

For a Sustainable Future

Sustainability Report 2022

OAT Agrio Co., Ltd.

Delivering the joy of food and agriculture by developing eco-friendly products that offer safety, security, and usability

We challenge food issues with human- and earth-friendly agritechnology

The world population is continuously increasing and is expected to exceed nine billion by 2050. To support this large population, an extremely large amount of food is required. The Food and Agriculture Organization has announced that global food production needs to be increased by 70%. On the other hand, the launching declaration of “the International Year of Plant Health 2020” stated that plants make up 80 percent of global food, up to 40 percent of which is lost to pests and diseases. Over the past several years, climate change has caused frequent droughts and heavy rainfall around the world, posing substantial damage to food production.

We challenge global issues with diverse human resources and knowledge

Since its establishment in 2010, OAT Agrio has sincerely coped with these food issues. Our philosophy that “We contribute to the people in the world with our agritechnology and sincerity” matches “the Sustainable Development Goals (SDGs)” adopted by the U.N. in 2015. Under the concept “human- and eco-friendly sustainable agriculture,” we have released many proprietary products featuring our three technology fields: plant protection products (chemicals for plants), fertilizers & drip fertigation (nutrients for plants), and biostimulants (increasing plants' immunity to diseases).

For example, “Green Products” for protecting agricultural products from pests can be safely used without limitation to the number of uses due to its

natural and food additive origin and have been highly evaluated for plant protection adaptable to prolonged and frequent pest seasons resulting from global warming.

In May 2021, the Ministry of Agriculture, Forestry and Fisheries formulated “the Strategy for Sustainable Food Systems”, aiming to promote carbon neutrality and other innovations to reduce the environmental impact on a medium- to long-term basis toward the establishment of a sustainable food system. Its specific goals include the reduction of agrochemicals by 50% and the reduction of chemical fertilizers by 30% by 2050. We consider these initiatives match our group's attitude to disseminate “Green Products”, “biostimulant business”, and “fertilizers and drip fertigation”.

We have R&D centers in Japan (Naruto, Tokushima), India, and Europe (Spain and the Netherlands), where diverse human resources are engaged in R&D activities in a global environment. International employees make up approximately 64% of our workforce. Employees with diverse knowledge work in Japan and overseas, regardless of nationality and gender. At our associated companies overseas, locally hired employees are leading the advancement of producer-friendly “agritechnology,” considering various factors that include the local environment, farming culture, law, and environmental regulations.

As mentioned above, food production must be increased to accommodate an increasing population. Because the development of arable land has limitations,

it is crucial to maximize crop on limited land. Our technology and knowledge for increasing efficiency have extremely large potentials in considering future agriculture.

Change starts with a single seedling

As part of our activity to hand over the corporate culture, our employees grow plants at our Cultivation Research Center located in Naruto, Tokushima. Our employees touch the soil and observe daily plant growth at our own farm, and experience what occurs by using our products in order to know the thoughts and concerns of field producers, thereby recognizing their mission as members of the OAT Agrio group against the food crisis.

We also consider that the experience of growing vegetables in home gardens will help consumers have new findings that may lead to the minimization of food loss. Our corporate culture is to experience and disseminate the fun and difficulty of cultivation. By disseminating the fun of growing and proposing handy methods for enjoying cultivation, we develop new business models and create new demands.

At Agricultural Materials EXPO in October 2021, we released the “Agrio Ichigo Master”, OAT's comprehensive cultivation solutions service. This is a new service for smart agriculture, incorporating strawberry cultivation data collected at our Cultivation Research Center and know-how from outstanding farmers into an automatic growth diagnosis system utilizing information and

communication technology and artificial intelligence.

We expect that this service will help prospective farmers start agriculture faster.

These activities may be an extremely small step considering the serious global food crisis. However, we are confident that the changing mindset of individuals will enable breakthroughs toward a resolution. We will continue contributing to global food production increases under the mission of helping more people experience the fun of growing and the fulfillment of harvesting, as well as the joy of eating delicious food. Please look forward to our future initiatives.



Hisashi Oka, President, CEO



Editorial policy

The OAT Agrio Group published the Sustainability Report since 2022, describing its initiatives for the environment (E), Social (S), and governance (G) aimed at the establishment of a sustainable society, as well as its management plans and other information. We hope that this report will help communication with the supply chain and other stakeholders and enhance the understanding of our company and group companies throughout all of society. We will continue to improve the report referring to your inputs and advice.



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< Reported organization >

The group (our company and its associated companies) consist of OAT Agrio Co., Ltd., 27 consolidated subsidiaries (including Asahi Chemical Manufacturing Co., Ltd.; Runhe (Zhoushan) Plant Science Co., Ltd.; OAT&IIL India Laboratories Private Limited; Asahi Chemical Europe s. r. o.; PT. Oat Mitoku Agrio; Lida Plant Research, S.L.; Inplanta Innovations Inc.; and Blue Wave Holding B.V.), 2 unconsolidated companies, and 3 associated companies.

< Reported period >

January to December 2021

< Published >

March 2022

We at the OAT Agrio Group contribute to the people of the world with our agritechnology and sincerity.

Under the philosophy that “We contribute to the people in the world with our agritechnology and sincerity,” the OAT Agrio Group develops and systematizes a comprehensive technology set that contributes to increased crops through the development, manufacturing, and marketing of agrochemicals, fertilizers, and proprietary cultivation systems.

By continuously developing “new increasing food production technology” based on our accumulated technology and know-how, we aim to resolve food issues and support an ever-increasing world population, as well as to obtain high trust and evaluation from stakeholders and entire society, thereby maximizing our corporate value as our basic management policy.

Our philosophy and 3 agritechnology fields

Plant protection products

Research at 2 laboratories (Naruto and India)
Discover new highly safe, effective substances

Fertilizers & drip irrigation

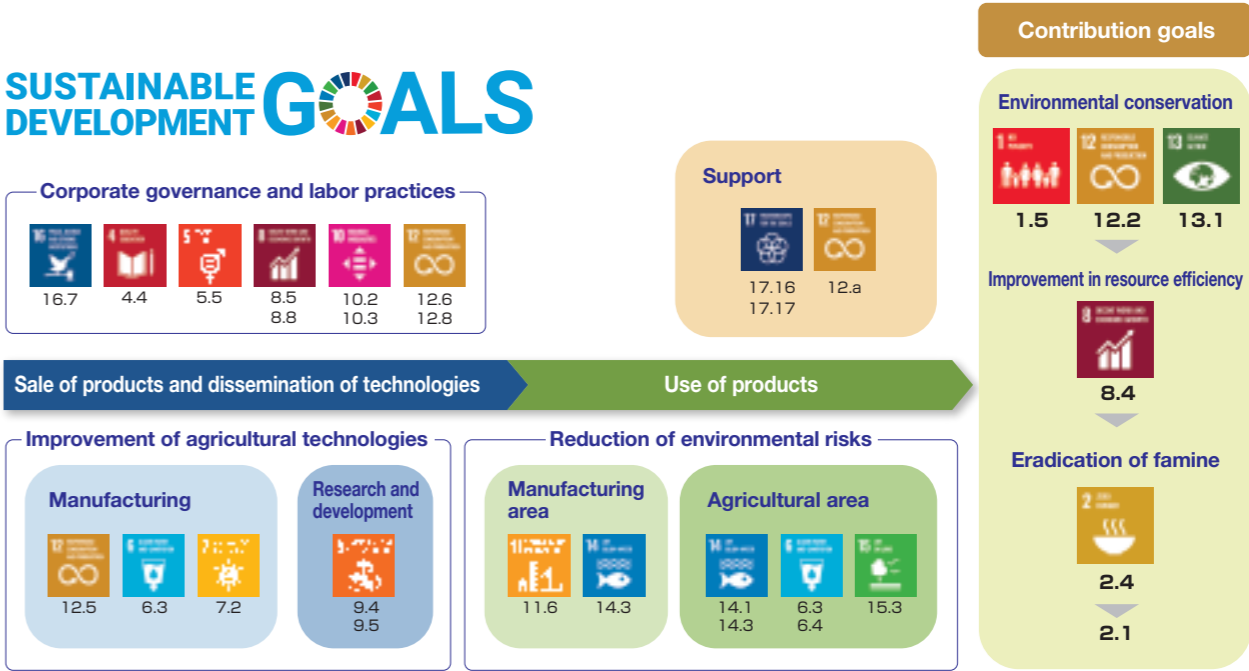
Cultivation technology
Fertilizers for hydroponic culture
(Largest share in the Japanese market)

Biostimulants

Boosting the immunity of crops against diseases, pests and environmental stresses
Respect for the environment and biodiversity that boosts the immunity of crops against diseases and pests

ESG management and CSR: Important issues and execution items

The business activities themselves of the OAT Agrio Group are the initiatives for attaining SDGs. The dissemination of “agritechnology” will lead to “environmental conservation,” “improvement in resource efficiency,” and “eradication of famine.”



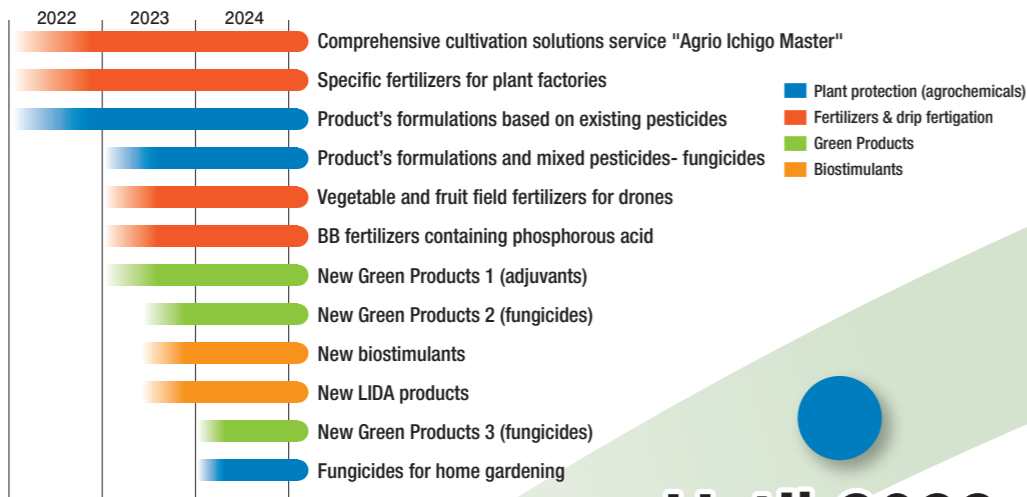
Aiming to be a company that contributes to sustainable agriculture

We attained numerical targets in “the New Medium-Term Management Plan 2021–2023” formulated in February 2021 one year earlier than scheduled. With “the pursuit of growth drivers” as the mainstay of business growth, we aim to “launch new products”, “participate in smart

agriculture”, and “maximize global synergy” while enhancing our corporate value. Our group will flexibly adapt to various changes while adhering to our philosophy, proactively taking on new challenges, and contributing to human- and eco-friendly sustainable agriculture.

Launch of new products

We release new products in good balance, including “Agrio Ichigo Master” as a comprehensive cultivation solutions service; “Green Products” for safe and secure plant protection based on natural and food additive origin; biostimulants, fertilizers, and drip fertigation and other products in key areas.



Until 2022

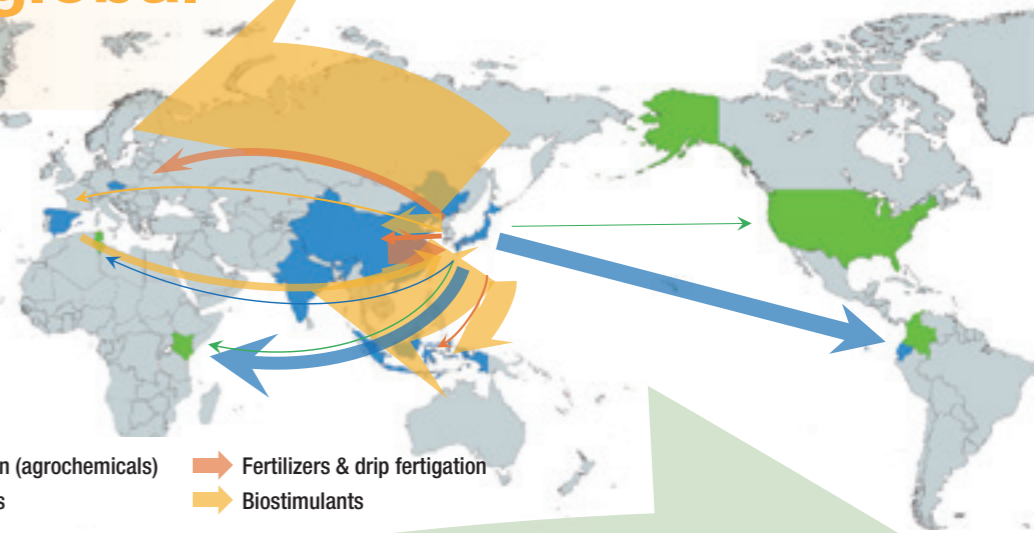
Until 2023

Until 2024

Maximizing global synergy

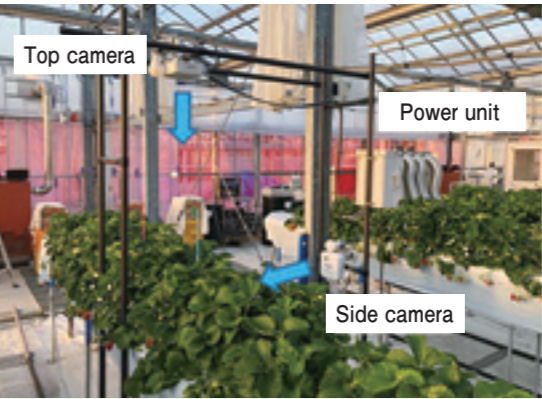
Our group supports the process from seeding to consumers with “agritechnology”. Utilizing our global group network, we will expand our sales to more than 89 countries for the expanded marketing of our products in the New Medium-Term Management Plan.

- Plant protection (agrochemicals)
- Green Products
- Fertilizers & drip fertigation
- Biostimulants



Entry into smart agriculture (Agrio Ichigo Master)

“Agrio Ichigo Master” is our comprehensive cultivation solutions service. Targeted at prospective farmers, farmers considering the switch from soil cultivation to elevated cultivation, and farmers hoping to improve yield and quality, this service offers a fixed-price package of the necessary OAT plant protection materials, fertilizers, the use of a hydroponic soil cultivation system and incidental equipment, advice based on automated growth diagnosis system, and other services.



Pursuit of growth drivers

- Green Products (GP)
- Biostimulants (BS)
- Create demands in greenhouse horticulture field
- Expand products globally

Value creation through agritechnology

Food, agriculture, forestry, and fisheries in Japan are faced with issues that include large-scale natural disasters, global warming, weakened production infrastructure due to decreasing producers, and the decline of local communities. It is urgently required to implement appropriate measures against these issues in order to achieve a stable food supply in the future.

Since our spinoff, we have vigorously promoted R&D of agritechnology to contribute to “environmental conservation”, “improvement in resource efficiency”, and “eradication of famine”. Our agritechnology matches “the Strategy for Sustainable Food Systems (to achieve both productivity and sustainability of food, agriculture, forestry, and fisheries industries through innovation) formulated by the Ministry of Agriculture, Forestry and Fisheries”. We will contribute to the establishment of a sustainable global food system by pursuing this goal.

1. “Green Products” for human- and eco-friendly plant protection

Our group defines “Green Products” as safe, secure, and eco-friendly plant protection materials registered as agrochemicals without limitation in the number of uses based on natural and food additive origins or conformance to the Organic Japanese Agricultural Standards. Green Products are plant protection materials that are slow to induce resistance to chemicals and conform to Integrated Pest Management (IPM) friendly to natural enemies.

The use of our Green Products will reduce agrochemicals, while coping with the decreasing yield of agricultural products due to prolonged and frequent pest seasons resulting from global warming.

As of March 2022, we released 12 product groups with 3 new products to be marketed in stages.

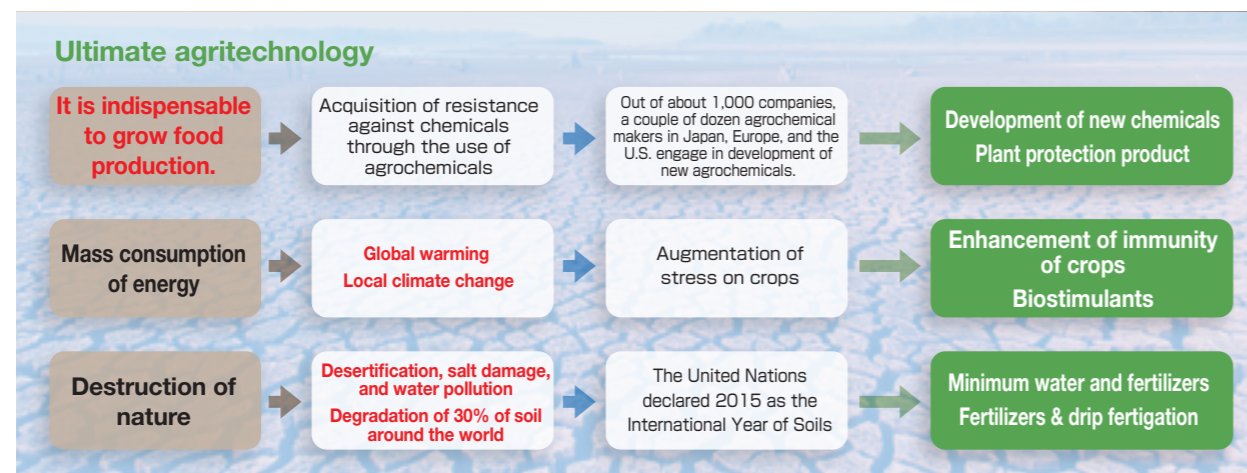
2. “Biostimulants” increasing plants' immunity to diseases

Biostimulants refer to substances and technologies that enhance the natural immunity and function of plants; increase their resistance to cold, heat, and pests; and boost growth. Climate change caused by global warming imposes environmental stress on agricultural products, resulting in decreased yield and quality. Our group increases yield and quality by developing biostimulants that enhance plants' resistance to environmental stress, thereby alleviating the impact of climate change.

3. Entry into “smart agriculture” in greenhouse horticulture field

Excessive fertilizers and drip fertigation cause soil degradation through desertification, salt damage, and water pollution. To prevent soil degradation and improve product quality, a hydroponic soil cultivation system is required to supply the necessary nutrients at the necessary times as plants grow.

At Agricultural Materials EXPO 2021, we uncovered “Agrio Ichigo Master”, OAT's new comprehensive cultivation solutions service for “smart agriculture”, incorporating strawberry cultivation data collected at our Cultivation Research Center (“GLOBAL G.A.P.” certified) and know-how from passionate farmers into an automatic growth diagnosis system using information and communication technology and artificial intelligence. This system will powerfully prevent excessive fertilizers and drip fertigation. We also provide one-stop proposals for materials and services concerning strawberry cultivation, such as hydroponic soil cultivation system, biostimulants, Green Products, and know-how.



Toward the resolution of environmental issues

1. Background

Under the philosophy that "We contribute to the people in the world with our agritechnology and sincerity," our group promotes ESG management as a company that contributes to human well-being. In the environmental aspect of ESG, we pursue the resolution of environmental problems toward our key objectives “waste reduction and recycling”, “use of renewable energy and GHG reduction”, and “management of exhaust and wastewater”, we aim to achieve carbon neutrality by 2050 as a company in the agricultural sector with a close relationship to climate change.

In addition, we will attain our philosophy by achieving “environmental conservation”, “improvement in resource efficiency”, and “eradication of famine” through contributions to human- and eco-friendly sustainable agriculture by disseminating agritechnology through cultivation.

2. Coping with environmental issues

(1) GHG reduction through the use of renewable energy

Our group is working on greenhouse gases (GHG) reduction at sites in Japan and overseas. The OAT Agrio Naruto factory has already introduced zero carbon electricity. Chrysal, based in the Netherlands, is reducing GHG emissions with solar and wind power toward its goal of “achieving carbon neutrality by 2030”.

Supply chain GHG emissions will be further calculated for entire group. We will set medium-term and long-term targets, and identify related risks and opportunities.



Naruto Factory

(2) Response to Task Force on Climate-related Financial Disclosures (TCFD)

We regard the response to climate change as an important risk and opportunity for the OAT Agrio Group operating in the agricultural sector. We also consider the pursuit of sustainable agriculture and carbon neutrality through agritechnology as an important strategy for continuous profitability. The OAT Agrio Group will endorse the proposal of TCFD within 2022 in order to strengthen and upgrade information disclosure and promote a continuous decarbonization through its business activities.

Climate change countermeasures at Chrysal Group

Chrysal is a cut-flower nutrient manufacturer based in the Netherlands with a history of more than 85 years, which became a member of the OAT Agrio Group in December 2018. The Chrysal Group implements measures to reduce the environmental impact to fulfill its corporate social responsibility(CSR). Specifically, aiming at achievement of carbon neutrality by 2030, it promotes the use of sustainable energy sources focusing on CO₂ reduction and the improvement of energy efficiency. At the headquarters in the

Netherlands, renewable energy (wind power), photovoltaic unit, and LED lights have been introduced. The group also evaluates the carbon footprint of all its products and promotes the reduction of packaging, waste, and CO₂ emissions throughout its entire supply chain.



3. GHG emissions

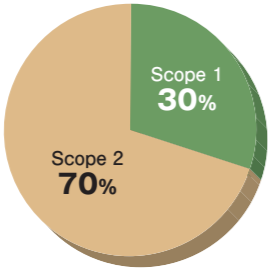
(1) Background

“To achieve carbon neutrality by 2050”, our group has calculated GHG emissions and identified business activities for urgent reduction since FY 2020. We will continue to calculate, verify, and reduce our GHG emissions as a proactive contribution to carbon neutrality by 2050. We will also continue communicating to our stakeholders how our “agritechnology” will contribute to the resolution of environmental problems as part of the SDGs.

(2) GHG emissions

We have calculated the Scope 1 and 2 emissions of the OAT Agrio Group.*

Ratio of Scope 1 and 2 emissions



Results of Scope 1 and 2 emissions

	2021 (t-CO ₂ e)	2020 (t-CO ₂ e)
Scope1	1,041	986
Scope2	2,451	2,456

*OAT Agrio, 15 consolidated subsidiaries (ASAHI KAGAKU KOGYO Co., Ltd.; OAT&IIL India Laboratories Private Limited; Asahi Chemical Europe s.r.o.; PT. Oat Mitokuagrio; Runhe (Zhoushan) Plant Science Co., Ltd.; Lida Plant Research, S.L.; Capa Ecosystems, S.L.U.; Ensofo La Granja S.L.; Inplanta Innovations Inc., and the 6 main companies of the Chrysal Group), and 2 non-consolidated subsidiaries (Drip Fertigation Research Co., Ltd. and OAT Pakistan Private Limited)

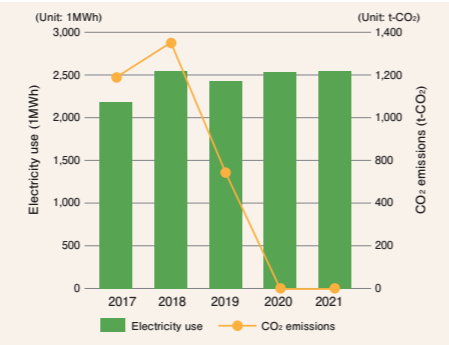
(3) Analysis of results and improvement measures

In Scope 1, the major sources of GHG emissions were heat sources and fuel consumption for transport.

For heat sources, we plan to switch to low-carbon fuels for boilers and co-generation. Fuel for transport mainly consists of gasoline and light oil for passenger cars, so we plan to switch to EVs and low-carbon vehicles.

As for GHG emission sources in Scope 2, we purchase zero carbon electricity at the OAT Agrio Naruto factory as a contribution to CO2 emission reductions. As indicated in the graph below, we have reduced CO2 emissions by purchasing renewable electricity since July 2019.

Electricity use and CO₂ emissions



On the other hand, the analysis indicated large GHG emissions from the heat utilization at the factory, followed by electricity consumption at OAT&IIL India Laboratories Private Limited and OAT Agrio Cultivation Research Center. Because emission factors are relatively high in Asia and the United States and low in Europe, we will increase the shares of renewable energy primarily in regions with high emission factors.

We will continue to calculate Scope 1 and 2 emissions and promote GHG reduction, while starting the calculation of Scope 3.

Example of GHG emissions reduction by introducing drip fertigation

Kashima and Kamisu in Ibaraki are the largest green pepper producing areas in Japan. In the recent trend for food safety and security, demands have been made to switch to low-chemical cultivation from the traditional high-fertilizer practice.

In cooperation with Ibaraki Prefecture and Japan Agricultural Co-operative, OAT Agrio has disseminated drip fertigation to reduce chemical fertilizers. The area of drip fertigation in the prefecture increased from 1.1 ha in 2004 to 65 ha in 2020, and

the consumption of fertilizers with chemical components was reduced by approximately 25% of 840kg/ha to 630kg/ha (total of semi-forcing and late-raising cultures). In a simple comparison with the conventional culture, GHG emissions were reduced by 39 t.



Overview of corporate governance

Fundamental Policy for Corporate Governance

The fundamental policy is to conduct business activities in compliance with laws and regulations as well as ethical standards in order to earn the trust of customers, shareholders, business partners and all others. To accomplish this, OAT Agrio is dedicated to reaching management decisions in an effective and efficient manner and conducting business activities properly.

1. Structure

Reason for selecting the present corporate governance structure

Based on a resolution at the 8th ordinary general meeting of shareholders on March 20, 2018 to revise the Articles of Incorporation in order to transition to a company with an audit and supervisory committee, the Company was changed on that date from a company with a board of corporate auditors to a company with an audit and supervisory committee. The purpose of this transition is to establish an audit and supervisory committee under the board of directors to strengthen the supervisory function of the board of directors, further improving the corporate governance system as a means of enhancing corporate value. In order to strengthen external supervisory functions, 1 external director and 3 directors who are external audit and supervisory committee members have been elected; this kind of structure has been chosen with the expectation of obtaining valuable input for the sake of proper company management based on their experience in various fields. We are confident that the current system will lead to thoroughgoing auditing and oversight, resulting in fair and transparent business management at our company.

2. Audit status

Status of internal audit and audit by the Audit and Supervisory Committee

The Internal Audit Section has a dedicated director and functions as an internal audit organ that directly reports to the president, while assisting audits by the Audit and Supervisory Committee as its office. The Section formulates an annual plan in coordination

with the Audit and Supervisory Committee, and visits in-house departments and key subsidiaries to inspect their status of “management policy”and “compliance”. The Section also inspects internal controls concerning financial reporting in collaboration with accounting auditors. Appointed committee members usually accompany the on-site audit team from the Internal Audit Section. The basic policy of the internal control system states that the Internal Audit Section observes instructions from the Audit and Supervisory Committee.

3. Internal control

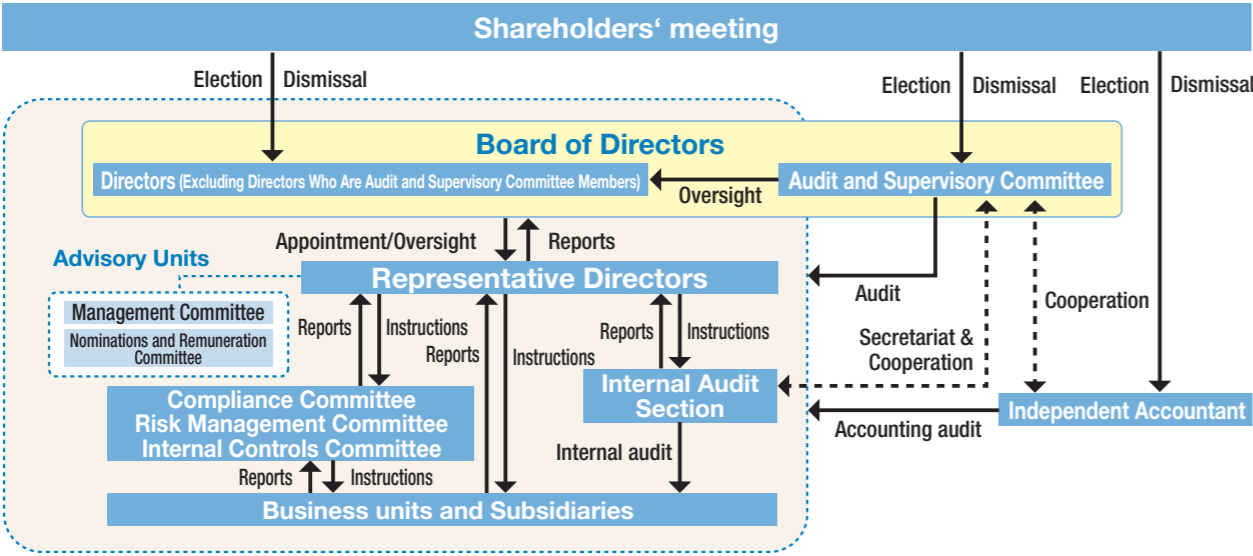
Fundamental Policy and establishment of internal control system

We consider fair corporate activities that are compliant with laws, regulations, and corporate ethics as the key to the continuous development of a company. Our internal control system centers around the “Internal Controls Committee”with the president as its chair and executive directors as its members. The Committee formulates rules and manuals for internal control, makes operating rules well known, implements training, and continuously monitors the operating status, thereby establishing an effective internal control system.

4. Sustainability

We regard ESG and SDGs as important managerial requirements and establish a structure for promoting sustainability, while continuously collecting data concerning the influence of our business activities on the environment and climate change. Our new medium-term management plan also pursues the ESGs and SDGs through agritechnology, and the relevant progress is periodically reported at Board of Directors’ meetings. Our group will continue to promote sustainability management for further enhancing corporate value on a medium- and long-term basis.

Corporate governance structure



5. Other matters concerning corporate governance

Compliance structure

“The Compliance Committee” with the president as its chair and executive directors as its members promotes, disseminates, and ensures compliance at our company and all group companies. Our company and all group companies also have “the Whistleblowing Rules” for promptly uncovering noncompliance with laws and other requirements and operate internal and external hotlines for reporting and consultation concerning compliance.

Establishment of risk management structure

In addition to risk management through monthly Board meetings and Management Conference sessions, our “Risk Management Committee” with the president as its chair and executive directors as its members identifies potential risks in the execution of duties, establishes rules, and implements risk management training for employees. We also consult lawyers and other experts when necessary.

< Philosophy >

We contribute to the people in the world with our agritechnology and sincerity.

< Our Code of Conduct >

1. We earn the trust with our agritechnology and honesty.
2. We bravely challenge new issues and difficult problems.
3. We constantly seek solutions for problems.
4. We make our decisions quickly and take actions quickly.
5. We always act honestly and sincerely.
6. We never bow to undue pressure.
7. We aim for growth through friendly competition while respecting individuality and different cultural values.
8. We promote effective use of finite resources and take good care of the global environment.

Establishing Structure and Environment for Diverse Human Resources to Maximize Their Abilities

We recruit and promote human resources focusing on their abilities and achievements. Mid-career employees are also evaluated based on their abilities, and many of them have become our core resources. International employees make up approximately 64% of our workforce. Locally hired employees take the initiative in the management and operation of overseas associated companies. Employees with diverse knowledge work in Japan and overseas, regardless of nationality and gender. For the statutory employment of post-retirement employees, we periodically revise our systems to present employment conditions closer to pre-retirement ones. We also have a limited employee system to provide wider workstyle

options to regular employees and enable switching between the systems.

We will continue to increase the share of female employees in the entire group and provide them with more opportunities for exercising their abilities.



Establishing an environment for women to play active roles

To retain diverse human resources, one of the key requirements is for woman to play active roles. We establish a working environment that helps them continue working over their changing life stages (e.g., childbirth and childcare), with extended short working hours for childcare (until June 30 in the first elementary school grade) and increased childbirth gift money. We acquired the “Kurumin mark” in 2021 for these measures, a certification of “a childcare-supporting company ”by the Minister of Health, Labour and Welfare.

Our group will continue to establish a working environment that helps female employees under the objectives of increasing the share of female managers from 12% at present to 20% at OAT Agrio and from 21% to 25% for the entire group. Toward these objectives, we will develop and train candidate female employees and provide opportunities for exchange and networking between female managers and female employees.



Creating a comfortable working environment

We have introduced systems to work from home, staggered commuting, hourly paid holidays, and reserved paid holidays, and flexibly operate them in accordance with social and individual conditions. We also endeavor to improve the use rate of paid holidays, maintaining our rate higher than the nationwide average. We ensure management to prevent prolonged work hours, implement anti-harassment training, operate an anti-harassment hotline, and have introduced a whistleblowing system for compliance violations and

related consultations. To confirm progress and further promote these measures, we conduct questionnaire surveys concerning workloads, tasks, and the workplace environment, as well as periodic interviews concerning career plans, position images, transfer requests for job types and locations, and other opinions. The results are summarized and incorporated into employee training and elsewhere. We have training courses by function, career, job type, and theme. IDs are assigned to each employee to freely participate in e-learning courses.

Health promotion

To help employees maintain mental and physical health and to lead a fulfilling life, we provide health guidance by occupational physicians and other healthcare staff in addition to various other health support measures. Key measures include the full payment for medical checkups by the company, confirmation of checkup results by the Personnel Division, early detection of diseases and injuries, and recommendation of re-exams.



ISO 9001-certified quality management system

We have acquired “ISO 9001” certification for the quality management system to continuously improve the quality of products and services provided to customers. The registered scopes are the R&D, manufacturing, and marketing of agrochemicals, fertilizers, home gardening materials, and agricultural materials. It means the scopes cover all departments and all employees.

Under the philosophy that "We contribute to the people in the world with our agritechnology and sincerity," we have formulated the Quality Management System Manual for 1) products, 2) employees, and 3) the environment. We survey the present status of our products, workplace, customers,

markets, applicable laws, and employees; investigate the influence on business activities; identify significant aspects (risks and opportunities); and determine quality objectives at the Management Conference.

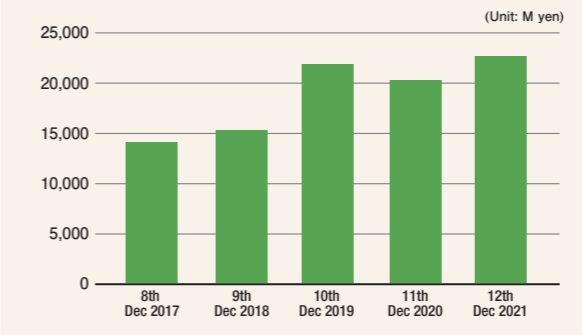
We manage the objectives by applying “the PDCA cycle”, and ensure daily control of sales and production plans, ordering of materials, work standards, records, equipment inspection, and maintenance inspection.

We determine policy, objectives, commitments, and changes to systems and organization through the Board of Directors, Management Conference, internal audit reports, Risk Management Committee, Compliance Committee, and Internal Control Committee for continuous improvement.

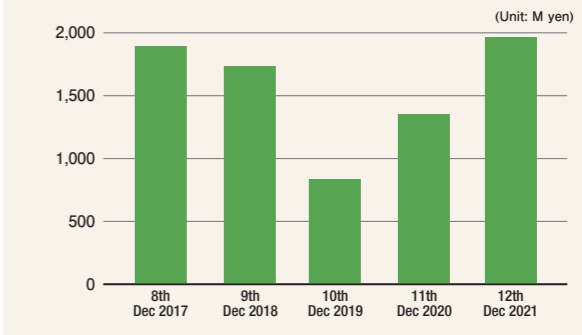


[Performance Highlights]

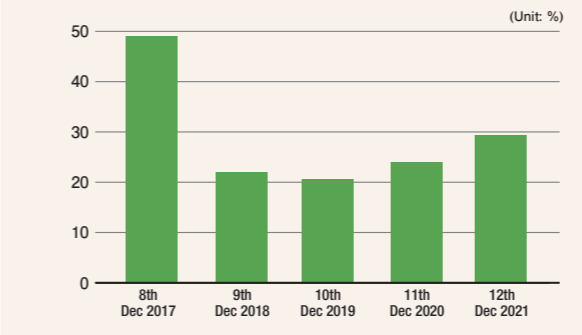
Net Sales



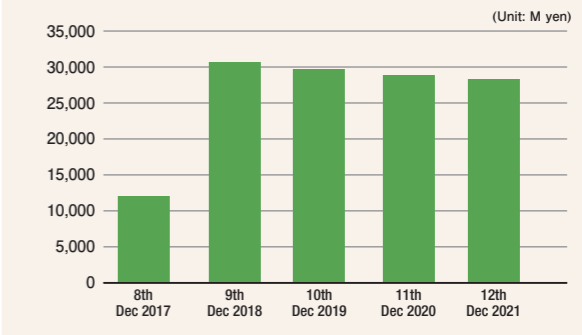
Ordinary profit



Shareholders' equity ratio



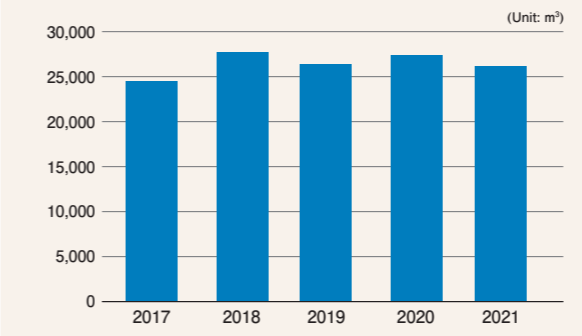
Total assets



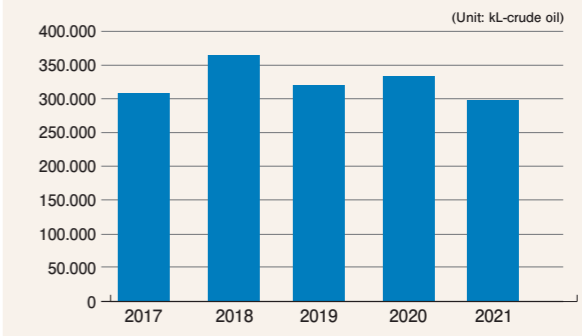
< Formula > Shareholders' equity ratio = Equity capital / Total assets x 100; Equity capital = Net assets - Subscription rights - Share options - Noncontrolling interests

Environmental conservation reports (Naruto Factory)

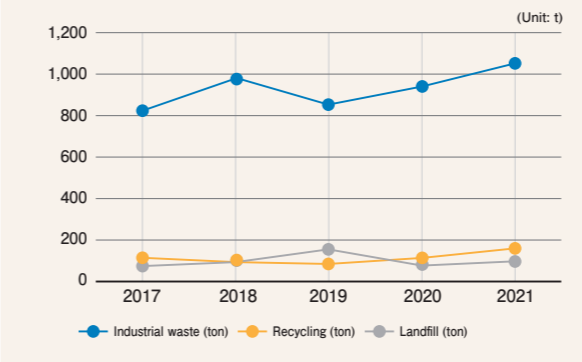
Water consumption



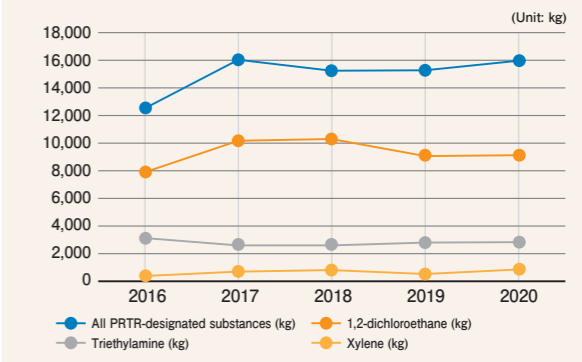
Steam energy consumption



Industrial waste, recycling, and landfill



Transfer and release of Class I PRTR-designated chemical substances





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