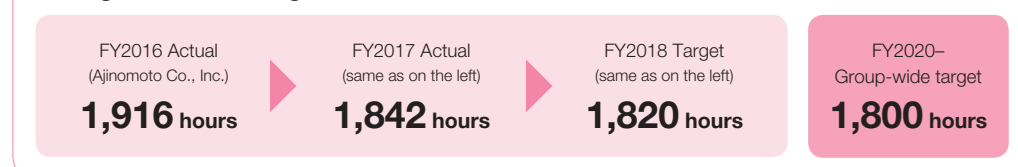
#### Key plans

- Study and implementation of action plans to address issues revealed by the survey
- Improvement of employees' health and well-being

[1] Percentage of employees that support the goals and targets of the company and feel engaged as they work toward the sustainable growth of the company

### Promoting advanced work styles for diverse lifestyles

#### Average annual working hours



# Human resource management

**Approach**

GRI401-DMA

**Framework**

The Ajinomoto Group pursues shared growth of individual employees and Group companies and innovation through human resource programs optimized at the Group level and by providing a work environment in which every employee feels engaged in their work and is motivated to apply and demonstrate their skills.

## Management Framework

The HR Committee established under the Executive Committee promotes matters related to human resource development to support the sound growth of the Ajinomoto Group.



## “Right Person for Right Position” across borders

The Ajinomoto Group is accelerating the development of next-generation business leaders and advanced specialists by utilizing its global human resource management system, a common platform for developing and promoting diverse talent across countries and regions to achieve “Right Person for Right Position.” This system is composed of position management and talent management to clarify key positions and talents.

The Group is now preparing a group common rule for international employee transfers. These efforts are aimed at creating a pool of diverse talents who can support the Group as a Genuine Global Specialty Company.

## Global human resource management system

<b>Position management (right position)</b> Clarifies and determines roles and responsibilities required in the organization to execute future business strategy.	
Job Grade	Apply job-based grading
Appraisal	Apply behavior evaluation based on “Ajinomoto Group Way” and individual performance appraisal
Compensation	Set up global compensation policies 1. Abide by relevant regulations in each country and region 2. Apply “pay for job” and “pay for performance” 3. Apply competitive compensation level based on local market level
<b>Talent management (right person)</b> Assigns the right person to the right position based on the above positions and their requirements to promote talent development. Appoint excellent talent at early stages.	
HR committee	Organize HR committees on local and regional levels
Talent portfolio	Apply past year’s individual performance and future leadership competencies Identify future leadership competencies based on the local and regional goals
Succession plan	Identify key positions and candidates on local and regional levels
Development plan	Define each talent’s development plan

Performance

GRI102-16

▶ P1  
 ▶ Integrated Report  
 2019 P56

Approach

Approach

▶ Personnel and  
 Labor-Related  
 Data

Framework

GRI102-41  
 GRI402-DMA  
 GRI403-4

▶ Personnel and  
 Labor-Related  
 Data

Performance

▶ Integrated Report  
 2019 P54

## Understanding Shared Value of the Ajinomoto Group and ASV

The Ajinomoto Group makes various efforts to ensure that all Group employees understand the “Ajinomoto Group Way,” which sets out employees’ shared values, and ASV, the Group’s initiative to create social and economic value through business. The globally accessible Our ASV website introduces ASV best practices and various employee education programs, enabling the timely sharing of information among all employees. In 2018, an ASV Dialogue Workmat-interactive session using two mats and ASV Game Cards were created and are being used as training tools to deepen individual understanding of ASV and organizational efforts to advance ASV.

## Fair Labor Practices

The Ajinomoto Group believes that employee growth contributes to company growth as well as society. To tie individual growth to company growth, each Group company works to provide workplaces, human resource and educational programs that support self-directed career development.

## Compensation and Benefits

The Ajinomoto Group strives on a global level to improve terms of employment, including remuneration, within the context of each company’s development.

## Labor-Management Relations

At Ajinomoto Co., Inc., all regular non-management employees (61.6% of all employees) are part of a labor union. Labor agreements require the Company to notify employees and their representatives before making any major changes that could substantially impact them (time requirements for notification are confidential).

Labor agreements also stipulate various requirements concerning safety and health, education and training, and medical checkups, and both management and employees work together to improve workplace safety and health standards. As per Japanese law, each workplace convenes a monthly safety and health committee, composed roughly half-and-half of managers and staff, to identify causes and solutions to occupational accidents and share information on the status of employees on sick leave, legal amendments, and more.

## Engagement Survey and Organizational Culture Innovation

In encouraging self-directed career development, the Ajinomoto Group places particular emphasis on individual employee engagement. The Group follows a PDCA cycle of quantitatively gauging employee engagement through a biennial Engagement Survey and uses the results to identify issues and take steps toward improvement.

### Raising employee engagement

	FY2017 Actual	FY2020 Target
Percentage of employees feeling highly engaged in their work <sup>[1]</sup>	79%	80%+

[1] Percentage of employees that support the goals and targets of the company and feel engaged as they work toward the sustainable growth of the company

Framework

GRI406-1

▶ P82  
 ▶ Personnel and Labor-Related Data

Approach

GRI405-DMA  
 GRI406-DMA

Framework

GRI405-DMA

Performance

GRI406-DMA  
 GRI412-2

▶ Ajinomoto Group Policies (AGP)

Performance

GRI202-2  
 GRI405-1

▶ Personnel and Labor-Related Data

## Hotline (Whistleblowing System)

The Ajinomoto Group has established a hotline as a whistleblower system that enables executive officers and employees, including part-time and temporary workers, to make reports or seek advice by phone, e-mail, fax, letter, or other means.

## Organizational Culture Innovation to Promote Diversity

Aiming to create a society and company where all employees are engaged and respect each other regardless of gender, generation, nationality or background, the Ajinomoto Group provides a system to support individual careers (work style diversity) and bring out the best in employees (career diversity), and encourages the growth of an inclusive organizational culture. The Group is advancing more substantial diversity initiatives in Japan, where diversity efforts are lagging behind other countries and regions.



The Group's diversity logo. The logo adopts the six rainbow colors used as a symbol by LGBT Allies (supporters) and expresses employees who are empowered and growing together in an environment of universal acceptance.

## Diversity Promotion Framework

At Ajinomoto Co., Inc., a diversity task force led by the officer in charge of promoting diversity has planned and implemented cross-organizational initiatives, including certain Group companies. Since July 2019, the diversity promotion activities are implemented by human resources departments.

In addition, a HR development committee for women provides concrete support for women's career development and promotion planning.

## Human Rights Awareness Training of Employees

In each Group company, human rights awareness training is conducted to advance understanding of the Ajinomoto Group Policies (AGP), which prohibits any form of discrimination or harassment, and nurture talented people with a strong sense of human rights.

In Japan, worksite meetings are held every year to help employees, including part-time and temporary workers, identify and resolve issues in the workplace. The AGP questionnaire also includes topics focused on discrimination and harassment to aid with identifying and preventing harassment.

## Diversity Performance in Fiscal 2018

### Ratio of locally hired overseas executives

Persons

	FY2017 Actual	FY2018 Actual	FY2020 Target
Total overseas executives	178	169	—
Local executives	73	65	—
Local executive ratio	41%	38%	50%

### Percentage of female managers (Group-wide)

	FY2017 Actual	FY2018 Actual	FY2020 Target
Percentage of female managers	22%	23%	20%

▶ Public Awards and Feedback

▶ Personnel and Labor-Related Data

### Main initiatives and external evaluation

#### ■ Women's empowerment

- Implemented mentor program for female managers at Ajinomoto Co., Inc.; 18 managers participated (officers become mentors for female senior managers, offering insights from outside their division).
- The Company held work-life balance seminars for employees and their partners who have or want children.
- AjiPanda® KIDS in-house nursery school was opened by the Company in March 2018; 15 children have attended thus far.
- Selected as a Nadeshiko Brand<sup>[1]</sup> for two consecutive years.



#### ■ Empowerment of persons with disabilities

- The Group met its legally mandated employment rate across three companies: Ajinomoto Co., Inc., special-purpose subsidiary Ajinomoto Mirai Co., Ltd., and Group-accredited company Ajinomoto Communications, Inc. (as of June 2019)
- Continued to provide work and a rewarding workplace for persons with disabilities, especially intellectual disabilities, at Ajinomoto Mirai Co., Ltd.
- Made a speech-to-text app standard as a support tool for persons with hearing disabilities, enabling them to participate in meetings and work remotely.

#### ■ Organizational culture innovation

- The Company held a sales division diversity training.
- An e-learning course was held for all employees of 25 Group companies in Japan aimed at providing basic knowledge of LGBT; Some 9,200 employees participated.
- The Company held an unconscious bias<sup>[2]</sup> training for its HR Dept. to promote fair evaluations and equal opportunities and enhance psychological safety in the organization. It plans for all employees to take the training by end of fiscal 2020.
- Issued eight installments of Diversity News for sharing diversity initiatives in the Group.

[1] A joint project of Japan's Ministry of Economy, Trade and Industry and the Tokyo Stock Exchange (TSE), which annually selects outstanding TSE-listed companies that encourage women's empowerment in the workplace as attractive stocks to investors who emphasize improving corporate value in the medium- and long-term, thereby promoting company investment and its efforts.

[2] Prejudices or unsupported judgments unknowingly held by an individual. Everyone has them.



Approach

### Work-style Innovation

The Ajinomoto Group is actively promoting work-style innovation to accelerate diversity efforts in Japan. Ajinomoto Co., Inc. aims to become completely paperless for in-house processes and reform work styles across existing organizational and professional boundaries by fiscal 2020. By doing so, it aims to change work behavior, develop a “decide and act quickly” culture, and realize advanced work styles that create more seeds of innovation.

In terms of implementing the work-style innovation, each Group company is left to set its own key targets according to its individual business operation and workforce requirements. From fiscal 2018, the Group has held the Work-Style Innovation Promotion Conference to create synergies across the Group.

- Vision for advanced work styles
- Strive for balance between career and life fulfillment
- Include and engage diverse human resources across genders, nationalities, values, etc. and achieve productivity commensurate with a Genuine Global Specialty Company
- Innovate continuously

Performance

### Work-style Innovation Initiatives

In fiscal 2018, Ajinomoto Co., Inc. advanced the work style by introducing hot-desking. Based on certain progress made in work efficiency, going forward the Company will aim to raise work-style quality, shift to more creative work, and consolidate and standardize common internal functions.

#### Roadmap of Ajinomoto Co., Inc.

	FY2015 (actual)	FY2016 (actual)	FY2017 (actual)	FY2018 (actual)	FY2019
Minimum daily work hours	7 hrs. 35 min.	7 hrs. 35 min.	7 hrs. 15 min.	7 hrs. 15 min.	7 hrs. 15 min.
Average annual work hours	1,976 hrs.	1,916 hrs.	1,842 hrs.	1,820 hrs.	1,800 hrs. (target)
Productivity <sup>[1]</sup>	-	-	107.5%	109.8%	-

[1] Ratio of total sales per employee per hour (vs. FY2016)

#### Group companies in Japan

	FY2020- (target)
Average annual work hours	1,800 hrs.

▶ Public Awards and Feedback

### TOPIC

#### FY2018 Japanese Ministry Award for Telecommuting

Ajinomoto Co., Inc. received Japan's highest honor in fiscal 2018 for organizations promoting work-life balance through a telecommuting program. The award was presented by the Ministry of Health, Labour and Welfare, which recognized the Company's work-style innovation initiatives as particularly outstanding.

# Career development support

## Approach

GRI404-2

▶ Personnel and Labor-Related Data

The Ajinomoto Group helps employees plan and realize their own career development path because it believes maximizing employee career fulfillment is vital to sustainable corporate growth. The Group offers a range of training and career support programs to support individual growth.

## Development Program for Global Leaders (The Ajinomoto Group Academy)

The Group launched the Ajinomoto Group Academy in fiscal 2018 as a program to systematically develop the next generation of business leaders and advanced specialists, as well as potential specific department leaders, who are the future global growth drivers.

### Major programs of the Ajinomoto Group Academy

Training	Objectives	Participants	Schedule	Contents
Global Leaders Seminar (GLS)	Enhance further individual authentic leadership based on the Ajinomoto Group Vision through insight of the future with wider perspectives	General Managers who are current or future head of company or organizational unit Approx. 25 people	8 days/year	Learnings on leading edge, internal case study, panel discussion with top management, action learning (presentation to top management)
Future Leaders Seminar (FLS)	Establish authentic leadership and enhance own leadership influence to take the initiatives of the future direction	Managers who are expected to be future general managers Approx. 25 people	10 days/year	Learnings on leading edge, internal case study, developing self-awareness through coaching
Leadership & Literacy Seminar (LLS)	Develop high self-awareness and build backbone of self-development as a leader	Newly promoted managers or team leaders Approx. 25 people	10 days/year	Enhancement of leadership and self-awareness, career planning, deepening of understanding on ASV through internal and guest lectures, business literacy

## Goal-specific Human Resource Training Programs

Ajinomoto Co., Inc. offers grade-specific and elective programs tailored to the employee's growth stage and goals so they can realize the career they envision for themselves.

### HR development programs at Ajinomoto Co., Inc.

#### Grade-specific training programs

Learning the standard abilities needed for each role/year

▶ Training for managers

▶ Training for non-managers

#### Elective programs

Further improvement of core abilities and business skills

▶ Group training, Online training

▶ Career support programs

## Performance

GRI404-1

In fiscal 2018, average hours of training per employee was 13 at Ajinomoto Co., Inc.

## Diverse Talent

### Approach

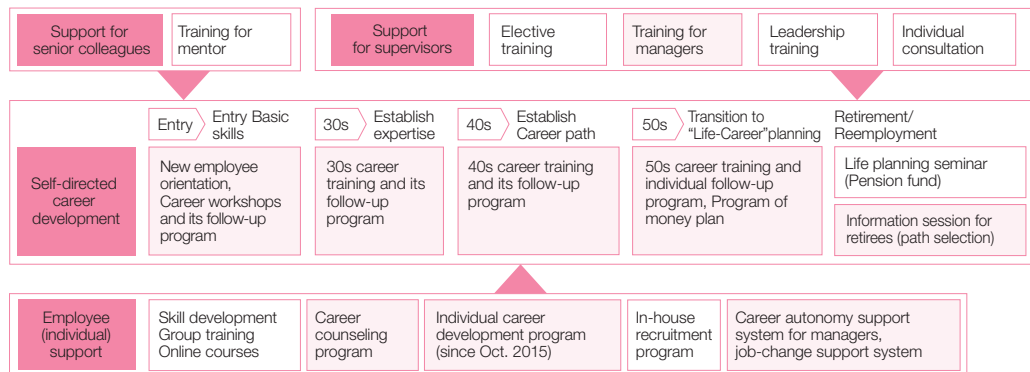
GRI404-2

### Comprehensive career support

Ajinomoto Co., Inc. provides the support every employee needs to understand their personal strengths, values and characteristics, envision who they want to be (goals and vision), and take voluntary steps to grow and achieve. It offers increasing opportunities in and outside the Company for employees to contemplate their career development. In fiscal 2015, it introduced age group-specific training so employees can review and plan at specific milestones. The Company helps especially employees beyond age 50 launch a second career and have more options after retirement. It is also working to expand its career counseling program.

For all staff and managers at the mandatory retirement age of 60, group companies in Japan provide a reemployment system to help them stay active after retirement.

### Comprehensive career support structure



## Health and Productivity Management

The Ajinomoto Group believes that employees' health and well-being is fundamental to improving employee engagement and simultaneous growth of employee and the company. The Group implements considerable effort in creating working environments that maintain and improve employees' health and well-being. The Ajinomoto Group Health and Well-Being Initiatives were compiled as part of this drive in May 2018.

The Group's vision for health and productivity management consists of two parts, company support for improving employee health and well-being, and individual self-care based on high awareness and knowledge, the two working together to maintain well-being and foster a health-minded culture.

### Vision



### Approach

GRI403-DMA  
 GRI403-3  
 GRI403-6

▶ Integrated Report  
 2019 P55

▶ Sustainability Data  
 Book 2018 P112

Framework

GRI403-DMA  
 GRI403-3  
 GRI403-6

Performance

GRI403-DMA  
 GRI403-3  
 GRI403-6

Performance

▶ Public Awards and Feedback

**Health promotion framework**

Ajinomoto Co., Inc.'s health policies are centered on the concept of self-care, which advocates health as a personal responsibility. This self-care is supported by a partnership between the Wellness Promotion Center, which has nine occupational physicians and 13 health staff members, the HR Department, and the Ajinomoto Health Insurance Society.

**Health and productivity initiatives**

■ Individual consultations

At Ajinomoto Co., Inc., individual consultations are the foundation for providing all necessary health support. Every employee that works in Japan is interviewed by medical staff at the Wellness Promotion Center at least once per year. Based on their medical examination and stress assessment results, they receive health guidance that is respectful of their individual values and lifestyle, while also making sure to catch signs of latent physical or mental health problems. Guidance and advice services are also available for employees who work long hours or overseas.

■ The A-Health Solution

The A-Health Solution is a health program that supports the self-care of Ajinomoto Group employees through its focus on health visualization and lifestyle disease prevention. As part of the program, in August 2018 the Group introduced *Karada kawaru Navi* (Body change Navi), an app that visualizes an employee's health condition on four axes (food, exercise, sleep, and stress) for providing health guidance based on a more accurate picture of their lifestyle habits. In October 2018, the Group introduced My Health, a personal health management website which employees can use to monitor their checkup results, work data, and lifestyle data.

■ Smoking cessation program

The Ajinomoto Group fully supports employees working to quit smoking and also strives to minimize smoking risk and passive smoking. Ajinomoto Co., Inc. targets the percentage of non-smokers to be 88% in fiscal 2020.

■ Mental Health Recovery Program

Ajinomoto Co., Inc. has its own Mental Health Recovery Program. From the start of temporary health leave until after their return to work, employees on the program receive continual support in recognizing their personal values and sources of fulfillment and aspiring to a state where they can enjoy work by relating skillfully to stress. Targets are set according to the state (stage) of symptom recovery.

**Inclusion in the 2019 Health & Productivity Stock Selection**

Ajinomoto Co., Inc. was included in the 2019 Health & Productivity Stock Selection for the third consecutive year as a company strategically promoting employee health and productivity from a management perspective. The selection is made by the Japanese Ministry of Economy, Trade and Industry (METI) and Tokyo Stock Exchange. In the same year, the Company was also included in the "White 500" where METI certifies 500 companies actively working in employee health management through Certified Health and Productivity Management Organization Recognition Program.



# Occupational safety and health

## Framework

GRI403-DMA  
 GRI403-1  
 GRI403-4

▶ Group Shared Policy on Occupational Safety and Health

## Occupational Safety and Health Management

The Ajinomoto Group established the Occupational Safety and Health Committee under the Executive Committee to decide on important policies, develop plans, and conduct reviews of activities related to occupational safety and health. To foster understanding of the Group Shared Policy on Occupational Safety and Health, the Group formulated a guide and standards for occupational safety and health management in February 2019 and encourages its awareness and use at Group companies.

In addition, the Group established the Safety & Disaster Prevention Promotion Headquarters to promote and support the smooth implementation of matters concerning occupational accidents and disaster prevention. If it has been determined that an accident, disaster or other emergency which seriously impacts the Group's occupational safety and health has occurred or may possibly occur, the Headquarters is responsible for assessing the situation, making recommendations, providing guidance, as well as reporting to company executives and related divisions.

### Occupational safety and health management system



### ISO 45001 adoption

From January 2019, the Ajinomoto Group has required all business sites to obtain ISO 45001 certification and is now in the process of transitioning even those sites that have previously obtained OHSAS<sup>[1]</sup> and other certifications.

[1] Occupational Health and Safety Assessment Series (OHSAS): An international standard for occupational safety and health management.

## Performance

## Diverse Talent

### Performance

GRI403-DMA  
GRI403-1  
GRI403-2  
GRI403-3  
GRI403-7

### Safety and health assessments, audits and inspections

The Ajinomoto Group conducts occupational safety and health assessments mainly at the starting stage of new product manufacturing as a way to prevent occupational accidents. In addition, the Group strives to prevent accidents, disasters or legal violations by carrying out internal audits at each company and business site based on the occupational safety and health management system.

Items	Description	FY2018 record
Safety and health assessment	Carried out to prevent occupational accidents, and mainly conducted at the start of new product manufacturing, when stepping up, changing manufacturing processes, developing new substances, and at the planning stages of constructing or demolishing buildings, structures, and equipment.	63 times
Safety audits and inspections	Internal audits are conducted at each company and site. In the event of a serious accident at a Group site, Ajinomoto Co., Inc. conducts on-site emergency safety audits to investigate the causes of the accident, determine corrective measures, and prevent recurrence. Some sites in Japan bring in third-party consultants or institutions to perform safety inspections.	4 times (AJINOMOTO BAKERY CO., LTD., PT AJINOMOTO INDONESIA, PTT Factory at AJINOMOTO CO., (THAILAND) LTD., and Amoy Food Ltd.)
Equipment inspection for safe and stable production	For factories, regular maintenance and legal inspections are conducted. At factories that operate 24 hours a day, production is periodically shut down completely to allow employees and specialists to inspect equipment for maintenance.	Conducted at each site
Occupational accident prevention at designated worksites	Worksites considered high-risk from a safety and health standpoint by the Chief of Safety & Disaster Prevention Promotion Headquarters (e.g., due to recurrence of accidents or injuries, or inadequate management functions) are designated and provided with safety enhancement guidance.	No designated worksites in FY2018

## Occupational Safety and Health Activities

### Fiscal 2018 key targets and performance

Key targets	Action plans
Prevent caught-in-machinery accidents	1. Tangible measures (1) For new food processing and packaging equipment, request manufacturers to include safety measures at design and fabrication stages (2) Consider and implement tangible measures for work tasks that require removing protective covers, etc. 2. Intangible measures Education and other measures to reinforce fundamentals, such as stopping equipment for work tasks that require removing protective covers
Prevent falls and low back pain	1. Prevent comprehensively through work infrastructure, work methods, maintaining physical fitness, and education 2. Promote automation and use of assistive robots 3. Hold low back pain prevention seminars

### Major accidents/incidents

	FY2014	FY2015	FY2016	FY2017	FY2018
Number of serious accidents	16	26	16	23	16
Number of serious commuting accidents	25	18	9	19	13
Number of fatal accidents	0	1	0	0	0
Number of caught-in accidents*(Persons)	9 (6)	5 (3)	5 (1)	10 (8)	8 (3)
Number of accident victims*(Persons)	19 (5)	31 (5)	30 (3)	23 (4)	32 (4)
Number of low back pain incidents*(Persons)	—	—	—	7 (0)	15 (0)

\* Serious incidents in ( )

### Performance

GRI403-DMA  
GRI403-7  
GRI403-9  
GRI403-10

▶ Personnel and Labor-Related Data

Performance

Performance

GRI403-5

In fiscal 2018, the number of serious accidents across the whole Ajinomoto Group declined. The number of caught-in-machinery declined, however, critical fall accident cases of employees over 45 years old increased in Japan. The number of low back pain incidents increased although they did not lead to serious incidents.

Starting from fiscal 2019, the Group plans to implement measures to prevent falls and low back pain as well as traffic safety education and guidance that focus on factors specific to each site; measures to prevent caught-in-machinery accidents during equipment cleaning and maintenance and other incidental work; and measures that reinforce PDCA cycle operations by advancing ISO 45001 certification and adopting the occupational safety and health management guide.

**Response to safety and health laws and accidents**

In fiscal 2018, there were nine cases of legal violations at three Group companies (three sites) in Japan. All of these cases have been fully addressed upon receipt of corrective advice and no serious accidents have occurred related to these violations. The Group will continue to conduct assessments, safety audits and inspections for the safety and security of production activities.

**Employee education**

The Ajinomoto Group conducts a variety of occupational safety and health training tailored to the work role and tasks of employees. In addition, a skills map that classifies the skills and knowledge required of all occupational safety and health officers at each site was created and shared within the Group.

**Training at Group companies in Japan in fiscal 2018**

Persons, cumulative in ( )

Name of training	Details	Recipients	Number of trainees
Occupational safety and health seminar for top management	Seminar for top management to acquire the necessary safety and health knowledge (e.g., responsibility to consider safety) and to learn how to promote safety and health in a company (one full-day course) : Began in fiscal 2010	Managers	43 (468)
Training course for ISO 45001 internal auditors	Acquisition of the necessary knowledge and skills as ISO 45001 internal auditors to promote occupational safety and health through exercises (one one-day course, one two-day course): Began in fiscal 2018	Leadership positions	28 (28)
Basic seminar for the management of chemical substances	Training for supervisors of chemical substances/safety and health to improve their skills by reviewing basic information on chemicals management (regulatory changes, risk assessment, safety data sheets (SDS), GHS labeling) (one full-day course) : Began in fiscal 2015	Chemicals supervisors	10 (98)
Fall and lower back pain prevention seminar	Training to consider the mechanisms and causes of falls and lower back pain, and study measures from equipment, work method and physical aspects that will lead to the management guiding, inspiring and practicing such measures in the workplace (one one-day course): Began in fiscal 2017	Management positions	26 (69)
Fall prevention seminar	Training to study the mechanisms of falls, raise awareness through survey and self-check, experience actual body-movement exercises, learn how to prevent fall accidents, consider equipment- and work method-related measures suited to each workplace, and study how to put them into practice (one one-day course): Began in fiscal 2018	Management positions / leadership positions	15 (15)

Performance

### Disaster Preparedness

The Ajinomoto Group routinely collects information on natural disaster forecasting and damage prediction. It confirms the safety of buildings and production facilities and takes any steps needed, while also revising emergency drills.

In addition to regularly carrying out individual evacuation and fire-fighting drills at each Group company and site, the Group steadily promotes initiatives such as updates on the organizational structures, communication systems, and manuals.

The Group also partners with the local governments where each site is located. To be able to receive local residents and provide food in times of disaster, several sites have been considering or implementing agreements with the government.



Framework

# Risk management

## Risk Management Framework

The Ajinomoto Group established the Management Risk Committee as an organization under the Executive Committee in order to identify and select corporate management risks and develop responses to these risks. The Management Risk Committee laid out the structure to assess and manage serious risks in a cross-organizational manner, including those related to climate change, social issues, and technological innovation, and at the same time allow for timely and appropriate response in the event of a crisis. In addition, the Committee encourages autonomous risk management at each organizational unit in the Group. The Committee also identifies and selects corporate management opportunities and evaluates their degree of impact.

### Promotion framework



# Compliance

## Framework

GRI205-DMA  
 GRI205-2  
 GRI307-DMA  
 GRI419-DMA

▶ Ajinomoto Group Policies (AGP)

## Performance

GRI205-2

## Promotion Framework

The Ajinomoto Group is seeking to strengthen its management base and enhance its corporate value by cultivating an open corporate culture and building strong crisis management structures through improved compliance awareness and a deep understanding of the Ajinomoto Group Policies (AGP).

Ajinomoto Co., Inc. established the Business Conduct Committee, which meets once every three months, to ensure that all personnel are well informed about the AGP, and verify that business activities comply. Major Group companies have also set up their own business conduct committees to boost AGP awareness and address their unique issues by country, region, and company.

### Promotion framework



## Improvement of Compliance Awareness

### Compliance education for employees

The Ajinomoto Group conducted the following training and educational activities in fiscal 2018 to boost awareness and understanding of AGP and of the whistleblowing system.

- Compliance training (for Ajinomoto Group company managers in Japan. Six times a year, 407 participants)
- Educational posters (produced in 12 languages)
- Compliance education message (sent each time employees start up their computers)

### Worksite meetings on the AGP

Members of the Business Conduct Committee have been holding worksite meetings on the AGP at Ajinomoto Co., Inc. to hear directly from employees about issues concerning compliance in the workplace. In fiscal 2018, 44 meetings were held (29 for regular employees, 15 for part-time and temporary employees) for 535 participants.

AGP worksite meeting summaries are shared with organizational heads and with every workplace, as well as posted on the intranet to inform all employees. Any compliance issues raised that warrant company-wide efforts are then discussed by the Business Conduct Committee and incorporated into measures to advance AGP and activities to promote compliance.

## Strong Corporate Governance

### Performance

GRI205-2  
GRI406-1

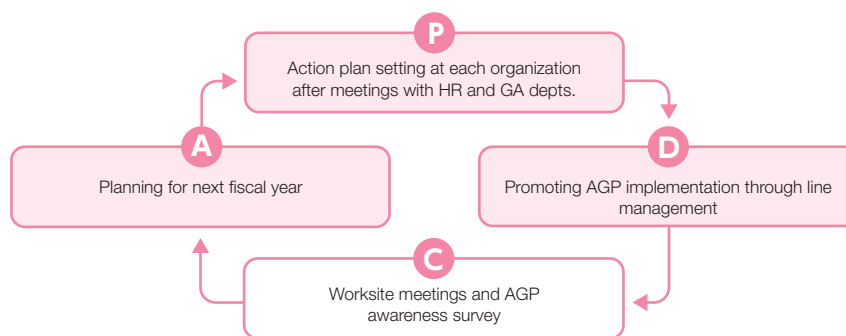
▶ Group Shared Policy on Whistle-blowing

▶ Personnel and Labor-Related Data

### AGP awareness survey

Each November, Ajinomoto Co., Inc. and its Group companies in Japan ask all employees to answer an AGP awareness questionnaire to monitor awareness and understanding of the AGP and to get a clear grasp of any compliance issues in each company and at every worksite. In fiscal 2018, 13,367 employees responded, and the results are made available to all employees on the intranet. Companies cooperate closely with relevant worksites to address any noted compliance issues.

### Functions of worksite meetings on the AGP and AGP awareness survey

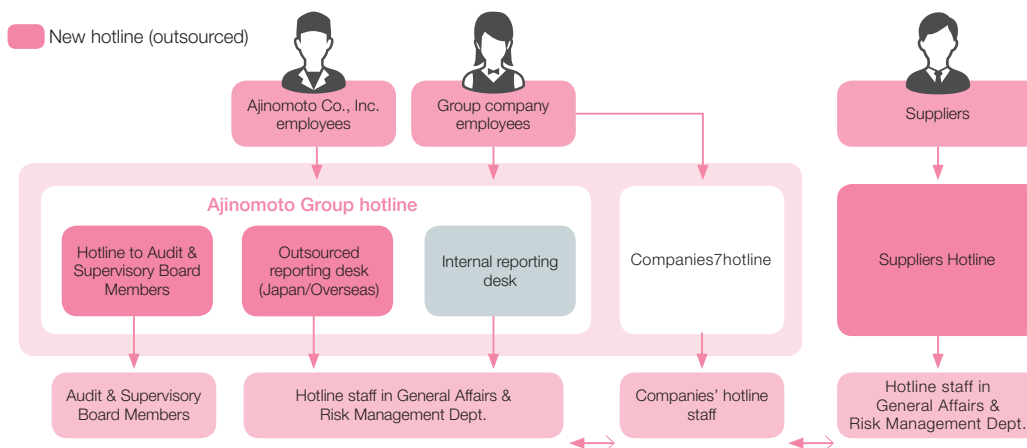


### Hotline: Strengthening the Whistleblowing System

The Ajinomoto Group has established the hotline as a whistleblower system that enables executive officers and employees, including part-time and temporary workers, to make reports or seek advice by phone, e-mail, fax, letter, or other means.

Using the guidelines to institute an internal reporting system based on the Whistleblower Protection Act, published by the Consumer Affairs Agency of Japan, the Group developed its services and multiplied reporting channels in fiscal 2018. In addition, the Group formulated the Group Shared Policy on Whistle-blowing to publicly disclose its policies on whistleblowing and standardize its rules and operations.

### Whistleblower system development and addition of reporting channels



### Number of hotline reports<sup>[1]</sup>

	Human rights, harassment	Hiring, working condition	Quality, environment	Irregularity	Social manners, ethics	Proper job performance	Others	Total
Fiscal 2017	28	14	1	2	10	13	3	71
Fiscal 2018	47	21	1	1	6	20	2	98

[1] Multiple issues were reported in some cases.

# Prevention of corruption

## Approach

GRI205-DMA  
GRI205-2  
GRI206-DMA

▶ Group Shared  
Policy on Bribery  
Prevention

## Performance

GRI205-2

## Basic Policy

The Ajinomoto Group Policies (AGP) prescribes that healthy relationships should be maintained with politicians and government officials, and that giving favors to public officials or any person equivalent in Japan or in foreign countries, in the form of gifts, entertainment, money or other bribery in any manner is prohibited. The Group Shared Policy on Bribery Prevention includes the rules below, requiring officers and employees of Group companies to comply with the policy and related bribery prohibition laws of the countries and regions.

- Accurate account books and records of all corporate transactions must be kept in reasonable detail.
- Attention must be paid to proper accounting of expenditures related to public officials etc.
- Compliance and execution of this policy must be monitored by audits.

## Education for Employees

The Group regularly holds training for officers and other employees involved in line management of Group companies in Japan on the proper relationship to have with public officials, including those of foreign countries, with 407 participants in fiscal 2018.

In addition, the Group conducts bribery prevention training courses for officers and managers of overseas Group companies. In fiscal 2018, around 730 participants joined the training courses held in Thailand, Malaysia and Indonesia, with local lawyers as instructors.

# Transparent, fair business practices

## Approach

GRI204-DMA  
GRI205-DMA  
GRI205-2  
GRI206-DMA

▶ Group Shared  
Policy on  
Procurement

▶ Group Shared  
Policy for Suppliers

## Performance

GRI205-2

## Basic Policy

Through the Ajinomoto Group Policies (AGP), the Group strives to ensure fair and transparent business transactions by requiring officers and employees to fully understand and comply with laws and regulations concerning competition in all countries and regions in which it operates. The Group has also developed guidelines for antitrust/competition laws of Japan, the United States and Europe. For procurement, the Group requests suppliers as business partners in the same supply chain for understanding on the purpose of the Group Shared Policy on Procurement, Group Shared Policy for Suppliers and relevant Guidelines, and not to engage in behavior that hinders fair, transparent and open competition.

## Education for Employees

The Group regularly holds training on antitrust law for officers and other employees involved in line management of Group companies in Japan, with 407 participants in fiscal 2018.

In addition, the Group conducts antitrust law training for officers and managers of overseas Group companies. In fiscal 2018, around 730 participants joined the training held in Thailand, Malaysia and Indonesia, with local lawyers as instructors.

In these trainings, the Group highlights the prohibition on cartels, which have an especially large impact on fair competition.

# Appropriate competitive behavior

## Framework

GRI206-DMA

▶ Group Shared Policy on Global Tax

## Performance

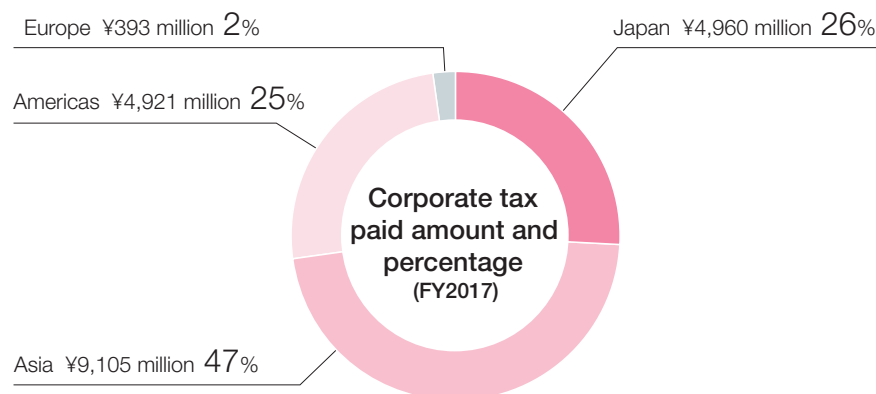
### Framework for Global Tax Strategy

The Ajinomoto Group encourages Group companies to conduct business in compliance with the tax laws of their respective countries, while also seeking to minimize tax risks, for which it formulated a Group Shared Policy on Global Tax in April 2016.

To ensure robust operations in line with the policy, the Group strives to identify appropriate tax practices by collecting self-assessments from Group companies and meeting regularly with each company.

In April 2018, the Global Finance Dept. was established to strengthen tax strategy management for the entire Group. The department strives to streamline tax procedures by sharing tax payment and tax audit information from different countries across the Group.

### Corporate Tax Paid by the Ajinomoto Group



# Proper use and management of intellectual property

## Approach

- ▶ Group Shared Policy on Intellectual Property
- ▶ Information on Intellectual Property

## Framework

### IP Initiatives

The Ajinomoto Group established the Group Shared Policy on Intellectual Property in July 2018, which promotes the following initiatives to establish competitive advantage, generate profit, and grow globally.

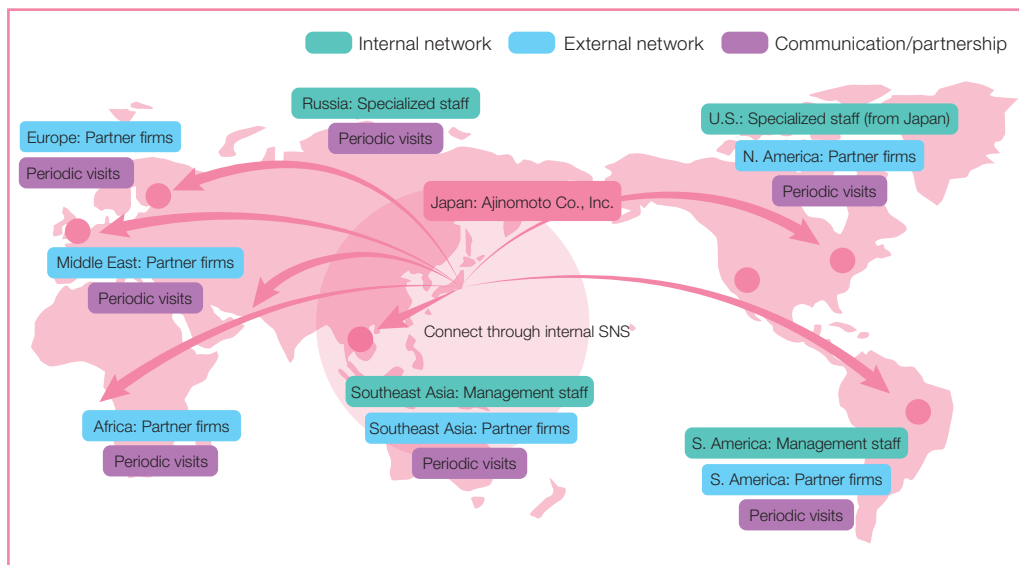
- (1) Strategic and efficient acquisition of intellectual properties including know-how for technologies that form the core of businesses
- (2) Proactive incorporation of external technologies and cooperation, including through open innovation
- (3) Utilization and exercise of rights to the Group's proprietary technologies through means including licensing of in-house technologies and litigation
- (4) Protection of products and improvement of brand value using the trademark system and other means
- (5) Minimization of infringement risk through respect for third-party IP rights and thorough surveys and clearance
- (6) Provision of survey and analytical data to Group business units and R&D departments
- (7) Cultivation of IP human resources and utilization of internal and external networks

The Group takes a firm stance toward companies that infringe on its IP rights and strongly protects these rights by giving warnings and filing infringement lawsuits, among others. Also, the Information Systems Planning Dept. and Intellectual Property Dept. plan and execute defensive measures to protect trade secrets and, in collaboration with the Internal Auditing Dept., carry out overall internal control related to trade secret management and protection for the Group.

### IP Management Organization

Ajinomoto Co., Inc. supervises IP (patents, designs, trademarks, etc.) for the entire Ajinomoto Group in line with "Instructions Regarding Licensing and Administration of Intellectual Property." An affiliated Intellectual Property Expert Co., Ltd., provides specialized services in the form of surveys, maintenance, and management of IP rights. The Group also has resident staff in the United States, specialized staff in Russia, and key persons designated at Group companies in Southeast Asia and South America, and works with patent law firms. The three bases in Japan, the United States, and Russia cooperate to secure strong patent rights, particularly in biotechnology.

IP management system



Performance

Impact of Ajinomoto Co. Inc. on Other Companies' Patents

Ajinomoto Co., Inc. topped the 2018 ranking of capability to prevent other food industry companies from obtaining patent rights, released by Patent Result Co., Ltd. (based in Tokyo). This ranking is a compilation of the number of a company's patents in each industry that were cited as reasons for rejection of another company's patent in its patent examination process in 2018. Companies with a large number of patents cited are considered as advanced companies with extensive prior art that blocks competitors from obtaining rights.

Education for Employees

The Ajinomoto Group regularly conducts trademark seminars to give Group employees basic knowledge on trademarks and the rules for displaying trademarks such as *AJI-NO-MOTO*<sup>®</sup>. They serve both to enhance employee appreciation of trademarks and to prevent the *AJI-NO-MOTO*<sup>®</sup> trademark from being used as a generic term. A total of 140 employees attended the seminar in fiscal 2018. In addition, Ajinomoto Co., Inc. conducted an e-learning program for all employees (approximately 3,500), of which about 3,100 participated, to disseminate the newly established "Regulations for Expressing Terms Containing "AJINOMOTO" and Trademarks."



# Cybersecurity & personal information management

## Approach

GRI418-DMA

▶ Group Shared Policy on Information Security

## Framework

GRI418-DMA

### Basic Cybersecurity Policy

The Ajinomoto Group defines cybersecurity as a significant risk. As such, the Group is extremely attentive to the handling of customer and confidential corporate information and has formulated the Group Shared Policy on Information Security and related Group-wide regulations, standards and guidelines.

In 2019, the Group plans to create and adopt Group-wide guidelines on local area networks (LANs) to address the risks of information leakage from IoT devices and external hacking.

### Information Security Management System

Each organization of Ajinomoto Co., Inc. and Group companies have established systems for appropriate response to information security incidents and other emergency situations in which information flows all the way to the CEO.



### Rigorous management of personal information

To securely manage customer data and other personal information, the Ajinomoto Group informs relevant organizations of clearly defined rules and procedures as part of its organizational business management.

At Ajinomoto Co., Inc., the Personal Information Management Guidelines under the Information Security Regulations specify rules and procedures for securely handling personal information. The guidelines are based on the ISO 27001 standard for information security management systems.

When operations are outsourced, the contractor's business and systems are assessed to ensure a similar high level of information security. The Company has been building a system for managing customer personal information more strictly on the collection of personal information for campaigns, consumer surveys, etc. The rules demand the selection of personal information managers under the jurisdiction of organizational managers, and clarify the persons responsible for or in charge of the collection, storage and deletion of personal information, as well as who might access or use the collected data.

Following revisions to the Personal Information Protection Law in Japan in May 2017, the Company has revised its internal processes and handling guidelines, and is regularly educating personal information managers in each organization. Regarding transfer of personal information among Group companies out from Europe, the Group complies with the requirements of the EU's General Data Protection Regulation (GDPR), which went into effect in May 2018.

Performance

GRI418-DMA

## Information Security Initiatives

### Main information security trainings in fiscal 2018

- Group training for line managers in business and sales divisions: Three times, 220 participants
- Group training for line managers in production and R&D divisions: Three times, 187 participants
- Group training for new hires: 87 participants
- Comprehension test on information handling via e-learning for all employees of Ajinomoto Co., Inc.: 3,560 participants (89.4%)

The Company also conducted training on targeted mail attacks for new employees.

### Ongoing initiatives to prevent leakage of confidential information

In Japan, the Ajinomoto Group introduced an AI-driven user behavior detection system on standard PCs for thorough detection of fraud. After adoption in four companies including Ajinomoto Co., Inc., it is currently being expanded into other Group companies.

The Group builds a consistent vulnerability response strategy by conducting annual external security checks of each Group company's website.

### Information security inspections

Ajinomoto Co., Inc. conducts annual information security inspections at all worksites. The inspections mainly focus on the basic elements of proper information handling, including management of IT equipment, confidential information, and personal information. The Company also conducts annual checks of external cloud service use and its management status.

## Relationship with local communities

### Approach

▶ Group Shared  
Policy on Local  
Community  
Enhancement

With the explicit commitment to contribute to community development stated in the Group Shared Policy on Local Community Enhancement, the Group works to resolve local issues in each community through business. The Group conducts dialogues and collaborates with communities, and gives suitable donations and support.

### Performance

#### Collaboration through foundation

Through foundations in four countries, the Ajinomoto Group supports various activities in the fields of food and nutrition based on local needs.

Country	Name of foundation	URL
Japan	The Ajinomoto Foundation	<a href="http://www.theajinomotofoundation.org">http://www.theajinomotofoundation.org</a>
	Ajinomoto Foundation for Dietary Culture	<a href="https://www.syokubunka.or.jp/english/">https://www.syokubunka.or.jp/english/</a>
	Ajinomoto Scholarship Foundation	<a href="http://ajischolarship.com">http://ajischolarship.com</a> (Japanese)
Thailand	Ajinomoto Foundation	<a href="http://ajinomotofoundation.or.th">http://ajinomotofoundation.or.th</a> (English and Thai)
Peru	Fundación Ajinomoto para el Desarrollo de la Comunidad	<a href="http://www.ajinomoto.com.pe/actividad/fundacion-ajinomoto-contribuye-reducir-indices-de-anemia-infantil">http://www.ajinomoto.com.pe/actividad/fundacion-ajinomoto-contribuye-reducir-indices-de-anemia-infantil</a> (Spanish)
Brazil	Instituto Ajinomoto	<a href="https://www.ajinomoto.com.br/instituto-ajinomoto/">https://www.ajinomoto.com.br/instituto-ajinomoto/</a> (Portuguese)

#### Support for areas struck by natural disaster

The Ajinomoto Group provides support that meets each disaster area's particular needs in the fields of food and health.

Event	Recipient	Aid amount	Relief goods	Quantity
July 2018 floods	Japan Platform	6 million yen	–	–
	Cash Grant for Japan Floods and Landslides 2018 (Japanese Red Cross Society)	4 million yen	–	–
	Recipients designated by Ehime, Hiroshima, and Okayama Prefectures	–	<i>Ajinomoto</i> <i>KK Okayu (shirogayu)</i> 250 g	Approx. 31,000 packs
		–	<i>aminoVITAL</i> ® <i>GOLD</i> Jelly drink 135 g	10,000 packs
–	–	<i>AQUASOLITA</i> ® oral rehydration solution 500 ml	9,000 bottles	
2018 Hokkaido Eastern Iburi earthquake	Hokkaido Disaster Donations Committee	3 million yen	–	–
	Japan Platform	2 million yen	–	–
	Recipients designated by Hokkaido Prefecture	–	<i>Knorr</i> ® <i>Soup DELI</i> ®	Approx. 5,400 packs

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# Global Review

The Ajinomoto Group's Integrated Report 2019 and Sustainability Data Book 2019 has been reviewed by representatives of important stakeholder groups in the Americas, Europe, and Asia. The Ajinomoto Group will use their input to help shape its future sustainability initiatives as a "Genuine Global Specialty Company."

## Perspective from Europe

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### Optimized reporting information format

The Ajinomoto Group's reporting information format for 2019 has evolved tremendously, starting with the Integrated Report. The Group's Integrated Report is a credible account of how the Group creates blended social and financial value (ASV). This is an established Ajinomoto Group strategy and this report is consistent with its approach in prior years, building and evolving the framework. Endorsements of the ASV approach by senior Board and Executive leadership give confidence that the Group is working in an aligned way, with an embedded approach to business that is built on sustainable principles. In this respect, the report is a solid reflection of integrated strategy, and includes enough sustainability content with references to the Sustainability Data Book ("SDB") and takes effective actions to provide a broad range of stakeholders with information required to make decisions.

The SDB augments Ajinomoto Group disclosures to present a full picture of Ajinomoto Group's sustainability performance. Together with the Integrated Report and web-based disclosures, the Group provides different formats and scope of disclosure for different stakeholders starting from an aligned company position. So many companies produce sustainability reports and fail to even mention sustainability in annual financial disclosures. The

fact that Ajinomoto Group presents its strategy and disclosures in a consistent way across all platforms helps stakeholders believe that it is genuine strategic corporate practice and not "lip-service" or "PR."

The SDB until previous year has always been comprehensive and has always included

substantial contextual information, detail and data. However, the 2019 edition pulls together the strategy, material focus and topical information in a much clearer and more aligned way, while retaining the style, tone and feel of Ajinomoto Group's brand and corporate image. There is also a clearer linkage between the business foundation and the sustainable development topics, shown in the new list of materiality items. At the same time, there is a clearer separation of topics and avoidance of duplication via the Integrated Report and the SDB, with storytelling aspects being part of the Integrated Report, allowing the SDB for focus more on specific sustainability performance.



**Elaine Cohen**

Founder and CEO  
Beyond Business Ltd.  
[www.b-yond.biz](http://www.b-yond.biz)

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### The core of building credibility, the consistency for long-term reporting

The continuity and consistency of Ajinomoto Group's reporting over 20 years or so is a strong trust-builder, as I have mentioned every year. Reporting consistency is core to building trust as it demonstrates Ajinomoto Group's proven commitment to transparency builds credibility.

Ajinomoto Group's efforts to align more closely with the GRI framework, including early adoption of the new GRI Standards for Water and Occupational Health and Safety, are impressive. Overall, this SDB is a noticeably stronger GRI disclosure.

References to climate change with new disclosures and scenario analysis in line with TCFD recommendations, and a new corporate tax disclosure, are also noticeable. All of this has been managed in a demonstrably shorter report that is easier to navigate. Another positive element is the highlighting of current year topics that are included in the Integrated Report 2019. This is a good way to avoid duplication, retain focus and provide the reader with both the big and the detailed picture.

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### New materiality that shows the relationship between business performance and social impact

Ajinomoto Group's new materiality items are concise, clear and relevant as part of the Group's overall strategy. Their connection to both business and social outcomes are well demonstrated. Several items have been adapted as broader issues that cover multiple similar elements. For example, addressing health and nutritional issues was previously three items: undernutrition, overnutrition and elderly nutrition. I think it makes much more sense to combine such issues in the same item as they clearly have underlying common elements. Additionally, the presentation is in a list style, not a matrix. This makes it very clear that all these impacts must be addressed with equal importance in order to achieve Ajinomoto Group's overarching goals. I believe the inclusion

of business foundation items is positive and helps remind us that sustainable development is both a business and a social/environmental need. "Preparing for intense global competition" through innovation and collaboration represent important business impacts both for business success and for social advancement. As mentioned, materiality items have been transformed in 2019, both in terms of their specific focus areas and their presentation. The description of the materiality revision process, however, is limited. Given such fundamental change, Ajinomoto Group could gain greater credibility by providing a more detailed discussion of the newly selected topics as well as those that are no longer material.

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### Visualizing the impact of social value and disclosing cutting-edge information

The Ajinomoto Group's framework which is composed of three pillars, such as Health and Well-being, Food Resources and Global Sustainability shows long term commitment. It is well constructed and highlighting the areas in which Ajinomoto Group can make a unique contribution. Health and Well-being, Food Resources and Global Sustainability form a robust strategy that enables Ajinomoto Group to describe its impacts in a compelling way. In each of the core pillars, Ajinomoto Group describes the relevant social and environmental context as well as its own performance and goals. In the future, there is an opportunity for Ajinomoto Group to further articulate its contribution to sustainable development with an impact analysis of the less tangible areas of social

value. Ajinomoto Group's premise is product sales is evidence of changes in consumer lifestyles and other social benefits. Some research linking this assumption to actual impacts in society would strengthen Ajinomoto Group's value proposition. Using simple methodologies, it would be possible to test the theory by developing data-based outcomes scientifically linking the use of a certain product with the desired outcome such as more free time, improved well-being, etc. This would not only add confidence that Ajinomoto Group is working on the right things and making a difference, it would be the leading edge company in terms of social impact measurement and disclosure.

### Introduction

The Ajinomoto Group's 2019 Sustainability Data Book ("SDB") demonstrates some welcome progression in the Group's approach to understanding and integrating sustainability as a strategic priority. It also presents a series of emerging risks and opportunities and the potential to drive business growth.

### Ajinomoto Group in the global context

As a global company with a global value chain, the 2019 SDB demonstrates a further evolution in the Group's approach to recognising and responding to global trends and challenges.

This is reflected positively in the Group's revised approach to materiality. Structured according to a number of "macro focus" topics related to or reflecting global mega trends through which 4 strategic themes with 11 associated materiality items are derived, the 2019 SDB presents a clear picture of important sustainability focus areas, cross referenced with relevant UN Sustainable Development Goals (SDGs).

This revised approach reflects a clear understanding that a changing world will give rise to new challenges and requires meaningful business responses. While the SDB presents a relatively coherent and accessible narrative to readers, it is unclear which best practice guidance or standards have been used to underpin its structure and disclosure

### Operationalising sustainable innovation

As a Group which produces many of its products using fermentation, an effective and relatively regenerative technology, Ajinomoto Group is well placed to be responding to some of the world's food challenges. In addition its use of alternative raw materials (e.g. bagasse rather than sugar cane derived sugar) is also positive. However, the Group also has the opportunity to be further driving the sustainability of its raw material sourcing, and its approach to ensuring high social and environmental standards in the supply chain.

Areas of opportunity in raw material sustainability lie in the development of a more comprehensive approach to ensuring adoption of recognised standards of sustainable

approach.

There remain other opportunities for the Group to further evolve its approach, most significantly through establishing and driving more ambitious performance goals for some key material issues. The past few years have seen the necessary recognition that companies need to clearly engage and align their sustainability performance with global best practice and scientific consensus. Initiatives such as the Zero Deforestation Pledge and Science Based Targets are gathering corporate support for performance which is more likely to align to the limits of our precious and pressurised world. The Ajinomoto Group should seriously consider adopting such targets for their performance, especially as the Group is a signatory to the Science Based Targets initiative.



**Joss Tantram**

Partner, Terrafiniti

## Global Review

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Perspective from Europe

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### Conclusion

The Ajinomoto Group is a global company which has placed itself at the heart of responding to and solving global challenges. In many cases, the 2019 SDB justifies this ambition. However there remain several areas where either ambition has outstripped action, or where the Group has more to do to justify its aspirations.

One critical area which illustrates this point of lagging behind ambition is the goal of achieving 100% sustainable palm oil, where to date only 25% has been reached. Conversely, the Group could afford to be more ambitious in its goals for the

use of renewable energy, especially if it seeks alignment with the world's corporate leaders.

The 2019 SDB shows a company in transition, engaging with and tackling global challenges, and in many cases demonstrating the approach and ability to deliver its mission to “contribute to the world’s food and wellness, and to better lives for the future.” The next steps in the journey will require a focus on making sure that performance targets are ambitious, comprehensive and delivered - action to match the ambition.

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### About this statement

This statement provides an external perspective on the Ajinomoto Group Sustainability Data Book 2019. It was commissioned by Ajinomoto Co., Inc. from Joss Tantram of Terrafiniti and constitutes a third-party opinion. It is

not intended to represent a statement of assurance or verification of any kind, but is an opinion derived from a review and assessment of the report.

## Perspective from the Americas

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### Reporting approach

Overall, Ajinomoto Group's 2019 reporting is an improvement over last year's in terms of usability and transparency. The new materiality items in combination with GRI alignment has allowed for increased standardization of data and information, which benefits the presentation of the information greatly, and makes it easier to read. I would like to see reference to SASB disclosures in the future. Providing supplemental information in between annual sustainability reports - as was done in May 2019 regarding plastics - is a nice way to provide timely information to stakeholders on progress updates.

While this kind of evidence of programmatic momentum and forward-looking spirit is positive, I think more work needs to be done to convey the essence of the Group's long-term strategy. Scenario analysis was performed using year 2100 assumptions, while the Ajinomoto Group's targets for material topics related to 'Food resources' and 'Global sustainability' vary between 2020, 2025, and 2030, and targets for topics in the 'Health and Well-being' and 'Business Foundation' themes are limited to the 2020 year. Anchoring the long-term strategy in 2030- and 2050-year targets across the board would help.

Perhaps the Group's mission "to contribute to the world's food and wellness, and to better lives for the future" should be used as a lens to formulate 2030 and 2050 goals. In

other words, objectives and performance targets against this mission should be developed and integrated into medium- and long-term goals. Closer alignment with the SDG indicators could solidify the connection to broader societal issues and support the Group's efforts to set 2030 targets. The <IR> Framework for integrated reporting could be used to articulate societal value in terms of the Six Capitals.

I was particularly pleased to see the Group's endorsement of the TCFD Recommendations this year, and the results of their initial foray into Scenario Analysis. The catalogue of risks and opportunities for each material item is another step in the right direction towards following the TCFD recommendations. I look forward to further developments of the Scenario Analysis and additional detail on the elements of the TCFD recommendations in the next iterations of Ajinomoto Group's integrated strategy.



**Celine Ruben-Salama**

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### Means of communication and cross references

Since last year, much work has been done to strengthen the links between the Integrated Report, Sustainability Data Book ("SDB"), and other publications, resulting in improved readability and navigation between the documents. The new dashboard for environmental metrics - available in Appendix 1 of the SDB 2019, and also in PDF and Excel formats - demonstrate transparency.

This year, I was happy to see the Overview of the Means of Communication prominently outlined on the inside cover of the Integrated Report 2019 which facilitates finding

the full set of ESG/Sustainability information. Another nice development is the alignment of the SDB 2019 with the GRI Standard. In my opinion, the GRI Standard Content Index is the best map to the Group's suite of sustainability-related documents, with its embedded links and page references clearly grouped in one single place. I would suggest adding references to annual CDP Reports for additional detail on Climate Change, Water Security and Forests issues.

### Integrated Report 2019

While the Integrated Report 2019 focuses on the business and financial value creation, I feel that the right level of detail regarding the social value creation model is included. At the very beginning of the Integrated Report 2019, the section 'The Ajinomoto Group Now' gives a good overview of the various business divisions sales and profitability which is

helpful for readers wanting to understand the sustainability context of the business. An excellent overview of the ASV, Materiality Items, as well as the related risks and opportunities, key initiatives, and 2020 targets follows. Societal Value performance data is presented at the end of the report side by side with financial data as well as



## Global Review

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Perspective from the Americas

some highlights around the materiality items: 'Sustainable Materials Sourcing' 'Response to Climate Change' and 'Contributing to the Circular Economy'. For next year's report, I'm looking forward to seeing how

the next Medium-term Management Plan develops, as well as further articulation of the long-term plan including additional targets and metrics.

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### Sustainability Data Book 2019

The level of the ESG/sustainability information presented in the SDB 2019 is extremely exhaustive, which of course presents communication challenges. The 2019 framework and composition of the SDB are a huge improvement over last year in terms of organization. Now the streamlined 11 materiality items act as an organizing principle. This works very well and contributes to the ease of use of the SDB 2019 itself, as well as the other accompanying sustainability documents. In-text GRI notations have been added, and initiatives reported on in the Ajinomoto Group's Integrated Report are marked in red, which helps readers cross reference the information between the two reports. Throughout the SDB 2019 the way of writing is brief and to the point, using graphs, charts, tables and iconography helps to pack in a lot of information. Each of the four thematic sections of the report – 'Health and Well-being' 'Food Resources' 'Global Sustainability' and 'Business Foundation' - follows roughly the same format, now beginning with an overview of each theme, SDG icons, and a table outlining specific examples,

opportunities and risks, as well as key initiatives for each of the priority ESG items. For the most part, the specific examples listed in this table correspond to the subsections in each section of the report. However, this is not always the case, which is an area of improvement for next year. Next each section covers: 'Targets' 'Approach' 'Frameworks' and 'Performance' for the various initiatives. The level of supporting data varies however, with some sections reporting detailed metrics and others reporting none. The grey sidebars for GRI notations, page numbers, and cross-references to further information in other documents works well too. Not enough companies provide this level of transparency in my opinion. Although, color coding for the various sections was used last year, the visual format and layout of the SDB 2019 are improved. I also liked that the case studies were included in-text as opposed to in a separate document like last year.

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### Sustainability Data Book components: Health and Well-being

In the 'Health and Well-being' theme, targets and metrics remained the same as last year, but only cover the 'Contribution to Health and Nutritional Issues' topic. Progress is being made towards 2020 targets, but a big push in 2019 and 2020 will be needed to achieve them. To me, the target to increase volume of meat consumption through the Group's products still seems a bit out of tune with the current zeitgeist and at odds with climate-related targets. Perhaps it is really protein that is meant here, rather than meat? Additional context would be helpful. The supply chain approach to 'Assurance and Product Safety' is compelling. Performance metrics are interspersed within the text. For example, 60 out of 82 Group companies

have acquired ISO 9001 certification. I would like to see this metrics more clearly presented in the future in tables showing year-on-year trends towards quantitative, timebound targets. Interestingly, sections on 'Customer feedback' and 'Customer satisfaction' are included in the discussion around 'Assurance and Product Safety,' evidencing a 360-degree evaluation style. Regarding the topic 'Contribution to Health and Nutritional Issues,' performance is mainly anecdotal – metrics should be developed in line with the SDGs. Is this not the overall mission of Ajinomoto Group? To improve credibility, reporting on this topic needs to be bolstered significantly.

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### Sustainability Data Book components: Food Resources

This year, I was happy to see 'Food Resources' separated from the 'Global Sustainability' theme, making it more streamlined and easier to grasp quickly. Targets and metrics remained the same as last year, with a strong focus on the 'Food Resources' topic. High-level, medium-term goals

and progress are presented, as well as detailed metrics for the areas of palm oil and paper procurement. While I congratulate the Group on excellent performance in the areas of sustainable palm oil and paper procurement (100%), I would like to see more detail on the chain of

## Global Review

Perspective from the Americas

custody and how compliance is being tracked. Missing was a discussion of bio-plastics procurement or production, which I thought would fit into the section on 'Sustainable Materials Sourcing.' While interesting, much of the performance for other areas such as, sustainable agriculture and land use, high-performance fertilizers, conservation, biodiversity, and supplier initiatives is anecdotal - metrics should be developed.

Details and metrics on the 'Reduction of Food Loss and

Waste' topic are largely lacking. The discussion on this topic feels like an after-thought compared to the depth of the 'Food Resources' topic. Further, performance towards the 2025 target to reduce upstream and in-house food waste by 50% was regressive this year with a 28% increase in food loss. In the future, I'd expect to see increased focus on this important area and progress towards improvement.

### Sustainability Data Book components: Global Sustainability

The 'Global Sustainability' theme covers: 'Climate Change Adaptation and Mitigation' 'Contribution to a Circular Economy' 'Conservation of Water Resources' and 'Environmental Management'. The Ajinomoto Group's Environmental Impact Assessment Input/Output model now appears in the beginning of the 'Global Sustainability' theme, just after the performance targets. This helps frame the narrative for this section and provide a contextual overview of the environmental impacts. However, a brief narrative to accompany the chart and figures would be a helpful supplement.

The 2030 vision for zero plastic waste volume is a new ambitious addition to the 'Global Sustainability' targets and an elaboration on the section on 'Zero Waste and the 3Rs' from last year's report has been reformulated as 'Contributions to a Circular Economy.' Detailed waste metrics are also presented in the 2019 report, in line with the GRI standards.

Otherwise, targets remained similar to previous years with a few interesting variances. 2018 progress towards the fluorocarbon elimination target was not reported in this year's report, making it difficult to gauge progress on this metric. Conversely, the GHG reduction and water target performance charts now express in terms of reduction

rate of GHG volume/water usage vs. emission intensity/production volume unit, makes it easier to gauge performance toward the 2030 targets. While these normalized targets are ambitious, I'd like to see absolute targets – especially an SBT for GHG emissions. Further, while the section on Eco-label: Aji-na Eco and Hotto-suru Eco displays the number of products labeled, I would be interesting to know what percentage of the overall portfolio these figures represent.

Another positive, new addition to this section is the 'Environmental Management' section that consolidates information on the Group's management framework, including ISO 14001 certifications, assessments and audits, response to environmental laws and accidents, education. Perhaps this section should appear just after the impact assessment at the beginning of the section on 'Global Sustainability' though.

I was happy to see the endorsement of the TCFD Recommendations and evidence that the Group is making strides in following them, such as a first foray into Scenario Analysis. In future reporting I look forward to more detailed scenario analysis for various product lines and at different timescales.

### Sustainability Data Book components: Business Foundation

The section on 'Business Foundation' is accompanied by an exemplary set of metrics dashboards, that now appears in the SDB 2019 Appendix 2 and can also be downloaded separately as a PDF or in Excel format. The breath of issues, policies, processes, and programs covered is very extensive and nicely organized in terms of 'Diverse Talent' 'Strong Corporate Governance' and 'Preparation for Intense Global Competition.'

Discussions on corruption prevention, fair business practices, appropriate competitive behavior, and proper use and management of intellectual property, now appear in the 'Business Foundation' theme, as opposed to in the 'Food

Resources and Global Sustainability' theme, which makes more sense as an organizing principle.

Business Foundation targets and metrics are the same as last year, and solid progress is being made in certain areas. The 2020 target for average annual working hours was achieved in 2018, two years early! In 2018, the ratio of locally hired overseas executives declined, but the ratio of female managers increased to - 23% exceeding the 2020 target. In the future, I'd like to see more targets around the topics of 'Strong Corporate Governance' and 'Preparation for Intense Global Competition.'

### Perspective from Asia

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#### Disclosure on sustainability in general

While this is the first time for me to review the Ajinomoto Group's reports, I have read hundreds of others in different capacities for various projects in the past. The disclosure of sustainability-related issues of Ajinomoto Group such as the Integrated Report and the Sustainability Data Book, and on the website, is as nearly exhaustive as I have seen anywhere.

Exhaustive can be good, but it can also raise questions. For example, the Report describes a half-dozen non-financial targets such as better nutrition, more eating together, smart cooking, and so on. Social issues are always challenging to measure, but one that seems particularly chancy is "more eating together." There may well be a creative angle upon which to quantify this claim, but if so, it is not intuitive. Try as the Data Book might, many will still question the validity of such a claim.

There are many more positives to detailed coverage than negatives, because thoroughness conveys the impression that the Ajinomoto Group is being forthright, as I'm sure is the case. But my guess is that even the Group devotee will find herself overwhelmed by the avalanche of data contained in the Data Book. That said, introductory one-page summaries for each of the four categories makes reading it more straightforward than might be expected for this much bulk.

Regarding the disclosure of sustainability-related issues on Ajinomoto Group's website, Integrated Report and Sustainability Data Book, the coverage cannot be faulted assuming the reader wants a very detailed look at Ajinomoto Group's inner workings. A disadvantage of presenting so much data is that it can be easy to get lost in the details

and overlook major trends along the way.

Whatever questions you may have about the Group's intangibles assets, the chances are that you will find the answers in either the Integrated Report, the accompanying Data Book, or the Ajinomoto Group's website. What needs improvement is that you might have to go to all three before you will find the information you're looking for. The three resources are not that well coordinated and have few hotlinks to assist. (The Data Book is organized around their material items but searching remains a challenge. Ajinomoto Group has, however created hotlinks from the GRI index to all their reports, including financials which can be very handy.)

And even if you do go to all three, your search won't be easy because the hard copy of the Integrated Report fairly screams for both an index and a glossary. The online format does have a glossary, but even there, the terms are for the most part narrowly food-related, so "MTP," "DINK," and "DEWK" don't show up. Obviously if you're reading in pdf format, you can find any terms you want. Not so for hard copies. Personally, I'm no fan of hard copies, but if your readers must have them, then they need to be useful: Ajinomoto Group should prepare indexes.



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## Global Review

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Perspective from Asia

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### Room for improvement on Integrated Report

As for the Integrated Report, on the whole the presentation is crisp. I liked the Q&A format for the President, who answered questions in the conversational, understandable style that characterizes the whole report. Well done.

On the other hand, I saw no explanation concerning the whys or wherefores of the involvement of stakeholders in anything except investor briefings. Some may consider this to be engaging a specific stakeholder group (the investors) but given that the meetings are one-way information exchanges, I would not characterize such an encounter as engaging them.

Nor did I come across a record of how the materiality conversations developed, or whether participants understood systems thinking well enough to grasp the interconnectivity of values, stakeholders, and the systems themselves. The Ajinomoto Group selection of materiality items did appear reasonable, but if the Group is to break out and rise from good to superb work, then they will need to invest time in capacity building.

They have already done a lot. Now that there are systems in

place to routinely capture the indicators needed, it is only a matter of fine-tuning the output.

I thought the Integrated Report showed a fair command of targets. Adjusting to an asset-light management style; organizing industry-wide logistics cooperation for greater efficiency, all around; and focusing on Ajinomoto Group's core brands, perhaps knifing the non-performers. There was discussion about responding to the need for quicker, more diverse food offerings; a push to energize the online marketing channel; and a suggestion to reduce costs by consolidating several of the manufacturing elements.

The final chapter of the Integrated Report—“The Management Foundation Supporting ASV (Ajinomoto Group Creating Shared Value)” —beginning on page 47 summarized everything a discerning observer of the sustainability imperative needs to know. I recommend move that section to the beginning of the Report, to either just before or just after the President's interview. Either there, or anywhere other than where it is now, looking like an afterthought or an appendix.

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### Sustainability Data Book

The Sustainability Data Book, as I have intimated, is to be applauded for its detailed coverage of everything imaginable. If there are two or three important messages to be extracted from its entries, it would be helpful to do

so on behalf of the reader. Otherwise some might be left wondering how much light the reports really do shed on the organization and its activities.

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### Conclusion

I can say that, not having had the opportunity to read previous years' reports, because this one appears so complete. But it leaves me wanting more—more of an understanding of the character of the company, to be exact.

For when a company is described as having something for everyone, my experience tells me that the company may not stand for anything at all.

Eat Well, Live Well.



## Ajinomoto Group Sustainability Data Book 2019

### ■ Front Cover

The front cover reflects how the Ajinomoto Group is sustainably growing through ongoing innovation and investment in its six core businesses.

### ■ Inquiries

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# Ajinomoto Group Sustainability Data Book 2019

## Appendix 1 : Environmental Data

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- Reduction of greenhouse gas emissions
- Conservation of water resources
- 3Rs of waste

### Scope of the Environmental Data

The environmental data of this section covers Ajinomoto Co., Inc. and other group companies subject to the Ajinomoto Group Environmental Management as defined in the company's Environmental Regulations as of March 31, 2019. Performance statistics are for the 125 major business sites (3 reduced following site reorganization as well as factory dissolution and new construction), which substantially represent the environmental performance of the entire Ajinomoto Group under the consolidated financial accounting system.

## Environmental Data

### Reduction of greenhouse gas emissions

■ Total greenhouse gas emissions calculated using applicable IEA (International Energy Agency) CO<sub>2</sub> emission factors

(t-CO<sub>2</sub>e)

		FY2014	FY2015	FY2016	FY2017	FY2018
<b>Scope 1 emissions</b>		1,167,816	1,251,654	1,270,429	1,244,676	1,196,969
	Japan	264,381	319,751	345,958	361,142	327,345
	Asia/Africa	494,811	528,823	550,319	519,025	526,405
	Europe	47,782	63,300	48,589	46,282	39,021
	North America	170,837	188,438	204,301	228,284	219,337
	South America	161,780	123,918	99,319	66,896	67,231
	China	28,225	27,424	21,943	23,047	17,629
<b>Scope 2 emissions (market-based method)</b>		1,143,380	1,101,529	1,121,770	1,072,248	1,015,723
	Japan	138,555	138,341	143,670	136,505	141,952
	Asia/Africa	415,330	427,826	415,967	441,259	427,389
	Europe	259,453	176,291	210,988	182,140	184,253
	North America	202,341	248,114	235,069	213,247	193,766
	South America	74,185	66,905	62,139	60,420	40,308
	China	53,516	44,052	53,937	38,677	28,056
<b>Scope 1,2 emissions</b>		2,311,196	2,353,183	2,392,199	2,316,924	2,212,692
	Japan	402,936	458,092	489,628	497,647	469,297
	Asia/Africa	910,141	956,649	966,286	960,284	953,794
	Europe	307,235	239,591	259,577	228,422	223,275
	North America	373,178	436,552	439,370	441,531	413,103
	South America	235,965	190,823	161,458	127,316	107,538
	China	81,741	71,476	75,880	61,724	45,686
<b>Scope 1 emissions</b>		-	-	1,270,429	1,244,676	1,196,969
Business activities	Production	-	-	-	-	974,641
	Transportation	-	-	-	-	25,976
	Others (office, sales, R&D, etc.)	-	-	-	-	196,352
Business division	Food products	-	-	333,215	344,819	347,927
	AminoScience	-	-	937,214	899,857	849,041
<b>Scope 2 emissions (market-based method)</b>		-	-	1,121,769	1,072,248	1,015,723
Business activities	Production	-	-	-	-	821,352
	Transportation	-	-	-	-	9
	Others (office, sales, R&D, etc.)	-	-	-	-	194,362
Business division	Food products	-	-	311,526	323,576	379,571
	AminoScience	-	-	810,243	748,672	636,152

## Environmental Data

### Total greenhouse gas emissions calculated based on internal CO<sub>2</sub> emission factors

	FY2005 (Base Year)	FY2014	FY2015	FY2016	FY2017	FY2018
Greenhouse gas emissions (kilo tons)	2,357	2,211	2,234	2,330	2,299	2,310
Greenhouse gas emission volume vs. emission intensity (per ton of product)	1.31	0.94	0.88	0.88	0.86	0.88
Reduction rate	-	28%	33%	33%	35%	33%
Reference value: Total amount of production (kilo tons)	1,800	2,347	2,532	2,657	2,684	2,627

### Ajinomoto Group products carbon footprint

Product	Production plant	CFP values <sup>[1]</sup> (per kg of product)	CFP values per serving <sup>[2]</sup>
(1) HON-DASHI®	Kawasaki Plant, Ajinomoto Food Manufacturing Co., Ltd.	14.08 kg-CO <sub>2</sub> e	-
(2) Ajinomoto 味の素 Consommé (Granules)	Takatsu Plant, Ajinomoto Food Manufacturing Co., Ltd.	6.87 kg-CO <sub>2</sub> e	-
(3) Knorr® Cup Soup Tsubu Tappuri Corn Cream	Takatsu Plant, Ajinomoto Food Manufacturing Co., Ltd.	7.08 kg-CO <sub>2</sub> e	-
(4) Ajinomoto 味の素 Shirogayu 250 g	Takatsu Plant, Ajinomoto Food Manufacturing Co., Ltd.	0.81 kg-CO <sub>2</sub> e	-
(5) Cook Do® Hoikoro	Kawasaki Plant, Ajinomoto Food Manufacturing Co., Ltd.	2.95 kg-CO <sub>2</sub> e	1.21 kg-CO <sub>2</sub> e per serving (approx. 700 g)
(6) Cook Do® Kyo-no Oozara Butabara Daikon	Shizuoka Plant, Ajinomoto Food Manufacturing Co., Ltd.	2.31 kg-CO <sub>2</sub> e	2.90 kg-CO <sub>2</sub> e per serving (approx. 1 kg)
(7) Nabe Cube Toridashi Umashio	Kunneppu Plant, Ajinomoto Food Manufacturing Hokkaido Co., Ltd.	8.54 kg-CO <sub>2</sub> e	-
(8) Blendy® Stick Café au Lait (coffee mixes)	AGF Suzuka, Inc.	4.85 kg-CO <sub>2</sub> e	-
(9) Lemon and Basil Fried Chicken (frozen foods)	Kyushu Plant, Ajinomoto Frozen Foods Co., Inc.	5.84 kg-CO <sub>2</sub> e	-
(10) Yamaki Mentsuyu (400ml and 500ml)	Daini Plant and Minakami Plant, YAMAKI Co., Ltd.	2.02 kg-CO <sub>2</sub> e	-
(11) Masako® Ayam (11g)	Mojokerto Factory, PT Ajinomoto Indonesia	2.49 kg-CO <sub>2</sub> e	-
(12) Aji-ngon® Pork flavor seasoning (400g)	Long Thanh Factory, Ajinomoto Vietnam Co., Ltd.	2.68 kg-CO <sub>2</sub> e	-
(13) Ros Dee® Pork (75g)	Nong Khae Factory, Ajinomoto Thailand Co., Ltd.	3.15 kg-CO <sub>2</sub> e	-

[1] Carbon footprint (CFP) values in the report are calculated in accordance with PCR No. PA-CG-02 from the Japan Environmental Management Association for Industry. The calculation system and the results are backed by a third-party assurance statement from Lloyd's Register Quality Assurance Limited, based on the ISO/TS 14067 standard.

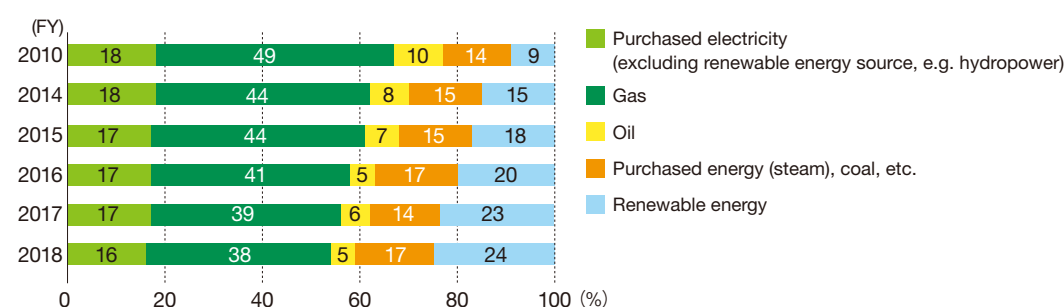
[2] CFP values of ingredients including vegetables and meat are included.

### Energy input

	FY2014	FY2015	FY2016	FY2017	FY2018
Energy input (TJ) <sup>[3]</sup>	36,356	37,362	39,105	39,589	38,468
Energy input intensity of production (per kilo tons of product)	15.5	14.8	14.7	14.8	14.6

[3] TJ: terajoule, T (tera) = 10<sup>12</sup>. The joule conversion factors officially published in 2005 have been used.

### Energy use (thermal equivalent)





## Environmental Data

### Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions (tons)

	FY2018
NOx	9,421
SOx	10,701
Soot and dust	1,827
CFCs, HCFCs, HFCs	11

## Conservation of water resources

### Water use

(megaliters)

	FY2005 (Base Year)	FY2014	FY2015	FY2016	FY2017	FY2018
<b>Total water withdrawal <sup>[1]</sup></b>	221,863	78,653	76,912	74,041	74,844	69,892
Fresh surface water	180,363	28,422	25,272	23,559	24,433	20,672
Brackish surface water/ seawater	0	0	0	0	0	0
Fresh groundwater-renewable	0	0	0	0	0	0
Fresh groundwater-non-renewable	-	16,293	16,972	15,859	16,371	15,076
Produced water	0	0	0	0	0	0
Municipal water (including industrial water)	41,500	33,938	34,668	34,623	34,041	34,144
<b>Water usage vs. production volume unit (per ton of product)</b>	123	34	30	28	28	27
Reduction rate	-	73%	75%	77%	77%	78%
<b>Reference value: Production volume (kilo tons)</b>	1,800	2,347	2,532	2,657	2,684	2,627
<b>Total water discharge</b>	201,300	66,386	60,873	59,701	60,464	55,800
Fresh surface water	53,000	29,897	27,418	27,419	29,813	29,231
Brackish surface water/ seawater	0	0	0	0	0	0
Groundwater	0	0	0	0	0	0
Third-party destinations	4,300	9,224	10,171	9,909	9,827	9,540
<b>Total water use recycled or reused</b>	144,000	27,265	23,284	22,373	20,824	17,029
<b>Proportion of water use recycled or reused</b>	65%	35%	30%	30%	28%	24%
<b>Total water use</b>	20,563	12,267	16,039	14,340	14,380	14,092
<b>BOD (tons)</b>	550	304	268	269	294	312
<b>Nitrogen (tons)</b>	3,200	404	424	445	394	501

[1] Water withdrawals are disclosed based on volumes measured/invoiced in accordance with national or regional laws or converted from pump power use/pipe water speed. Water discharge volume and quality are both disclosed based on accumulated values measured in accordance with national or regional law.

## Environmental Data

### 3Rs of waste

#### Volume of waste and by-products and resource recovery ratio

(tons)

	FY2014	FY2015	FY2016	FY2017	FY2018
<b>Hazardous waste (waste acid, waste alkali, waste oil, cinder)</b>					
Generation	60,304	60,431	59,217	59,162	69,991
Recycling	59,719	59,457	58,890	58,862	68,422
Incineration	35	14	54	24	40
Landfill	550	959	274	276	1,529
<b>Non-hazardous waste</b>					
<b>By-products</b>					
Generation	2,295,432	2,435,544	2,337,284	2,395,249	2,194,566
Composting	2,293,952	2,434,281	2,335,451	2,394,976	2,194,470
Incineration	144	0	0	0	0
Landfill	1,336	1,263	1,832	273	96
<b>Others</b>					
Generation	132,462	140,464	178,861	178,989	174,651
Recycling	123,330	131,258	163,414	161,455	153,388
Incineration	1,116	1,293	3,021	2,066	2,821
Landfill	8,016	7,913	12,426	15,467	18,442
<b>Total generation</b>	<b>2,488,199</b>	<b>2,636,439</b>	<b>2,575,361</b>	<b>2,633,400</b>	<b>2,439,208</b>
<b>Total recycling</b>	<b>2,477,001</b>	<b>2,624,997</b>	<b>2,557,755</b>	<b>2,615,293</b>	<b>2,416,280</b>
<b>Total waste</b>	<b>11,197</b>	<b>11,442</b>	<b>17,606</b>	<b>18,107</b>	<b>22,928</b>
<b>Resource recovery ratio</b>	<b>99.5%</b>	<b>99.6%</b>	<b>99.3%</b>	<b>99.3%</b>	<b>99.1%</b>

# Ajinomoto Group Sustainability Data Book 2019

## Appendix 2 : Personnel and Labor-Related Data

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- Employee statistics
- Work-life balance (WLB) -related programs (Ajinomoto Co., Inc. only)
- Frequency of serious accidents and accidents with absence
- Number of hotline reports

### Scope of the personnel and labor-related data

The personnel and labor-related data of this section covers Ajinomoto Co., Inc. and its consolidated subsidiaries (28 in Japan, 73 overseas) as of March 31, 2019.

### Definitions of terms

Employees : Directly employed management, non-management and contract staff  
Temporary staff : Directly employed contract and temporary staff, including part-time employees  
Executive : Directors, auditors, advisors, executive officers or a higher position (excluding part-timers)  
Management : Employees in the position of section manager, a position equivalent to section manager, or a position higher than section manager (excluding executives)

## Personnel and Labor-Related Data

### Employee statistics

#### Number of Ajinomoto Group employees

(persons)

	FY2016			FY2017			FY2018		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
<b>Ajinomoto Group total</b>	43,001	-	-	44,606	-	-	44,199	-	-
<b>Employees</b>	32,734	23,607	9,127	34,452	24,550	9,902	34,504	24,467	10,037
Management	4,488	3,626	862	4,921	3,861	1,060	4,911	3,804	1,107
Non-management	28,170	19,931	8,239	29,460	20,639	8,821	29,521	20,607	8,914
Contract staff	76	50	26	71	50	21	72	56	16
<b>Temporary staff</b>	10,267	-	-	10,154	-	-	9,695	-	-
<b>Japan</b>	15,595	-	-	15,059	-	-	14,991	-	-
<b>Employees</b>	9,450	7,281	2,169	9,213	6,999	2,214	9,219	6,913	2,306
Management	2,278	2,118	160	2,221	2,056	165	2,203	2,024	179
Non-management	7,096	5,113	1,983	6,921	4,893	2,028	6,944	4,833	2,111
Contract staff	76	50	26	71	50	21	72	56	16
<b>Temporary staff</b>	6,145	-	-	5,846	-	-	5,772	-	-
<b>Asia</b>	17,269	-	-	17,880	-	-	17,305	-	-
<b>Employees</b>	13,571	9,404	4,167	14,105	9,772	4,333	13,819	9,730	4,089
Management	1,153	820	333	1,532	981	551	1,597	1,008	589
Non-management	12,418	8,584	3,834	12,573	8,791	3,782	12,222	8,722	3,500
<b>Temporary staff</b>	3,698	-	-	3,775	-	-	3,486	-	-
<b>Europe and Africa</b>	2,887	-	-	3,899	-	-	3,972	-	-
<b>Employees</b>	2,479	1,931	548	3,450	2,437	1,013	3,557	2,458	1,099
Management	308	223	85	393	282	111	420	290	130
Non-management	2,171	1,708	463	3,057	2,155	902	3,137	2,168	969
<b>Temporary staff</b>	408	-	-	449	-	-	415	-	-
<b>The Americas</b>	7,250	-	-	7,768	-	-	7,931	-	-
<b>Employees</b>	7,234	4,991	2,243	7,684	5,342	2,342	7,909	5,366	2,543
Management	749	465	284	775	542	233	691	482	209
Non-management	6,485	4,526	1,959	6,909	4,800	2,109	7,218	4,884	2,334
<b>Temporary staff</b>	16	-	-	84	-	-	22	-	-
<b>Ref.: Ajinomoto Co., Inc.</b>	3,898	2,623	1,275	3,896	2,614	1,282	3,928	2,638	1,290
<b>Employees</b>	3,459	2,449	1,010	3,464	2,429	1,035	3,494	2,444	1,050
Management	1,078	985	93	1,071	974	97	1,098	994	104
Non-management	2,305	1,414	891	2,322	1,405	917	2,324	1,394	930
Contract staff	76	50	26	71	50	21	72	56	16
<b>Temporary staff</b>	439	174	265	432	185	247	434	194	240

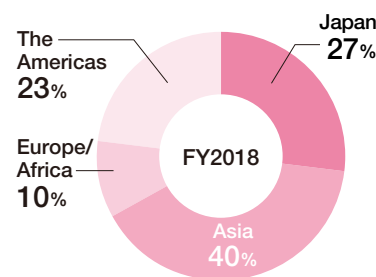
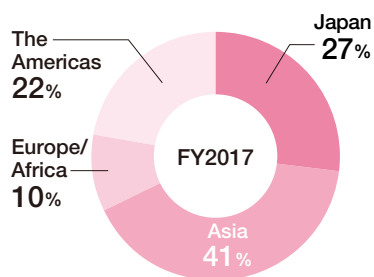
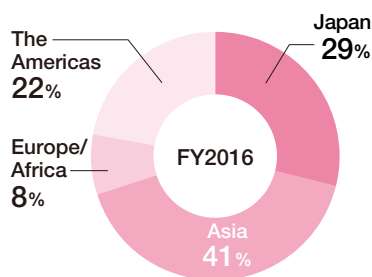
# Personnel and Labor-Related Data

## Ajinomoto Group employee ratio

Numbers in parentheses indicate male and female percentages.

	FY2016			FY2017			FY2018		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
<b>Ajinomoto Group total</b>	100%	-	-	100%	-	-	100%	-	-
<b>Employees</b>	76%	(72%)	(28%)	77%	(71%)	(29%)	78%	(71%)	(29%)
Management	10%	(81%)	(19%)	11%	(78%)	(22%)	11%	(77%)	(23%)
Non-management	66%	(71%)	(29%)	66%	(70%)	(30%)	67%	(70%)	(30%)
Contract staff	0%	(66%)	(34%)	0%	(70%)	(30%)	0%	(78%)	(22%)
<b>Temporary staff</b>	24%	-	-	23%	-	-	22%	-	-
<b>Japan</b>	100%	-	-	100%	-	-	100%	-	-
<b>Employees</b>	61%	(77%)	(23%)	61%	(76%)	(24%)	61%	(75%)	(25%)
Management	15%	(93%)	(7%)	15%	(93%)	(7%)	15%	(92%)	(8%)
Non-management	46%	(72%)	(28%)	46%	(71%)	(29%)	46%	(70%)	(30%)
Contract staff	0%	(66%)	(34%)	0%	(70%)	(30%)	0%	(78%)	(22%)
<b>Temporary staff</b>	39%	-	-	39%	-	-	39%	-	-
<b>Asia</b>	100%	-	-	100%	-	-	100%	-	-
<b>Employees</b>	79%	(69%)	(31%)	79%	(69%)	(31%)	80%	(70%)	(30%)
Management	7%	(71%)	(29%)	9%	(64%)	(36%)	9%	(63%)	(37%)
Non-management	72%	(69%)	(31%)	70%	(70%)	(30%)	71%	(71%)	(29%)
<b>Temporary staff</b>	21%	-	-	21%	-	-	20%	-	-
<b>Europe and Africa</b>	100%	-	-	100%	-	-	100%	-	-
<b>Employees</b>	86%	(78%)	(22%)	88%	(71%)	(29%)	90%	(69%)	(31%)
Management	11%	(72%)	(28%)	10%	(72%)	(28%)	11%	(69%)	(31%)
Non-management	75%	(79%)	(21%)	78%	(70%)	(30%)	79%	(69%)	(31%)
<b>Temporary staff</b>	14%	-	-	12%	-	-	10%	-	-
<b>The Americas</b>	100%	-	-	100%	-	-	100%	-	-
<b>Employees</b>	100%	(69%)	(31%)	99%	(70%)	(30%)	100%	(68%)	(32%)
Management	10%	(62%)	(38%)	10%	(70%)	(30%)	9%	(70%)	(30%)
Non-management	89%	(70%)	(30%)	89%	(69%)	(31%)	91%	(68%)	(32%)
<b>Temporary staff</b>	0%	-	-	1%	-	-	0%	-	-
<b>Ref.: Ajinomoto Co., Inc.</b>	100%	(67%)	(33%)	100%	(67%)	(33%)	100%	(67%)	(33%)
<b>Employees</b>	89%	(71%)	(29%)	89%	(70%)	(30%)	89%	(70%)	(30%)
Management	28%	(91%)	(9%)	27%	(91%)	(9%)	28%	(91%)	(9%)
Non-management	59%	(61%)	(39%)	60%	(61%)	(39%)	59%	(60%)	(40%)
Contract staff	2%	(66%)	(34%)	2%	(70%)	(30%)	2%	(78%)	(22%)
<b>Temporary staff</b>	11%	(40%)	(60%)	11%	(43%)	(57%)	11%	(45%)	(55%)

## Group employees by region



## Personnel and Labor-Related Data

### Ratio of locally hired overseas executives

(persons)

	FY2016	FY2017	FY2018
<b>Total overseas executives</b>	-	169	178
Local executives	-	65	73
Local executive ratio	50%	38%	41%

### Number of new hires, retention rate

(persons)

	FY2016			FY2017			FY2018		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
<b>Total number of new hires (new graduates + mid-career)</b>	7,072	-	-	6,882	-	-	7,303	-	-
Japan	356	-	-	384	-	-	387	-	-
Asia	4,558	-	-	4,662	-	-	4,183	-	-
Europe and Africa	189	-	-	376	-	-	2,261	-	-
The Americas	1,969	-	-	1,460	-	-	472	-	-
<b>Ref.: Ajinomoto Co., Inc.</b>	107	75	32	119	66	53	124	71	53
New graduates	64	42	22	85	45	40	87	49	38
Mid-career	43	33	10	34	21	13	37	22	15
Management	6	5	1	9	7	2	4	4	0
Non-management	37	28	9	25	14	11	33	18	15
<b>Retention rate (3years) for new graduates</b>									
Ajinomoto Co., Inc.	95.0%	93.5%	100.0%	95.7%	97.9%	90.9%	92.4%	91.5%	93.8%

### Number of retirees, turnover, reemployment

(persons)

	FY2016			FY2017			FY2018		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
<b>Total number of retirees</b>	7,674	-	-	6,867	-	-	7,330	-	-
Japan	422	-	-	352	-	-	361	-	-
Retired	154	-	-	151	-	-	138	-	-
Resigned for personal reasons	268	-	-	201	-	-	223	-	-
Overseas	7,252	-	-	6,515	-	-	6,969	-	-
<b>Ref.: Ajinomoto Co., Inc.</b>	118	89	29	99	82	17	116	86	30
Retired	60	48	12	51	46	5	51	46	5
Resigned for personal reasons	58	41	17	48	36	12	65	40	25
<b>Turnover<sup>[1]</sup></b>									
Ajinomoto Co., Inc.	1.6%	1.6%	1.7%	1.2%	1.2%	1.1%	1.6%	1.3%	2.3%
<b>Reemployed after retirement<sup>[2]</sup></b>									
Japan	164	-	-	145	-	-	111	-	-
<b>Ref.: Ajinomoto Co., Inc.</b>	35	-	-	28	-	-	28	-	-
Under reemployment program	4	0	4	4	0	4	7	0	7
Seniors (after retirement)	31	-	-	24	-	-	21	-	-
<b>Ref.: Number of employees registered in reemployment program (Ajinomoto Co., Inc.)</b>									
Employees registered	52	2	50	47	3	44	46	4	42
Newly registered	7	0	7	7	1	6	17	1	16

[1] Only includes employees resign for personal reasons [2] Japan only

## Personnel and Labor-Related Data

### Number of personnel with disabilities (Japan only)

	As of June 1, 2017	As of June 1, 2018	As of June 1, 2019
<b>Employees</b>	307.0	333.5	300.5
Ajinomoto Co., Inc.	88.0	90.0	91.0
Group companies <sup>[1]</sup>	219.0	243.5	209.5
<b>Percentage of workforce rate</b>	2.07%	2.21%	2.23%
Ajinomoto Co., Inc.	1.91%	1.95%	2.06%
Group companies <sup>[1]</sup>	2.14%	2.33%	2.31%

[1] For group companies in Japan, numbers refer to 17 companies with 45.5 or more regular workers, among the 27 consolidated subsidiaries in Japan, and a special-purpose subsidiary Ajinomoto Mirai Co., Ltd.

### Age, years of employment, salary

	FY2016			FY2017			FY2018		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
<b>Average age</b>									
Ajinomoto Co., Inc.	43.0	43.7	40.9	43.1	44.0	41.1	43.6	44.4	41.5
Group companies in Japan	41.2	-	-	42.6	-	-	42.0	-	-
Overseas Group companies	36.6	-	-	36.7	-	-	33.5	-	-
<b>Average years of employment</b>									
Ajinomoto Co., Inc.	19.4	20.0	17.8	19.6	20.2	17.9	19.9	20.6	18.1
Group companies in Japan	13.9	-	-	13.2	-	-	12.8	-	-
Overseas Group companies	8.9	-	-	8.9	-	-	7.6	-	-
<b>Average annual salary<sup>[2]</sup> (thousand yen)</b>									
Ajinomoto Co., Inc.	9,525	-	-	9,458	-	-	9,823	-	-

[2] Average for employees (excluding contract staff)

### Working hours (Ajinomoto Co., Inc. only)

	FY2016			FY2017			FY2018		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
<b>Average annual working hours</b>	1,916	-	-	1,842	-	-	1,820	-	-
<b>Average paid leave days</b>	17.0	-	-	16.6	-	-	16.3	-	-
<b>Paid leave utilization rate</b>	87.6%	-	-	86.2%	-	-	84.3%	-	-

### Education and training (Ajinomoto Co., Inc. only)

	FY2016	FY2017	FY2018
<b>Annual expenditures for education and training</b>	504	511	513

### Freedom of Association (Ajinomoto Co., Inc. only)

	FY2016	FY2017	FY2018
<b>Ratio of employees represented by an independent trade union</b>	-	-	61.60%

## Personnel and Labor-Related Data

### Work-life balance (WLB) -related programs (Ajinomoto Co., Inc. only)

Program		Details
Anywhere office		Allows employees to work on eligible tasks at home or at a satellite office up to 4 days per week when approved by the Company.
Super flextime		Flextime system without setting core time, or a time zone in which working is required, aimed at supporting efficient fulfillment of work duties and improving WLB.
Hourly paid leave system		Allows employees to take paid leave of up to 40 hours per year in hourly units.
Child care leave system		Allows employees with children who have not yet entered junior high school to take up to 10 days of childcare leave per fiscal year per child.
Nursing care leave system		Allows employees to take leaves for 10 days per eligible family member (20 days if there are 2 or more eligible family members)
Volunteer leave system		Allows employees to take volunteer leave of up to 8 days per fiscal year in case he or she is qualified for volunteer work by an NPO, social welfare foundation, or other organization.
WLB leave system		Allows employees to take 3 consecutive days of leave separate from ordinary paid leave (once per year).
Refreshment leave system		Allows employees to take rejuvenation leave of 9, 16, 30, and 16 days one time in the age ranges of 25–32, 33–40, 41–48, and 49–56, respectively.
WLB short working hours system	Short time work for childcare	Allows employees to take leave up to 2 hours and 30 minutes per day until the child enters the 4th grade of elementary school.
	Short time work for nursing care	Allows employees to take leave up to 2 hours and 30 minutes per day to provide care for certain family members until such care is no longer needed.
Area application system		Allows employees to request to work in a specific area due to childcare, family care, or other applicable reasons (global employees: no transfer, regional employees: transfer to area different from that when hired).
WLB temporary retirement system	Temporary retirement for child care	Allows employees to take leave until the last day of April following the child's 1st birthday. A total of 15 days paid leave is provided.
	Temporary retirement for nursing care	Allows employees to take leave up to 1 year to care for a spouse, parents, or family within the 2nd-degree of kinship whom the employee supports.
	Temporary retirement for infertility treatment	Allows employees to take leave once in principle, up to 1 year, to receive advanced reproductive therapy.
	Temporary retirement for accompanying spouse on job transfer	Allows employees to take leave once, for a period between 1 and 3 years, to accompany their spouse on a job transfer that requires the spouse to change residence.
Re-employment system		Allows employees to register for re-employment in the event that retirement was unavoidable due to childbirth and newborn care, family and child care, or relocation because of marriage or spouse's job transfer.



## Personnel and Labor-Related Data

### Employee usage of WLB-related programs (Ajinomoto Co., Inc. only)

	FY2016			FY2017			FY2018		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
<b>Parenting leave program</b>									
<b>Number of users</b>									
Parenting leave	123	10	113	149	27	122	122	23	99
Number of employees with the right to take childcare leave	-	-	-	-	-	-	174	124	50
Part-time parenting and work	182	0	182	157	0	157	154	0	154
Childcare leave	39	3	36	25	2	23	18	1	17
<b>Usage ratio</b>									
Parenting leave	-	25.5%	100.0%	-	21.3%	100.0%	-	18.5%	100.0%
Part-time parenting and work	-	-	-	-	-	-	-	-	-
Childcare leave	-	-	-	-	-	-	-	-	-
Average parenting leave usage days	-	27	332	-	16	288	-	27	365
Reinstatement rate	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Retention rate	-	-	-	-	-	-	-	100.0%	100.0%
<b>Other WLB-related programs</b>									
<b>Number of users</b>									
Nursing care leave	14	5	9	14	5	9	12	1	11
Nursing care temporary retirement	0	0	0	1	0	1	3	1	2
Part-time family care and work	1	0	1	1	0	1	-	-	-
Accumulated paid leave	104	41	63	85	32	53	79	22	57
Volunteer leave	55	-	-	42	-	-	36	-	-
Rejuvenation leave	155	-	-	142	-	-	160	-	-

## Frequency of serious accidents and accidents with absence

### Frequency of serious accidents and accidents with absence, and number of accident victims<sup>[1]</sup>

	FY2014	FY2015	FY2016	FY2017	FY2018
No. of people (with absence)	102	108	119	110	134
No. of people (serious)	24	26	16	23	16
Lost-time injury frequency rate	1.25	1.26	1.37	1.39	1.49
Lost-workday rate	0.027	0.097	0.054	0.021	0.018

[1] Data from Ajinomoto Foods North America, Inc. and Ajinomoto Istanbul Food Industry and Trade Ltd. Co. were added in fiscal 2017.

## Personnel and Labor-Related Data

### Major accidents / incidents<sup>[1]</sup>

		FY2014	FY2015	FY2016	FY2017	FY2018
Number of caught-in accident victims People, serious accident victims in ( )	Japan	6 (4)	2 (1)	2 (1)	1 (1)	1 (0)
	Oerseas	3 (2)	3 (2)	3 (0)	9 (7)	7 (3)
	Total	9 (6)	5 (3)	5 (1)	10 (8)	8 (3)
Number of fall accident victims People, serious accident victims in ( )	Japan	6 (2)	18 (5)	24 (2)	14 (3)	19 (4)
	Oerseas	13 (3)	13 (0)	6 (1)	9 (1)	13 (0)
	Total	19 (5)	31 (5)	30 (3)	23 (4)	32 (4)
Number of low back pain incidents People, serious incidents in ( )	Japan	1 (0)	8 (0)	7 (0)	5 (0)	10 (0)
	Oerseas	-	-	-	2 (0)	5 (0)
	Total	-	-	-	7 (0)	15 (0)
Number of serious accidents (excluding commuting acci- dents) caught-in and fall accidents in ( )	Japan	8 (6)	13 (6)	8 (3)	6 (4)	9 (4)
	Oerseas	8 (5)	13 (2)	8 (1)	17 (8)	7 (3)
	Total	16 (11)	26 (8)	16 (4)	23 (12)	16 (7)
Number of serious commuting accidents	Japan	3	5	4	3	3
	Oerseas	22	13	5	16	10
	Total	25	18	9	19	13
Number of fatalities	Japan	0	1	0	0	0
	Oerseas	0	0	0	0	0
	Total	0	1	0	0	0

[1] Data from Ajinomoto Foods North America, Inc. and Ajinomoto Istanbul Food Industry and Trade Ltd. Co. were added in fiscal 2017.

### Number of hotline reports

	FY2016	FY2017	FY2018
<b>Number of hotline reports</b>	<b>69</b>	<b>71</b>	<b>98</b>
Human rights, harassment	33	28	47
Hiring, working condition	14	14	21
Quality, environment	1	1	1
Irregularity	2	2	1
Social manners, ethics	8	10	6
Proper job performance	6	13	20
Others	5	3	2