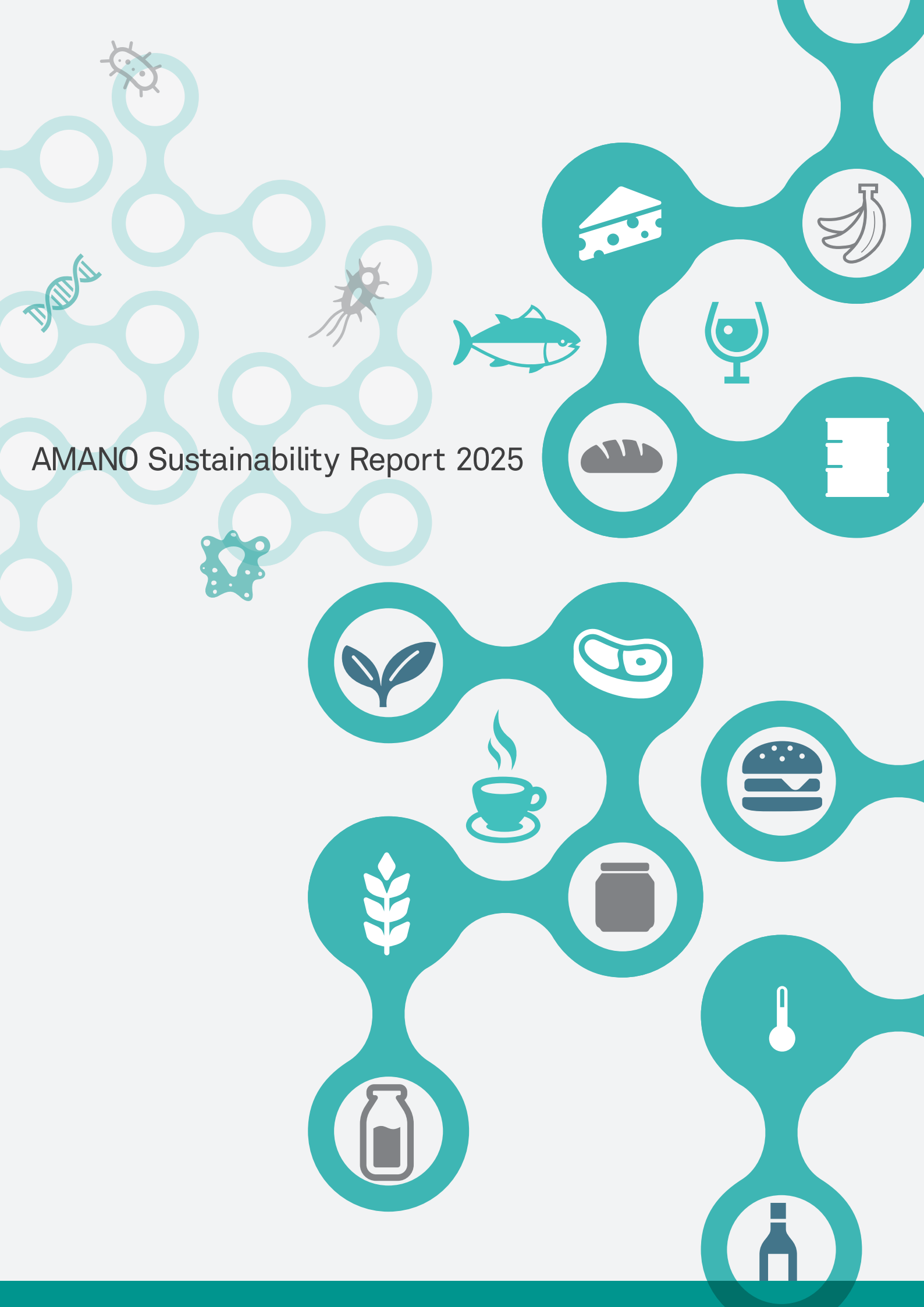


AMANO Sustainability Report 2025



The Amano Spirit

—The Words of Our Founder—

“Making the Intangible, Tangible”

Corporate Philosophy

“Jizen (慈善)”, the Spirit of giving and caring

Our actions – both as individuals and as an organisation – are guided by the Japanese principle of “Jizen”, which embodies a spirit of giving and caring. Through Jizen, we actively seek opportunities to make the world a better place, leveraging our capabilities and resources to benefit society at large. This altruistic vision compels us to channel our efforts towards developing solutions that uplift communities, safeguard the environment, and contribute to the greater good.

Pioneering Spirits

Our pioneering spirit fuels our commitment to push boundaries and shape industries through the unique combination of traditional know-how and advanced technology. This ethos empowers our team to approach every challenge with the goal of creating shared value for all our stakeholders, while enriching the communities and industries we serve.

Philosophy of Coexistence

We co-exist harmoniously with environment and local communities, fostering mutually beneficial partnerships with customers, suppliers, shareholders and each other, with the shared goal of continuously advancing society.

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Editorial Line

This report aims to communicate Amano Enzyme’s principles and initiatives for building a sustainable society to all stakeholders. Guided by our Sustainability Vision, which addresses today’s pressing social issues, we present our goals and initiatives in five key areas: Securing the future of food and health, Living in harmony with nature, Earning and maintaining public trust, Empowering a diverse workforce, and Practicing sound corporate governance.

Report Period

With a focus on our activities in fiscal year 2022, 2023, and 2024 (April 1, 2022–March 31, 2025), this report highlights our most recent key developments.

Date of Publication

August 2025

Company Information

Company Name: Amano Enzyme Inc.
Established: 1948
Founded: 1899

Business Activities: Manufacture and sale of enzyme agents for the pharmaceutical, food, and manufacturing industries, and for diagnostic reagents
Manufacture and sale of pharmaceuticals, veterinary medicines, and feed additives
Capital: 390 million yen
Number of Employees: 480

126 Years of History, 77 in Enzyme Business

Established in 1948, Amano Enzyme has consistently engaged in the research and production of enzymes for over 70 years, focusing on the functions of enzymes in nature to make them useful to people's lives.



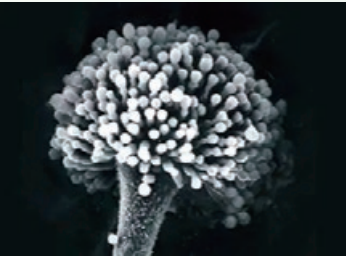
Ennosuke Amano



Genichi Amano



Motohiro Amano



Japanese *koji* mold

Founded
1899

Drugs for household
medicine distribution

Began
producing
enzymes
1948

Opened Central
Research Institute
1960

Opened
Nagoya Plant
1969

New & OTC
pharmaceutical
enzymes

Opened
Yoro Plant
1976

Expanded into Europe
(now AEE Ltd.)
1983

Expanded into the US
(now AEU Co., Ltd.)
1981

Shifted to
specializing
in enzymes
1996

“World No.1 Speciality
Enzyme Producer”

Changed name to
Amano Enzyme Inc.
2000

Opened Gifu R&D Center
(now Innovation Center)
2000

Re-expanded into China
(AEMC Ltd.)
2007

Expanded into Thailand
(AEAP Co., Ltd.)
2018

Speciality Enzymes
for Every Industry
2024

Started a household
medicine distribution
business
1899



First line of products

1899	Ennosuke Amano started a household medicine distribution business in Japan
1928	Established Amano Jizen-do Pharmaceuticals
1939	Genichi Amano expanded into China for increased OTC sales
1948	Established Amano Pharmaceutical Co., Ltd. and started production of a pharmaceutical enzyme (malt diastase)
1950	Opened Nishiharu Plant and started production of microbial digestive enzymes (biodiastase)
1957	Patented Amano-style aeration <i>koji</i> production instrument
1960	Established Central Research Institute
1961	Started production of food-processing enzymes
1969	Opened Nagoya Plant
1970	Started production of diagnostic enzymes
1976	Opened Yoro Plant

1980	Transferred pancreatin production technology to China (compensation trade)
1981	Established Amano International Enzyme Co., Ltd. → Established Amano Enzyme U.S.A. Co., Ltd. (AEU) in 1992
1983	Opened European office in Germany → Established Amano Enzyme Europe Ltd. (AEE) in the UK in 1992
1996	Shifted to specializing in enzymes—“Become the World’s No.1 Specialty Enzyme Producer”
2000	Opened Gifu R&D Center (now Innovation Center)
2000	Changed name to Amano Enzyme Inc.
2001	Acquired majority shares of Daiwa Kasei K.K. → Merged as Shiga Plant in 2013
2007	Established Amano Enzyme China Ltd. in Shanghai
2009	Established Amano Enzyme Manufacturing (China), Ltd. (AEMC)
2018	Merged Amano Enzyme China Ltd. in Shanghai into Amano Enzyme Manufacturing (China), Ltd. (AEMC)
2018	Established Amano Enzyme Asia Pacific Co., Ltd. (AEAP) in Thailand
2021	Opened Hanoi office in Vietnam



Amano Enzyme U.S.A. Co., Ltd.

“Working for a Sustainable Future, Unlocked by the Unlimited Possibilities of Enzymes”

Amano Enzyme Inc.
President

天野源之
Motoyuki Amano

Microorganisms with Unlimited Possibilities

Founded in 1899, Amano Enzyme began manufacturing enzymes in 1948 and has since been supplying them to markets around the world for over 70 years. Our innovations have grown from Japan’s long —standing traditions and deep connection to the natural world. Japan has long embraced a spirit of harmony with nature, where our ancestors recognized the invisible power of enzymes and wove it into everyday life through traditional foods like soy sauce, vinegar, and miso.

Today, biotechnology is gaining unparalleled attention as a vital driver of a sustainable future. We also see that enzymes, a core component of biotechnology, are receiving growing recognition.

Behind this rising interest lies the immense, untapped potential of microorganisms. It is estimated that humanity has discovered only 0.01% of all existing microorganisms. At Amano Enzyme, we produce enzymes primarily by cultivating these microorganisms, meaning that every new microbial discovery opens the door to new enzymatic possibilities. We believe this vast unknown holds potential far beyond what we can imagine.

Ever-Evolving Applications of Enzymes

Until now, our business has primarily focused on the food and medical sectors. However, we are currently working to expand that scope significantly. Of particular note is our expansion into new industrial fields. As the world seeks to move away from dependence on fossil fuels, enzymes are expected to play an invaluable role in achieving a circular economy. There is growing interest in their potential across a wide range of industries. In response to these global trends, and to help address pressing societal challenges, we launched a new business venture in 2024 called “Specialty Enzymes for Every Industry.”

While expectations for biotechnology continue to rise, challenges remain. For example, replacing all petrochemical products with bio-based alternatives is not easy from an economic standpoint. However, recent advances in computer science have driven significant improvements in analytical technologies, opening up new potential to address this issue. Additionally, thanks to progress in



machine learning and AI, it is now possible to design new enzymes and optimize microbial metabolic pathways. These technological innovations are unlocking new possibilities every day. While we embrace the latest technologies, we also cherish a distinctly Japanese approach—recognizing the inherent gifts of nature and striving to live in harmony with them. This is because nature harbors microorganisms capable of producing enzymes that humans never imagined. That’s why we believe that true disruptive innovation may actually come from traditional methods like breeding and microbial screening. Guided by this belief, we continue to embrace challenges that use approaches rarely seen anywhere else in the world. We are confident that our unwavering commitment to research and development will ultimately lead to major breakthroughs.

Global Expansion and the Strengths of Japan

As our business continues to grow and increase sales overseas, it becomes ever more important to integrate new technologies while simultaneously embracing Japan’s unique strengths. As a Japan-based company, we aim to bring together the best of both worlds to create unique value recognized internationally.

Japan has long embraced a philosophy of living in harmony with nature, and within that tradition lies a wealth of wisdom that can be harnessed for sustainability. For example, Ise Grand Shrine in Mie Prefecture is one of the most culturally and historically significant Shinto

sites in Japan. It embodies Japan's tradition of living in harmony with nature through the Shikinen Sengu ritual—a ceremony carried out for over a thousand years in which the shrine buildings are completely rebuilt every 20 years. The dismantled timber is reused in shrines across the country, while new trees intended for future reconstructions are planted and nurtured with a long-term vision spanning 200 years. This sustainable mindset—of engaging with nature, passing on skills and blessings to future generations, and promoting circular use of resources—offers timeless insights that continue to inspire our business today.

At Manshuin Temple in Kyoto, there is even a memorial mound dedicated to microbes, honoring the countless microorganisms that have been sacrificed for human advancement. Although invisible to the eye, microorganisms are living beings, and we hold a deep sense of gratitude for them at the core of everything we do. Such reverence, rooted in Buddhist and Shinto beliefs, sharpens our sensitivity to the subtle differences among microbial strains, enhancing our ability to discover and innovate.



Kinzuka — microbe memorial mound

This way of thinking holds even greater value in today's world, where the pursuit of a sustainable society is more important than ever. Rather than imposing solutions or relying solely on others, we believe that working together to address challenges fosters a mindset that can be especially effective in tackling the increasingly complex issues facing society.

Building the Future, One Day at a Time

Last year, we refined our corporate philosophy. However, updating words and phrasing alone is not enough. What truly matters is translating these principles into our daily efforts, using them as a compass to guide our behavior and decision-making.

To that end, deepening mutual understanding and collaboration with employees was essential. When each team member understands the company's direction and recognizes their individual role within it, both the company and its people grow. That growth then leads to further business developments that create value for society. We believe that by sincerely engaging with social challenges, the results necessary to sustain a business will naturally follow. To us, this is the reason for a business to exist.

In a time of constant change, it is more important than ever to remain anchored by a clear, unwavering philosophy. We must strike a balance between a long-term vision—looking 30 or even 50 years ahead—and fully dedicating ourselves to the tasks in front of us. Although these two attitudes may seem contradictory, we believe that maintaining both is the key to sustainable growth. We see future generations, though not yet born, as cherished beneficiaries of our efforts.

As the world undergoes rapid change, we at Amano Enzyme are using the power of enzymes to help tackle society's most pressing challenges. Drawing on the wisdom of global traditions and environments and blending them with new technologies, we are committed to creating a more sustainable future. We ask for your continued support and guidance as we work to create this future together.



Innovation Center

Enzymes — Explore Unlimited Possibilities

Amano Enzyme proudly marked its 120th anniversary in 2019, reflecting over a century of enzyme expertise.

Enzymes are a type of protein that supports the function of life in all living things.

Put simply, life cannot exist without enzymes.

These vital proteins are produced by living organisms, including bacteria and microorganisms found in soil and even in the human gut.

There are more than 8,000 known types of enzymes, each with its own unique function.

In essence, enzymes help break down, synthesize, or transform organic matter.

Enzymes play a powerful, often unseen role in enriching our lives.

A Tastier World



In the foods all around us, enzymes help make bread fluffy, meat tender, and seasonings more flavorful.

A Healthier World



Enzymes have, are, and will always be used in medicine as digestive agents to prevent upset stomachs, diagnose illnesses, and assist in creating regenerative medicines.

A More Convenient World



From enhancing the effectiveness of detergents and cosmetics to creating new materials for industrial products and purifying water, enzymes support many essential functions behind the scenes of our everyday lives.

At Amano Enzyme, we explore the microbial world in search of enzymes, from the deep sea and dense jungles to even the stratosphere, and deliver them as solutions to industries around the world.

This spirit has been nurtured and passed down through generations, deeply rooted in the culture and natural environment of Japan.

As seen in traditional foods like miso, soy sauce, and sake, Japan has long drawn on the invisible power of enzymes to live in harmony with nature, using limited resources wisely and enriching nature's blessings.

In this sense, Japan has been a biotechnology pioneer since ancient times.

Today, thanks to advancements in technology, the powerful potential of enzymes is gaining attention as a promising solution to a wide range of pressing challenges, including those related to food, energy, resources, and the environment.

Listening to the earth
and supported by the power
of nature,
we work every day to create
a better world for tomorrow
with enzymes.



Building on the enzyme technologies we have developed in the food and pharmaceutical fields, we are exploring a wide range of areas where enzymes can contribute to a more sustainable society—including agriculture, energy, materials, and environmental conservation.



Food × Medical Applications

Protein
Sugar
Fats & oils
Seasonings
Flavor
Fermentation

Digestion
Dietary supplement
Chiral synthesis
Diagnostics
Regenerative medicine

By leveraging our expertise in both the medical and food sectors, we develop creative, high-value applications while ensuring safety and quality through robust assurance practices.

Koji × Liquid Fermentation

Fungi

Yeast
Bacteria

With our technological strength in *koji* and liquid fermentation, we produce a diverse range of fermentation-derived products.

Modern × Classical Biotechnology

GMO
Protein engineering
Genome screening

Screening from natural samples
Classical mutagenesis

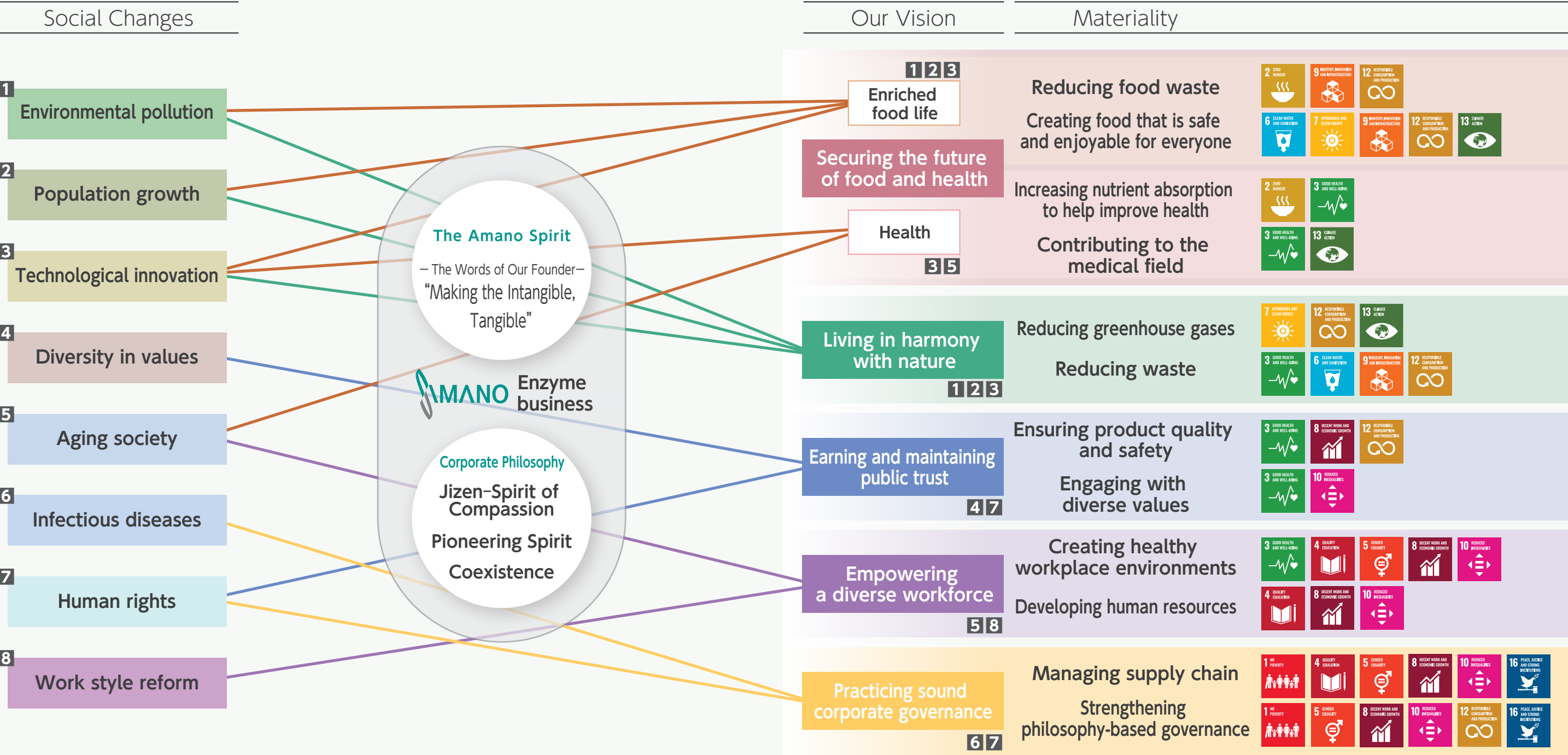
We utilize the latest biotechnology and traditional fermentation methods for R&D that generate new, unique value.

Shaping a Better Future for People and the Planet Through Enzymes

At Amano Enzyme, our business activities are rooted in our corporate philosophy of “Coexistence,” as we strive to support the sustainable development of society. The world is facing a multitude of social issues from environmental pollution to food shortages brought on by population growth. In order to fulfill our societal responsibilities through our enzyme business, we have identified five goals and issues, starting with social issues, to tackle. Through these efforts, we aim to contribute to achieving the SDGs and to realizing our guiding principle of coexistence.

Sustainable Development Goals(SDGs)

The SDGs are a set of international objectives adopted at the United Nations Summit in September 2015, as part of the 2030 Agenda for Sustainable Development that aims to build a more sustainable and equitable world by 2030. The agenda includes 17 goals and 169 specific targets and pledges to “leave no one behind.”



Securing the future of food and health

Creating the future of food and health with enzymes

With enzymes, we aim to create a world where everyone can enjoy a variety of foods and a healthy lifestyle. Enzymes bring out the best in food. They also reduce food waste by improving shelf life. Enzymes are also used in the fields of regenerative and preventive medicine, contributing to the extension of healthy life expectancy.



Living in harmony with nature

Reducing environmental impact to sustainably protect a prosperous future

Global warming and waste management are important issues that must be actively addressed by everyone across the globe. We are committed to reducing our environmental impact through our businesses in order to realize a sustainable society for the future. We will not only reduce greenhouse gas emissions and waste generated in the enzyme manufacturing process, but also contribute to the reduction of environmental impact through our enzyme products.



Earning and maintaining public trust

Providing safe and reliable products that go one step ahead

As a manufacturer, our mission is to provide customers with quality products that ensure safety and peace of mind. We offer timely information on product quality, allergens, religious compliance, and all other relevant details to achieve customer satisfaction. We also use cutting-edge technologies and approaches like AI and digital transformation to provide quality solutions for challenges occurring around the world.



Empowering a diverse workforce

Creating a thriving culture where everyone can thrive

True to the words of our founder that "people's brains are our greatest asset," we believe human resources are one of our most important management resources. To this end, we support the maintenance and improvement of our employees' well-being to create a work environment where each individual can flourish. We also promote work system reforms that enable a diverse range of employees to grow and demonstrate their skills.



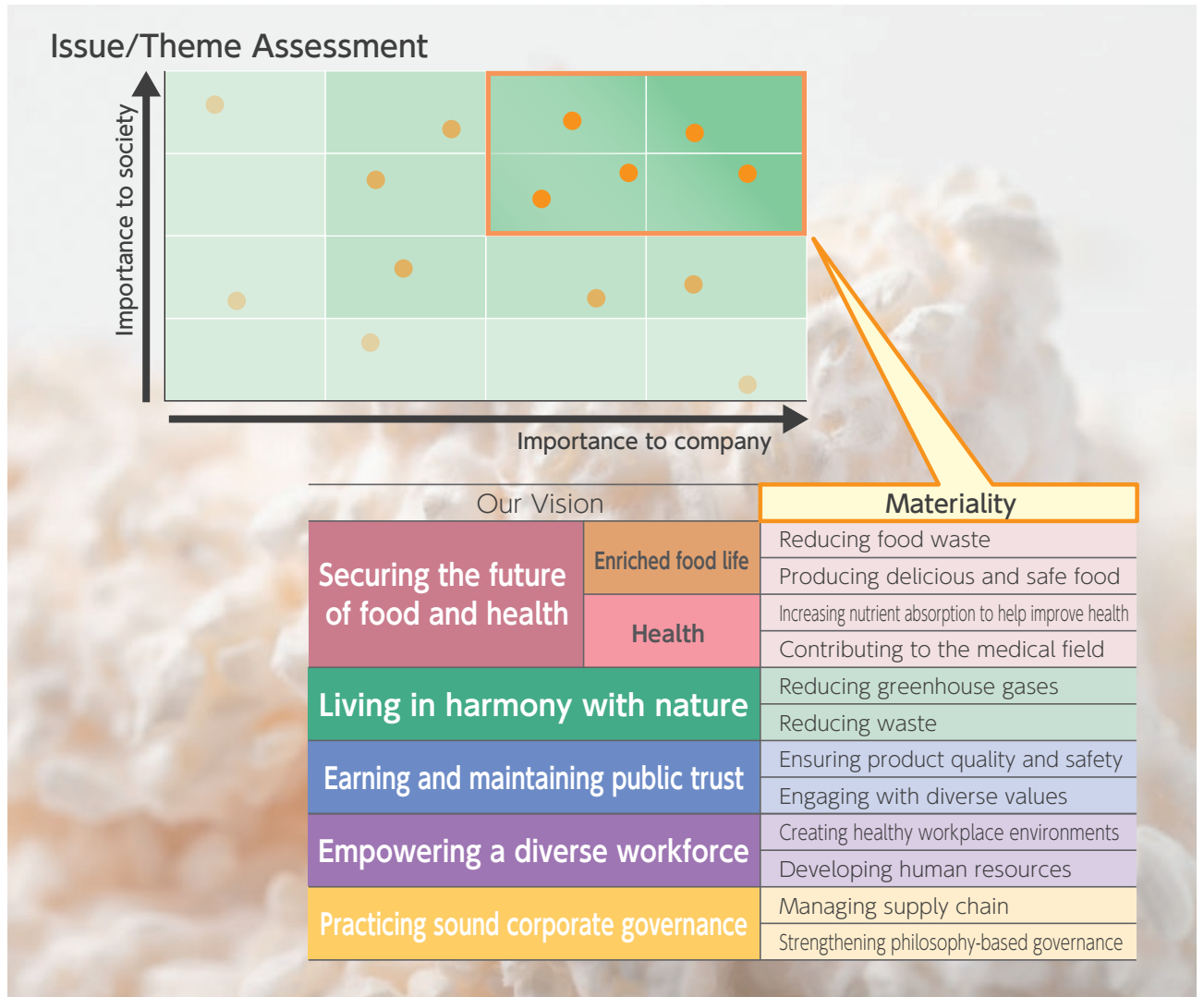
Practicing sound corporate governance

Conducting ethical business activities

In order to fulfill our corporate social responsibility, we pledge to comply with laws and regulations, as well as continue to be a company that is an upstanding corporate citizen that has the trust and confidence of customers by holding ourselves to high corporate ethical standards.



Materiality Decision Process



Securing the Future of Food and Health

Creating the Future of Food and Health with Enzymes

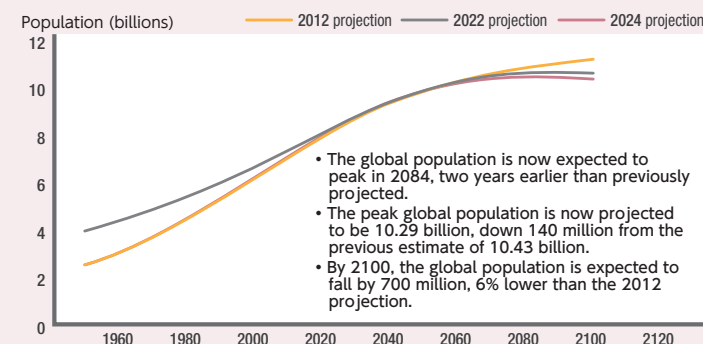
With enzymes, we aim to create a world where everyone can enjoy a variety of foods and a healthy lifestyle.

Enzymes bring out the best in food.

They also reduce food waste by improving shelf life.

Enzymes are used in the fields of regenerative and preventive medicine as well, contributing to the extension of healthy life expectancy.

Environmental Issues Affecting Our World



- The global population is projected to reach 9.7 billion by the 2050s. (UN World Population Prospects 2024)
- Around one-third of all food produced is lost or wasted globally. (Food and Agriculture Organization of the UN)
- Concerns over climate change's impact on food production are increasing the importance of adaptation and mitigation strategies.
- By 2050, the global population aged 60 and over will reach 2.1 billion. (WHO)
- Efforts to reduce food waste and promote upcycling are growing.

Amano Enzyme's Tasks and Goals to 2030

Enriched food life

Reducing food waste

Contributing to the reduction of food waste

Creating food that is safe and enjoyable for everyone

Ensuring that everyone can eat delicious, safe food

Health

Increasing nutrient absorption and contributing to improved health

Improving quality of life through the enjoyment of food

Contributing to the medical field

Realizing a society where everyone can lead a healthy life

Enriched food life

Reducing food waste



Improving shelf life
Contributing to upcycling

Some enzymes can be used in food processing to allow foods to remain fresher for longer. Enzymes can also play a role in reusing food waste, such as food processing waste, for other purposes or in other products. Amano Enzyme contributes to reducing food waste by extending the shelf life of food through enzymes and by supporting corporate upcycling.

Creating food that is safe and enjoyable for everyone



Improving production efficiency and physical properties of plant-based milk through the use of enzymes

Enzymes are used in food processing to improve taste, physical properties, and manufacturing efficiency. For example, they are used to bring out umami in vegetable proteins and to improve binding. In addition, chemical reactions with enzymes are known to have a lower environmental impact than chemical processes using other catalysts and reagents. We will continue to develop enzymes with the goal of allowing everyone to eat safe, delicious food, and strive to achieve a recycling society.

Health

Increasing nutrient absorption and contributing to improved health



Making healthy eating possible for all generations and improving quality of life through the enjoyment of food

For about 75 years, Amano Enzyme has been manufacturing and selling enzyme products for upset stomachs and indigestion, including diastase, biodiastase, and pancreatin. Amid global trends in aging populations and increasing health consciousness, we continue to research and develop enzyme products that enable people to enjoy delicious and healthy food.

Contributing to the medical field



Realizing a society where everyone can lead a healthy life



Enzymes for blood glucose sensors



Developing enzymes for regenerative medicine

Amano's enzymes also support people's lives through medicine. Some examples are their role in the precision diagnosis of substances in blood, such as blood sugar levels, and in improving cell recovery rates in regenerative medicine. Striving to realize a society in which everyone can lead a healthy life, we will continue to support the maintenance and improvement of people's health through enzymes.

Securing the Future of Food and Health

Creating the Future of Food and Health with Enzymes

Enriched food life

Preventing food waste

Most relevant SDGs



Diverse applications of enzymes

At Amano Enzyme, we are working to reduce food waste by harnessing the power of enzymes in a variety of ways.

For example, starchy foods tend to harden over time, especially when stored at low temperatures, due to a process called retrogradation. However, some enzymes can help slow this aging process. By using enzymes to alter the structure of starch, we can maintain the softness and flavor of foods for longer, effectively extending their shelf life.

Enzymes help turn food scraps, like bones or peels, into valuable resources, promoting efficient use of resources.

Through these enzyme-based solutions, we aim to support a more sustainable food industry.



Remains soft and flavorful for longer

Creating food that is safe and enjoyable for everyone

Securing a stable food supply

Most relevant SDGs



The global population is expected to reach 9.7 billion by 2050, raising serious concerns about food shortages. As ensuring a stable food supply and using resources more efficiently have become urgent priorities, enzymes are gaining attention as one promising solution.

For example, to address the growing shortage of cocoa beans, enzymes can be used to produce cocoa butter alternatives from palm oil, helping to stabilize the supply of chocolate.

Enzymes are also used in the extraction of coffee and tea, improving brewing efficiency and reducing waste by allowing fuller use of coffee beans and tea leaves.

Through such applications, improving processing efficiency and creating ingredient alternatives, enzymes support both a stable food supply and reduced environmental impact.



Enzymes are also used in meat and milk alternatives.

Health

Increasing nutrient absorption and contributing to improved health

Most relevant SDGs

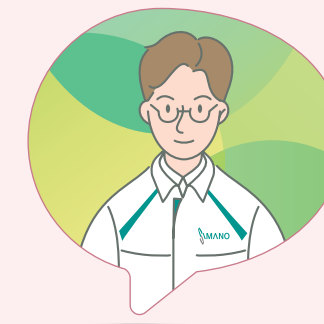


Balancing great taste with reduced salt and sugar

Lifestyle-related diseases are a growing global health issue, and improving daily eating habits is essential for prevention. While healthy meals are often thought to be bland, enzymes can help make food both nutritious and delicious.

Enzymes have the ability to enhance the natural flavors of food. By leveraging this property, we can reduce salt and sugar while maintaining taste. For example, enzymes can boost the umami of foods, making lower-sodium options just as tasty. They can also convert starches into natural sugars, helping reduce added sugar in foods.

Through enzyme-based food processing, we can make it possible to enjoy healthier meals without compromising flavor.



Contributing to the medical field

Enzyme technology in healthcare

Most relevant SDGs



Enzymes also play a vital role in the medical field. For example, they are used to measure blood glucose levels in people with diabetes. By reacting with glucose in the blood, enzymes enable accurate monitoring of blood sugar levels.

Enzymes are also widely used in pharmaceutical manufacturing. In particular, they are effective in producing pharmaceutical intermediates under milder conditions compared to traditional chemical synthesis, which helps reduce environmental impact.

In this way, enzymes contribute not only to improving patients' quality of life but also to more environmentally friendly pharmaceutical production.



Living in Harmony with Nature

Reducing Environmental Impact to Sustainably Protect a Prosperous Future

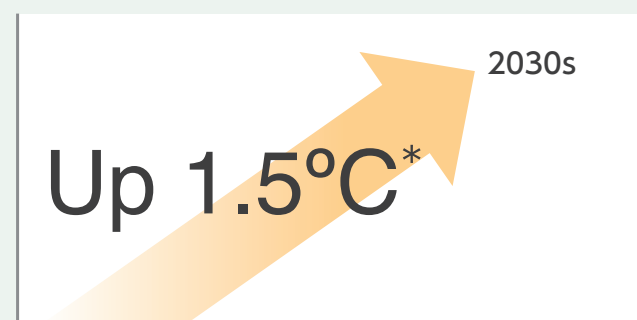
Global warming and waste management are important issues that must be actively addressed by everyone across the globe.

We are committed to reducing our environmental impact through our businesses in order to realize a sustainable society for the future. We will not only reduce greenhouse gas emissions and waste generated in the enzyme manufacturing process, but also contribute to the reduction of environmental impact through our enzyme products.

Related policies and external assessments:
Environmental Policy, ISO 14001
<https://www.amano-enzyme.com/en/corporate/csr/>
<https://www.amano-enzyme.com/en/whyamano/quality/>

Environmental Issues Affecting Our World

Global annual average temperature



Pre-Industrial Revolution

*From IPCC data

- Global average temperatures are likely to rise by 1.5°C by the 2030s. (IPCC)
- Increasing marine plastic pollution
- Rapid loss of biodiversity
- Ongoing deforestation and desertification



Amano Enzyme's Tasks and Goals to 2030

Reducing greenhouse gases

CO₂ emissions

Down 46% from 2020

Target for CO₂ emissions by 2030: 16,570t-CO₂ per year or less

Reduce waste

Waste emissions

Down 46% from 2020

Target for waste emissions by 2030: 5,230 t per year or less

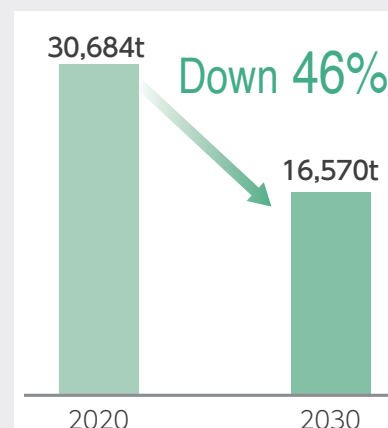
We are tackling the three below initiatives to reduce greenhouse gas emissions and waste:

- (1) Life cycle assessments to identify sources of environmental impact and areas for improvement
- (2) Development of new technologies and horizontal deployment of existing technologies
- (3) Reduction of environmental impact through ISO 14001

We will manage the progress of measures in an ISO 14001 environmental management system and will revise goals, set KPIs, and make changes to achieve the following goals.

Reducing greenhouse gases

Goals for 2030



(1) Life cycle assessments

- Identify sources of environmental impact and areas for improvement
- Identify the amount of energy and water used and CO₂ emissions

(2) Development of new technologies and horizontal deployment of existing technologies

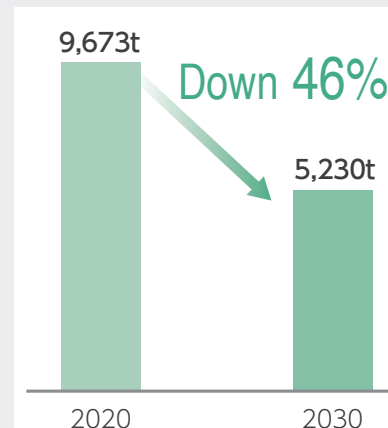
- Improve energy efficiency
- Reduce energy consumption
- Use more renewable energy
- Maximize productivity

(3) Reduction of environmental impact through ISO 14001

- Reduce energy consumption

Reduce waste

Goals for 2030



(1) Life cycle assessments

- Identify sources of environmental impact and areas for improvement
- Identify product waste emissions

(2) Development of new technologies and horizontal deployment of existing technologies

- Promote waste reduction and recycling
3R: Reduce, reuse, recycle
- Maximize productivity to effectively use natural resources

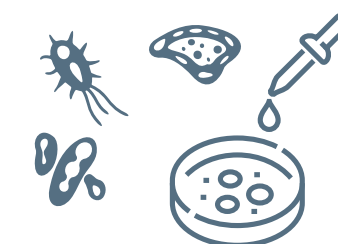
(3) Reduction of environmental impact through ISO 14001

- Reduce waste emissions

Topics Methods of Obtaining Microorganisms

Microorganisms used for enzyme production are obtained naturally and modified primarily using reactions similar to those found in nature.

Since its establishment 120 years ago, Amano Enzyme has grown with Japanese culture and traditions that cherish coexistence with nature. We also value the coexistence with nature in the use of microorganisms for enzyme manufacturing.



Living in Harmony with Nature

Reducing Environmental Impact to Sustainably Protect a Prosperous Future

Reducing greenhouse gases

Wastewater treatment at the Nagoya Plant

At our Nagoya Plant, Amano Enzyme operates a biogas recovery system using anaerobic wastewater treatment. Anaerobic treatment is a process in which microorganisms break down organic matter in the absence of oxygen, producing biogas (methane), which can be captured and used as an energy source.

In fiscal year 2023, the volume of recovered biogas increased by 129% compared to 2020. This recovered biogas is used within the plant as a fuel source for boilers, helping to replace fossil fuels and reduce CO₂ emissions.

In addition to biogas recovery, we have implemented measures such as equipment optimization and upgrading to high-efficiency systems. As a result, while total greenhouse gas emissions in fiscal year 2023 increased by 1.8% compared to fiscal year 2020 due to higher production volume, emissions per unit of sales decreased by 24.1% over the same period. Through continuous improvement, we remain committed to advancing our greenhouse gas reduction initiatives.

Most relevant SDGs

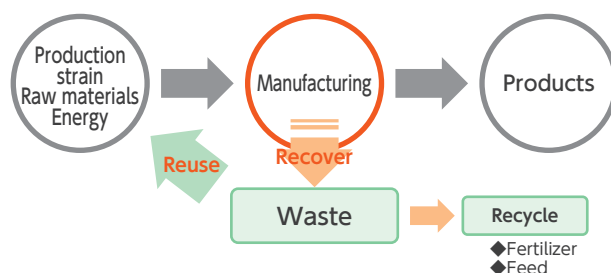


Reduce waste

Effective use of industrial waste

In 2023, we launched a new waste reduction initiative at our Yoro Plant. As part of this effort, surplus sludge generated during wastewater treatment is now processed, registered, and sold as fertilizer. This allows us to convert what was previously treated as industrial waste into a valuable agricultural resource. The initiative not only reduces waste disposal costs but also contributes to the development of a circular economy. Moving forward, we aim to further improve the quality of the fertilizer, expand its applications, and continue striving to reduce environmental impact while enhancing the sustainability of our business.

Most relevant SDGs



Earning and Maintaining Public Trust

Providing Safe and Reliable Products that Go One Step Ahead

As a manufacturer, our mission is to provide customers with quality products that ensure safety and peace of mind.

We offer timely information on product quality, allergens, religious compliance, and all other relevant details to achieve customer satisfaction. We also use cutting-edge technologies and approaches like AI and digital transformation to provide quality solutions for challenges occurring around the world.

Related policies and external assessments:

Product Safety Action Plan, FSSC 22000, ISO 13485, GMP for food additives
<https://www.amano-enzyme.com/en/whyamano/quality/>

Environmental Issues Affecting Our World



- Accelerated adoption of advanced quality control systems using AI and IoT
- Shift toward environmentally friendly raw materials and manufacturing processes
- Tightening of international food safety standards
- Increased demand for transparency in raw materials, manufacturing processes, and supply chains

Amano Enzyme's Tasks and Goals to 2030

Ensuring product quality and safety/Engaging with diverse values

Promotion of quality management
 Provision of safe and reliable products
 Provision of appropriate and prompt information

Efforts to accept diverse values

Ensuring product quality and safety/Engaging with diverse values

Goals for 2030



Maintaining and improving management systems

Promotion of quality management

We hold third-party certifications (FSSC 22000 and ISO 13485) and are committed to maintaining and continuously improving our quality management systems in all areas. We provide highly safe enzyme products that comply with the latest regulations and guidelines of different countries, as well as international standards. We are also committed to ensuring that our customers around the globe can use our enzyme products with peace of mind by meeting religious, vegan, and GMO/non-GMO requirements.

Goals for 2030



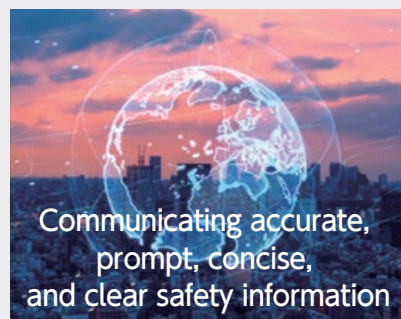
Manufacturing high-quality products and maintaining zero product recalls

Provision of safe and reliable products

Through proper manufacturing control in all processes from acceptance of raw materials to shipping of products, we strive to manufacture high-quality products and continue to achieve zero product recalls. We purchase all raw materials from suppliers who hold quality and supply safety assessments, and adhere to work procedures and customer agreements on manufacturing, testing, and inspection, to consistently manufacture products that meet the desired quality.

Additionally, we continue to improve manufacturing control by incorporating new technology, such as factory automation and IT, including AI and IoT, and tackle challenges daily to provide customers with even higher quality products.

Goals for 2030



Communicating accurate, prompt, concise, and clear safety information

Provision of appropriate and prompt information

We strive to provide information about products as quickly and reliably as possible to ensure trustworthy communication with customers. For the appropriate and effective management of product information, we are introducing technology into document management and quality reviews. We also collect real-time information on regulations in different countries, are looking into introducing big data analysis using AI, and strive to communicate accurate, prompt, concise, and clear safety information to customers over the internet.

Goals for 2030



Establishing Amano's own global quality assurance standards, AQS



Efforts to accept diverse values

As enzymes are used by customers around the world, providing accurate and up-to-date information on global regulations is becoming increasingly important.

To meet this need, we have reviewed how we manage and share product-related regulatory information and have begun exploring the implementation of a Product Lifecycle Management (PLM) system.

Featured

Amano Enzyme's Initiatives

Earning and Maintaining Public Trust Providing Safe and Reliable Products that Go One Step Ahead

Ensuring product quality and safety/Engaging with diverse values

Most relevant SDGs

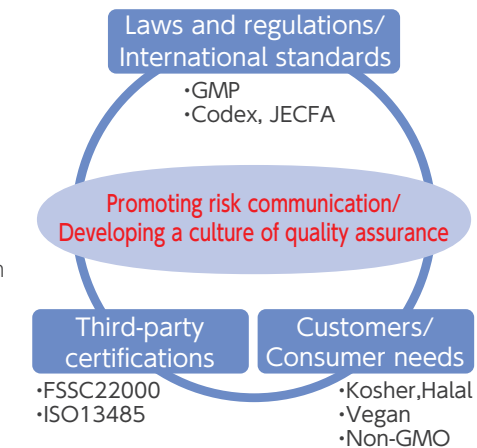


Amano's quality assurance system

We promote risk communication with external parties and actively share information on quality with our stakeholders. In addition, we embrace the open exchange of feedback.

Within the company, we work to enhance the development of a quality culture that fosters high ethical standards.

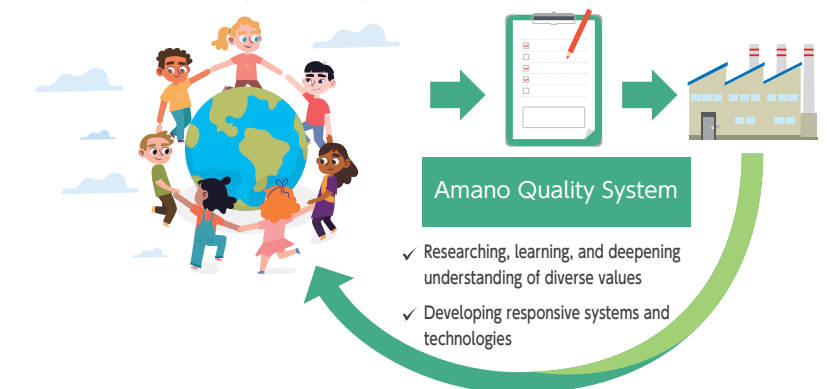
Working from these, we fulfill three initiatives that help us live up to the trust instilled in us by customers around the globe.



Establishment of Amano global quality assurance standards

"Bringing Smiles to People's Faces"

We will always make products that respect diverse values.



Topics Roundtable on Sustainable Palm Oil Certification

Palm oil is one of the most widely used vegetable oils in the world, valued for its high production efficiency. It is used in a wide range of applications, including food, cosmetics, detergents, and fuels, and global demand continues to rise each year. However, this growing demand has led to rapid plantation expansion, particularly in Southeast Asia, the main production region, and has caused serious environmental and social issues such as deforestation.

In response, Amano Enzyme has obtained the Roundtable on Sustainable Palm Oil Supply Chain Certification Standard (RSPO SCCS) certification for select products and is committed to sourcing sustainable materials for those certified products (as of 2024).

Empowering a Diverse Workforce

Creating a thriving culture where everyone can thrive

True to the words of our founder that “people’s brains are our greatest asset,” we believe human resources are one of our most important management resources.

To this end, we support the maintenance and improvement of our employees’ well-being to create a work environment where each individual can flourish. We also promote work system reforms that enable a diverse range of employees to grow and demonstrate their skills.

Related policies and external assessments:
Declaration of Health Management
<https://www.amano-enzyme.com/jp/corporate/health/>

Environmental Issues Affecting Our World



- Decreasing domestic work-force in Japan due to low birth rates and an aging population
- Expansion of diverse work styles in the post-COVID era
- Shifting skill demands driven by trends such as digitalization and sustainability
- Changing business environment due to technological advancement and globalization
- Promotion of diversity and inclusion

Amano Enzyme's Tasks and Goals to 2030

Creating healthy workplace environments

Maintenance and enhancement of employees’ physical and mental health

Creating workplace diversity

Developing human resources

Self-directed goal setting and continuous growth of employees

Support for top athletes

Creating healthy workplace environments

Goals for 2030



Through disease prevention, exercise habits, and mental health care, we promote health management and encourage the maintenance and improvement of employee health. By raising awareness for health checkups, holding regular health education seminars, and actively supporting club activities, we work to foster healthy habits in our employees. In addition, we created a mental health program to help improve employee communication through company trips, sports tournaments, company videos, and more.

Goals for 2030



Creating workplace diversity



- Nationality
- Disability
- Life stage, etc.

We are working to create a flexible work environment that embraces diverse values and human resources to allow each and every employee to fully exhibit their skills in a rewarding and fulfilling way. We are committed to actively taking on non-Japanese employees and improving the work environment so that people with disabilities can demonstrate their aptitudes. We have created multiple systems, such as childcare leave, eldercare leave, shorter working hours, and leave, to help employees balance work and life based on their personal stage in life. The rate of female employees taking childcare leave is 100%, and we are working to create an environment that facilitates male employees to take childcare leave as needed.

Developing human resources

Goals for 2030



While promoting work-life balance, we offer a variety of training opportunities and encourage employees to pursue self-directed learning and always grow.

We are systematically implementing training programs to help employees develop key business skills such as reading comprehension and problem identification. In addition, we are expanding our educational library, which includes employee-led seminars and in-house training videos.

Topics Response to Globalization

As the world continues to globalize, overseas sales make up over 70% of our sales, with this number growing each year.

Given these trends, we are actively working to improve the skills of individual employees, aiming to become a group of strong “individuals.”

As part of our efforts to support globalization, we are creating an environment where employees can grow independently. This includes expanding self-development programs and fully subsidizing correspondence courses for language learning.



Topics Support for Top Athletes

Amano Enzyme is committed to supporting sports development and promoting sports within the company.

Women’s épée fencer Haruna Baba currently works for Amano Enzyme. The whole company supports her athletic pursuits while learning from her mental toughness and team spirit. Her dedication and achievements as an athlete serve as powerful motivation for other employees as well.



Empowering a Diverse Workforce

Creating a thriving culture where everyone can thrive



Health management initiatives

With the goal of being a company of active people, we work to maintain and improve the health of our employees.
Since 2020, our efforts in health management have been recognized, and we have been certified as a Health & Productivity Management Outstanding Organization.

Most relevant SDGs



Sports Yell Company Certification

In recognition of its efforts in sports, Amano Enzyme has been certified by the Japan Sports Agency as a "Sports Yell Company" since 2021. We consider the maintenance and promotion of the physical and mental health of our employees and their families to be an important foundation for the company in achieving sustainable growth. We are actively incorporating the benefits of sports into our health management, including support for gym use and watching sports games.



Health Management Initiatives



Disease Prevention

- Routine health checks, special health checks, dental health checks
- Secondary health checks, specific health guidance/post-check-up guidance, interviews with occupational physicians
- Tumor marker testing support (routine health check)
- On-site flu vaccination

Sports



- Sports Yell Company certification
- Radio exercises and stretching (daily, all offices)
- Subsidies for gym training and sports viewing
- Company trips (hiking, etc.) and clubs (tennis, baseball, etc.)
- Company sports events
- Meetings with employee athletes

Mental Health

- Stress checks (at least once a year)
- Mental health seminars
- Encouraging communication through lunchtime in-house TV broadcasts, etc.
- Mental health counseling services (Nagoya Pharmaceutical Health Insurance Society)



Lunchtime in-house TV broadcast

Health Management

Health Education

- Lifestyle-related disease prevention seminars
- Physical health seminars
- Women's health seminars
- Seminars on quitting smoking



Work Style



- Career design training (for employees who wish to attend)
- Labor management workshops (annually, for all managers)
- Periodic overtime work checks

Health Awareness

- Health awareness posters (monthly, at all offices)
- Posting of calorie estimates, etc., in company cafeterias
- Sharing health information via in-house newsletter "Somu Tsushin"
- Sharing health information via the health management app "PepUp"

Practicing Sound Corporate Governance

Conducting Ethical Business Activities

In order to fulfill our corporate social responsibility, we pledge to comply with laws and regulations, as well as continue to be a company that is an upstanding corporate citizen that has the trust and confidence of customers by holding ourselves to high corporate ethical standards.

Related policies and external assessments:

Basic Procurement Policy, Code of Business Ethics, and UK Modern Slavery Act Statement
<https://www.amano-enzyme.com/en/whyamano/quality/>
<https://www.amano-enzyme.com/en/corporate/philosophy/>
<https://www.amano-enzyme.com/en/corporate/csr/>

Environmental Issues Affecting Our World



One in ten
children around
the globe is subject
to **child labor**.











- Food and water shortages, energy crises, and supply chain disruptions caused by climate change and conflict
- Forced labor affecting approximately 28 million people globally (International Labour Organization [ILO])
- Child labor impacting one in ten children worldwide (ILO)
- Increasing importance of corporate social responsibility and sustainability efforts driven by the rise in ESG investments
- Transformation of industrial structures and rise of new employment forms due to digital technology advancements

Amano Enzyme's Tasks and Goals to 2030

Managing supply chain

Achieving sustainable supply chain management
Coexisting with suppliers

Strengthening corporate philosophy-driven governance

Establishment of a sound management foundation

Managing supply chain

Goals for 2030


Sustainable supply chain management

- Enhancing CSR audits
- Strengthening links with suppliers
- Achieving mutual growth and coexistence across the entire supply chain



Coexistence is one of our corporate philosophies, and we aim to develop sustainably alongside society and suppliers. We also have a procurement policy that encompasses social issues, such as the environment, human rights, and occupational safety, and we support the establishment of a responsible supply chain. To further expand our global business while fulfilling our social responsibilities, we are committed to enhancing CSR audits, strengthening collaboration with our business partners, and promoting mutual growth and coexistence throughout the entire supply chain.

We will continue to work toward solving social issues throughout our supply chain and contribute to achieving a sustainable society.

Strengthening corporate philosophy-driven governance

Goals for 2030


Establishment of a sound management foundation



Amano Enzyme upholds the corporate philosophy of "Compassion," "Pioneering spirit," and "Coexistence," and is committed to building a sound corporate foundation and strengthening governance based on these core values. To support the sustainable development of society, we strive to maintain a healthy corporate structure through sincere and responsible business practices with all stakeholders, including local communities, customers, business partners, employees, and shareholders. In line with this approach, we have established and implemented a Code of Business Ethics to guide our actions as a responsible member of society and to promote sustainable growth.

To ensure that every employee understands and embodies our core values, and to foster shared growth between the company and its people, we conduct philosophy forums and other activities to embed these values, along with the implementation of our employee code of conduct. All executives and employees of Amano Enzyme work together to pursue a better corporate structure and governance.

Practicing Sound Corporate Governance Conducting Ethical Business Activities

Managing supply chain

Social issue initiatives

As companies continue to globalize, there is a growing shift toward socially responsible procurement (corporate social responsibility [CSR] procurement) across the entire supply chain. At Amano Enzyme, we ask our suppliers to understand and support our Procurement Guidelines and Guidance for Suppliers Concerning Procurement. In addition, we actively work on the following initiatives to address key challenges and strengthen collaboration.



- Results:**
- Public declaration of the "Partnership Building Statement"
 - Regular workshops to enhance knowledge and keep information up to date
 - Strengthened collaboration through cloud-based sharing of raw material specifications with suppliers

Most relevant SDGs



Strengthening corporate philosophy-driven governance

Philosophy awareness initiatives: Foundational Philosophy Training

Since 2023, Amano Enzyme has held biannual Foundational Philosophy Training sessions for new employees (in October and February), with the goal of enabling all employees to articulate our corporate philosophy in their own words.

Each half-day training combines lectures and discussions to help participants explore the essence of the philosophy and the values behind it. The first session focuses on understanding and embodying the philosophy, while the second delves into topics such as compliance with ethical standards and corporate social responsibility. Participants also have the opportunity to engage in dialogue with recipients of the Philosophy Award, gaining real-life insights into how the philosophy is practiced within the company.

Through these efforts, we aim to strengthen governance rooted in our philosophy and foster a values-driven corporate culture.



Most relevant SDGs

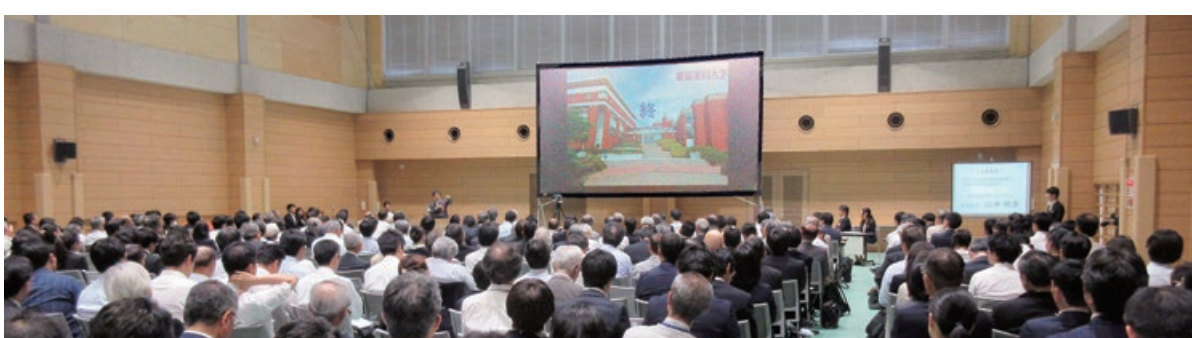


Amano Enzyme's Social Contributions

Academic aid

Enzyme Application Symposium

Most relevant SDGs



First held in May 2000, our 100th anniversary, this symposium's goal is to contribute to the promotion of science and technology in Japan through the aid of enzyme-related R&D. This year's symposium marked the 26th year.

Today, we offer not only lectures on enzyme applications and related topics, but also special presentations on cross-disciplinary subjects and cultural themes.

Disaster recovery support

Great East Japan Earthquake reconstruction assistance

Most relevant SDGs



After the earthquake, our teams visited disaster-affected areas in northeastern Japan for four consecutive years, with support from employee and company donations. Since then, we have provided support in the form of volunteers and it has become a regular company trip in which new hires also participate.

Amano Enzyme's Initiatives and SDGs

We offer a variety of products and services related to the SDGs and implement sustainability initiatives. In order to further promote these initiatives, we have organized the major targets and material issues for each of the ESG key themes, and verified their relevance to our initiatives within the 17 goals and 169 targets of the SDGs.

●: Most relevant SDGs ○: Other relevant SDGs

ESG	ISO 26000 Core Subjects	Amano Corporate Policy	ESG Key Themes	Key Company Targets	1 NO POVERTY	2 ZERO HUNGER	3 GOOD HEALTH AND WELL-BEING	4 QUALITY EDUCATION	5 GENDER EQUALITY	6 CLEAN WATER AND SANITATION	7 AFFORDABLE AND CLEAN ENERGY	8 DECENT WORK AND ECONOMIC GROWTH	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	10 REDUCED INEQUALITIES	11 SUSTAINABLE CITIES AND COMMUNITIES	12 RESPONSIBLE CONSUMPTION AND PRODUCTION	13 CLIMATE ACTION	14 LIFE BELOW WATER	15 LIFE ON LAND	16 PEACE, JUSTICE AND STRONG INSTITUTIONS	17 PARTNERSHIPS FOR THE GOALS
E	Environment	In line with our environmental policy, we engage in sustainable environmental improvement activities to contribute to the conservation of the environment and the protection of natural resources through our business activities.	Preventing climate change and air pollution	Reduce CO ₂ emissions			○3.9				●7.3	●8.2 ●8.4	●9.4			●12.2	●13.2				
				Achieve decarbonization		●2.1 ●2.2															
				Promote alternative proteins																	
			Promoting energy conservation	Improve productivity								●8.2	●9.5				●13.2				
				Develop breeding and screening																	
				Promote energy conservation							●7.3 ●7.2					●12.2					
			Biodiversity preservation	Promote renewable energy																	
				Preserve biodiversity				○4.7							●11.4				●15.1 ○15.2 ●15.6		
			Waste and recycling	Respect animal welfare												●12.8					
				Reduce food waste		●2.1 ○2.4										●12.3					
				Reduce waste												●12.2 ●12.4 ●12.5					
				Conserve soil and water			○3.9			●6.3			●9.4				●14.1				
S	Fair operating practices	- We are honest and fair in business with customers and form sound relationships. - We fairly compare and evaluate suppliers of raw materials, products, and services. - We do not engage in bribery or collusion of any kind.	Ensuring fair trade compliance	Ensure fair trade compliance	●1.2	○2.3								●10.3							●16.4 ●16.5 ●16.10
			Managing supply chain	Conduct sustainable procurement	●1.1 ○1.3	●2.4						○8.4 ●8.7		○10.2 ●10.3		●12.2 ●12.4 ●12.5				●16.5	
	Consumer issues	We are committed to delivering safe products and providing reliable services and information.	Health value recognition	Manage supply chain																	
				Apply COVID-19 measures			●3.3														
				Contribute to health through food										○9.4							
				Contribute to infant and child health				●4.2													
				Contribute to elder health		●2.2															
				Support diagnosis, treatment, and prevention of diseases			●3.d														
			Protecting personal information	Support diagnosis, treatment, and prevention of diseases																	
				Ensure information security																●16.4 ●16.5 ●16.10 ●16.10	
				Protect personal information								○8.5				●12.4					
	Ensuring product quality and safety		Ensuring product quality and safety	Ensure product quality and safety		○2.2	●3.d							●10.2							
				Support diverse values								●8.2	○9.4								
				Ensure product availability																	
	Ensuring appropriate information disclosure		Ensuring appropriate information disclosure	Ensure product availability												○12.2 ●12.4				●16.10	
				Improve product labeling			●3.d														
				Ensure appropriate information disclosure																	
	Human rights	We work to eliminate forced labor, harassment, inhumane treatment, and all forms of discrimination of workers, and comply with legal working ages.	Respect for human rights	Raise awareness of human rights								●8.5 ●8.8		●10.3							
				Support eliminating child labor	●1.1							●8.5									
				Support eliminating forced labor	●1.3																
	Labor practices	- We comply with laws, regulations, and internal rules related to occupational health and safety, and strive to create a safety-first work environment. - We promote activities to maintain and improve the physical and mental health of employees.	Employee health and safety	Create healthy workplace environments			○3.1		●5.1 ●5.4			●8.2 ●8.8		●10.3 ●10.4							
				Respect freedom of association								●8.5									
				Promote occupational health and safety																	
			Maintain and promote employee health	Maintain and promote employee health		○2.1 ○2.2	●3.3 ●3.5 ●3.a ●3.d	●4.7													
				Develop human resources				●4.4 ●4.7				●8.5		●10.3							○17.17 ○17.16
			Human resources and employee benefits	Develop human resources								●8.5 ●8.9									
				Ensure equal employment and treatment	●1.1 ●1.3																
			Diversity	Guarantee minimum wage																	
				Achieve diversity					●5.1			●8.5 ●8.8									
				Ensure gender equality					●5.1 ●5.4 ●5.5												
	Community involvement and development		Engaging in local activities with communities	Engage in local activities with communities				○4.4 ●4.5				●8.9	●9.4		●11.4	●12.8					●17.17
			Environmental and cultural initiatives with communities	Engage in environmental and cultural initiatives with communities			●3.d					●8.2									
			Developing industry with communities	Develop industry with communities				●4.4 ●4.5				●8.1 ●8.2	●9.4 ●9.5		○11.a						●17.16 ●17.17
			Engaging in human rights initiatives with communities	Promote open innovation			○3.d					●8.5 ●8.8									
			Engage in human rights initiatives with communities	Engage in human rights initiatives with communities					●5.1					●10.3							
G	Organizational governance		Supporting disaster reconstruction for communities	Support disaster reconstruction for communities	●1.1 ●1.5	○2.4									●11.5		●13.1				
			Corporate governance	Enhance group governance																	●17.16
			Compliance	Improve compliance awareness										○10.2 ○10.3 ○10.3						●16.4 ●16.5	
			Risk management	Conduct effective risk management																	
				Prevent technology and microorganism strain leaks																	
				Ensure business continuity in the event of disasters, etc.											●11.2 ●11.5		●13.1				

*Coloring of "Key Company Targets" : Most relevant company vision :Securing the future of food and health :Living in harmony with nature :Earning and maintaining public trust :Empowering a diverse workforce :Practicing sound corporate governance

From Japan to the world





Explore Unlimited Possibilities

For inquiries about the Amano Enzyme Sustainability Report, please contact:

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