



Greate the Future

— Expanding our Possibilities —

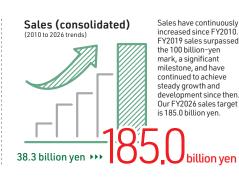


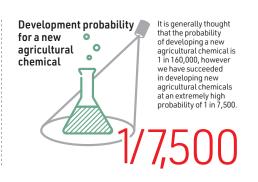
Protecting and Fostering Life and Nature through Creative Science

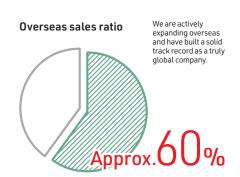


Kumiai by the numbers









We will continue to take on these challenges with the goal of being "a corporate group with flexibility and a strong presence that enriches the lives of people through its unique technologies, and that contributes to the sustainable development of society in harmony with nature."

Related article on the company's official website https://www.kumiai-chem.co.jp/english/company/about/



MESSAGE FROM THE PRESIDENT

From individual happiness to global happiness

Since providing the first domestically produced agricultural chemicals to the market in 1959, we have continued to research, develop, and promote safe and effective agrochemicals in order to contribute to the development of agriculture worldwide and to support the stable production of safe and secure food.

Society as a whole is currently facing a range of issues, including a higher global population and changes in the global environment. The Kumiai Group aims to bring about a safe, secure, and prosperous society through the power of science and is moving forward with the Agricultural Chemicals and Agriculture-Related Business, which supports the world's food supply, and the Fine Chemicals Business, which contributes to improving quality of life in various ways.

In October 2023, based on the goal of strengthening our research and development system, we started the operation of our new

Chemical Research Institute "Shimizu Innovation Park (abbreviated as ShIP)" which integrated the three chemical research centers of chemical discovery, formulation technology, and process chemistry development. I believe that by sharing the opinions of researchers from various fields in one space, various innovations will be generated and will become a place for creating new technologies and new businesses that transcend the boundaries of agrochemicals and chemical products.

The slogan of the Kumiai Group is Dreams and Triangle for Happiness, aiming toward further expansion through a cycle in which each employee strives toward achieving their own dreams, produces results, and through a sense of accomplishment and fulfillment achieves a sense of happiness. We are confident that by expanding this cycle from an individual level to a global scale, we can bring about our unique sustainability management that contributes to society and addresses environmental challenges.

We will ceaselessly continue to take on the challenge of creating new value tied to the realization of a sustainable society. I want to thank each of you for your continuous understanding and support.



Two Business Pillars

Agricultural Chemicals and Agriculture-Related Business

Based on dialogue with growers and other stakeholders, we have long been dedicated to researching, developing, and promoting agricultural chemicals. We provide safe and secure products from the four perspectives of agricultural produce, users, consumers, and the environment throughout all processes in research and development, manufacturing, and sales.

Fine Chemicals Business

Using technology cultivated in the process of developing agricultural chemicals, we are developing, manufacturing, and selling raw materials for various applications, including polymeric materials, electronic materials, pharmaceuticals, and more, contributing to various aspects of daily life.

We also provide custom manufacturing tailored to customer needs.

Main Products



AXEEV field crop herbicide

Kumiai's flagship product. Contributes to solving the world's food insecurity with its outstanding herbicidal efficacy and safety.



One-shot herbicides for paddy rice

Top share in Japanese market*. A major contribution in labor savings in paddy rice cultivation.



Bismaleimide monomers

Raw materials for resins used in electronic substrates and aircraft components. Top supplier within Japan.



Chlorinated derivatives

Japan's largest supplier, and we also export some of our other products to manufacturers outside Japan.

*2023, calculated by Kumiai based on data from the Japan Association for Advancement of Phyto-Regulators

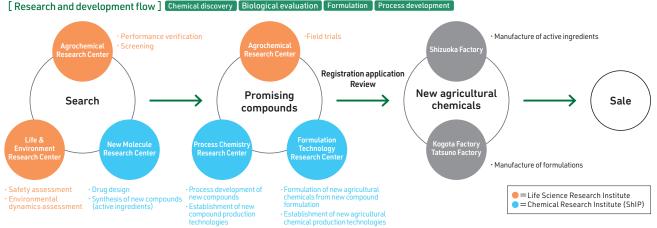
Kumiai Manufacturing, Close to People and the Environment

Research and Development

The Chemical Research Institute and the Life Science Research Institute's integrated research and development system covers from exploratory synthesis, biological evaluation, safety and environmental impact assessment, and formulation, through to the establishment of process chemistry for new compounds, and is engaged in the research and development of original, high-value-added new agricultural chemicals to respond to market demands.

It is generally said that the probability of developing a new agricultural chemical from evaluated compounds is 1 in 160,000, however, we have succeeded in developing new agricultural chemicals at an extremely high probability of 1 in 7,500. Factors contributing to this include the company developing products with an accurate understanding of grower requirements and the environment and based on future market predictions; having researchers from various fields work together as a team to develop products; and ensuring each researcher has a wide range of expertise allowing them to make comprehensive value judgments at the researcher level.

In product development for the global market, which in recent years has seen significant growth, we have established testing and research bases in various countries where we are developing products optimized for local natural environments and climates, as well as for customer needs.



Chemical Research Institute ShIP

The "Shimizu Innovation Park / ShIP" Chemical Research Institute that began operation in October 2023 integrates three chemical research centers formerly dotted around Shizuoka Prefecture in Shimizu-ku, Shizuoka City, where Kumiai was founded. As a center for accelerating innovation through synergy, the facility incorporates advanced design features such as interconnected living spaces linked by an open atrium and grand staircase, state-of-the-art experimental equipment, and the use of renewable energy sources.



Chemical discovery

Biological evaluation

Formulation Process development

[Structure exploration for new compounds] Chemical discovery



Structure exploration and the compounding of new bioactive compounds is the starting point for the development of agricultural chemicals. We synthesize compounds using the latest technology, and predict drug behavior by measuring their physiochemical properties.

[Fieldwork] (Biological evaluation



Once promising compounds are found, these are applied into pots and trial fields to test their effectiveness on pests and weeds, and their safety for the crops. These trials are conducted under various conditions to equalize the results of these evaluations.



Remember to always look ahead and use your imagination!

Researcher (Chemical Research Institute)

Research and development of agricultural chemicals takes at least 10 years. When considering the future needs of agriculture, we must always look ahead and use our imagination. Furthermore, our products are used not only in Japan but around the world, so every single day I feel it is my mission to contribute to solving the world's food insecurity. The operation of ShIP, equipped with cutting-edge experimental equipment, facilitates interaction among researchers thereby boosting their motivation.

Procurement and Production

A distinctive feature of our production system is the close collaboration between the factory and the research institute, allowing us to develop manufacturing methods that scale up from the experimental stage. This lets us achieve efficient production using our unique production technologies, and also reduce costs. Moreover, when outsourcing production, engineers from Kumiai visit the actual site to give instructions to ensure the stable supply of high-quality products.

Regarding the procurement of raw materials, we have built up a global supply chain covering our domestic and overseas group companies and our bases outside Japan in order to mitigate the impact of daily changes in market pricing. As well as securing alternative raw material suppliers, we are also strengthening our production system through the decentralization of production bases and a global expansion.

Additionally, we will work to reduce our impact on the environment by considering and implementing environmentally-friendly materials and equipment, and implementing measures for reducing greenhouse gas emissions.

[Shizuoka Factory] Production (active ingredients)



The Shizuoka Factory, our production base for compounds centering mainly on agricultural chemical active ingredients, produces and supplies compounds according to the needs of various fields including intermediates for pharmaceuticals and agricultural chemicals, and high-performance chemicals to the world. The plant also has waste treatment facilities including activated sludge treatment systems, which decompose and remove organic matter from wastewater, and liquid incineration facilities (top right), which instantaneously oxidize wastewater and waste oil into fully combusted gases, thereby ensuring clean production.

[Kogota Factory] Production (formulation)



[Tatsuno Factory] Production (formulation)



As formulation bases, we have established the Kogota Factory (Miyagi Prefecture) in eastern Japan, and the Tatsuno Factory (Hyogo Prefecture) in western Japan. In October 2022, a new high-performance, environmentally-friendly plant for water-dispersible granules was completed at the Tatsuno Factory to further efforts toward quality assurance and environmental conservation.

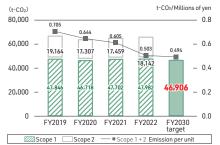
Procurement

Production (active ingredients)

Production (formulation)

Raw material procurement sources* Japan 23% Overseas Diverseas *2023, value base

[Mitigation of environmental impact] Production (active ingredients, formulation GHG emissions and reduction targets



Target companies for GHG calculation (7 companies):
KUMIAI CHEMICAL INDUSTRY, RIKENGREEN, IHARANIKKEI CHEMICAL
INDUSTRY, K-I CHEMICAL INDUSTRY, Ihara Construction Industry,
ONOMICHI KUMIKA INDUSTRY, and KUMIKA LOGISTICS.

In Kumiai Group, we are working to reduce GHG emissions by improving energy efficiency based on capital investment in factories, and by utilizing carbon-free, renewable power sources. By FY2030, Kumiai Group is aiming to reduce GHG emissions* from our seven major group companies by 30% from FY2019 levels.

*Scope 1 + 2

Voice

Even with automation, teamwork is still important

Production & Procurement Division (Shizuoka Factory)

We serve as a bridge between the factory and the research institute to ensure the stable production of products born out of years of research and development. To ensure efficient production while maintaining the desired quality, merely relying on machines and equipment is not enough-close communication with the shop floor is indispensable. When I actively talk with the team in my daily work, there are moments when I feel that the team is all on the same page. These are the moments I feel great joy.

Sales and Marketing

Our product portfolio includes hundreds of herbicides, fungicides, and insecticides, and our sales and marketing activities leveraging our detail-oriented sales network begin with "listening to the voices of our customers." We also have expert salespersons and engineers spread across our 11 bases in Japan who work in collaboration with JA, agricultural experiment stations and agricultural development centers run by JA and local governments. They can propose agricultural chemicals according to the location, perform on-site verification trials, conduct education on the appropriate usage of agricultural chemicals, and provide other after-sales services. In addition, information on new needs and changes in the agricultural situation obtained through daily communications is provided to research and development departments as feedback, leading to the planning and development of new agricultural chemicals.

Furthermore, we sell our proprietary products and active ingredients to over 50 countries around the world. We also provide local technical services, and conduct promotional activities and after-sales support at our overseas bases. We are developing new markets by accurately understanding customer needs and proposing appropriate usage methods that are in harmony with the environment.



Technical services and promotional activities

On-site verification

Sales & distribution

After-sales service

[Smart agriculture demonstration tests] Technical services and promotional activities



Kumiai is collaborating with a drone manufacturer to establish new spraying technologies. As well as drones, we are promoting smart agriculture by combining labor-saving tools such as radio-controlled boats and automatic water supply systems for paddy fields with our proprietary formulations.

[Strengthen sales capabilities] Sales and distribution



In collaboration with Singapore company Asiatic Agricultural Industries Pte. Ltd. (AAI), which manufactures and distributes agricultural chemicals and was acquired by us as a subsidiary in 2021, we are strengthening and integrating our sales network in Asia and Africa, and working to strengthen the sales capabilities of our Group in countries outside Japan.



The important thing is to listen. That's my motto.

Domestic Sales Division

Agrochemical products must be safe and secure in all environmental and usage conditions. In this sense, we perceive our role in which we interact with related organizations and growers daily as one of listening more than selling. Staying constantly close to the growers and taking on board their input underpins Kumiai's research and development activities. With this in mind, we visit our areas of responsibility every day.



I feel really involved in global food issues.

Overseas Sales Division

I visit overseas growers and distributors, directly promoting our products and offering technical services. I remember with fondness when a local grower told me that he had been using Kumiai products for 10 years. They have more diverse needs and more challenging situations than within Japan, but I have a real sense of being directly involved in improving the world's food production—I find this highly rewarding.

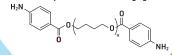
Expanding Kumiai's Chemical Products and Custom Manufacturing Business

The chemical products derived from manufacturing technologies developed in the process of developing agricultural chemicals are used in various aspects of our lives as raw materials for polymer materials, electronic materials, pharmaceuticals, and more.



Amine curing agents are used in surfacing for tennis courts and running tracks at athletics stadiums, as well as for wheels on roller coasters, contributing to improvements in safety, durability, and comfort.

Related product: Amine curing agents



Related article on the company's official website (in Japanese)

https://www.kumiai-chem.co.jp/products/chemical_products/familiar/





We manufacture high-quality chemicals that enable the production of safe pharmaceuticals. For example, parachlorobenzoyl chloride is used as a raw material for gastrointestinal medicine, contributing to the maintenance of a safe and healthy lifestyle.

Related product: Parachlorobenzoyl chloride

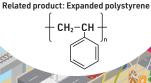


Cartires

High-performance fibers are used in tires, aircraft parts, firefighting protective gear, cables, and more. Aramid fibers, with their flame resistance, toughness, and chemical resistance, are one of these. Terephthaloyl chloride, produced using advanced chlorination technologies, and other substances are used as the raw material.

Related product: Terephthaloyl chloride





Highway

construction materials

Expanded polystyrene is used in areas where a

reduced load and soil pressure are required, such

as using as earth fill on soft ground or in areas

prone to landslides. This construction method

does not require large construction machinery, reduces environmental impact, and offers the benefits of shorter construction periods and lower costs. As such it is garnering attention, being used in many situations.



Smartphone circuit boards

Manufacture of raw materials for highperformance resins used in electronic substrates and aircraft components. Heat resistance and strength (high elasticity) can be adjusted as needed to create products suited to spec

Related product: Bismaleimide



Custom Manufacturing Business, fulfilling your desire to create

in the agricultural chemical business, Kumiai is engaged in custom manufacturing of chemical products. We offer products that meet customer requirements, along with a manufacturing flow so that these products are produced safely and at a low cost. By maximizing the use of our internal and external networks, we respond quickly to diversifying demands.

The Future of Kumiai — Future Lifestyles through Creative Science

Please take a look at how Kumiai aims to contribute to a safe, secure, and prosperous society in harmony with our theme of "Protecting and fostering life and nature."

Imagine File 01

Solving the world's problems through the power of science. Toward a world with no concerns about food

In this world, there are many people who suffer from inadequate nutrition. The agricultural chemicals that Kumiai has been continuously researching are essential for increasing crop yields and ensuring stable production. We will continue to research, develop, manufacture, and market our products with an eye to the global market, and continue to produce safe and highly effective agricultural chemicals. We are aiming toward a world with no concerns about food.



Imagine File 02

Enhancing the economic value of crops, and enriching the lives of those involved in agriculture

Agricultural chemicals are essential for ensuring stable yields and quality of crops, however, the types of pests, diseases, and weeds to be controlled vary greatly. We are facing instances of resistant pests, diseases, and weeds that do not respond to agricultural chemicals. In response to these issues, Kumiai is collecting information leveraging our domestic and overseas networks, and we are conducting extensive fieldwork and basic research. We are enhancing the economic value of crops, and enriching the lives of those involved in agriculture. That is Kumiai's dream.



Imagine File 03

Reducing workload, and achieving an ideal work-life balance. Making agriculture a popular profession for children

Japan has an increasingly aging society and a dropping birthrate, with the decrease in the number of farmers becoming an urgent issue. Kumiai is contributing to addressing these social issues through the development of new agricultural chemicals that reduce the work required in agriculture, as well as through the creation of smart agricultural systems utilizing agricultural drones and automatic water supply systems. In the future, we may see the day when agriculture will become a popular occupation among children.



Imagine File 04

Reduce plant- and animal-borne diseases, ensuring a healthy and prosperous life for everyone

The ubiquitous availability of healthy and fresh fruit and vegetables which we can enjoy safely and with peace of mind is because of the rigorous safety standards under which harmful pests and diseases are controlled by agricultural chemicals. Kumiai is committed to achieving further technical innovations in agricultural chemicals in order to ensure food safety, thus bringing about a society in which everyone can lead healthy and prosperous lives.



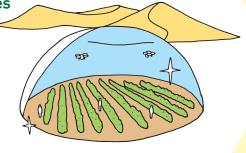
Corporate activities cannot proceed without blending knowledge and ideas from many talented individuals. Kumiai's slogan of Dreams and Triangle for Happiness of enhancing the happiness of individual employees thereby leading to a more happy society overall is a concept born from a management approach that values our human resources. We aim to create a new style of company that accelerates innovation with human resources as its starting point.

Imagine File 05

Through the discovery of new compounds and application of bio-stimulants*, we can

transform vast deserts into oases

As the global population continues to grow, it is thought that 67% of land is unsuitable for agriculture, leading to concerns about food shortages. Fulfilling the dream of being able to grow crops on this land may be possible through discovery of new compounds that can change the properties of the soil and of the crops, and application of bio-stimulants that can increase their tolerance to environmental stresses such as drought and high temperatures. These are exactly the areas in which Kumiai, a research and development oriented company, excels. Every day, we dedicate ourselves to these research efforts with the hope that these discoveries may save the earth.



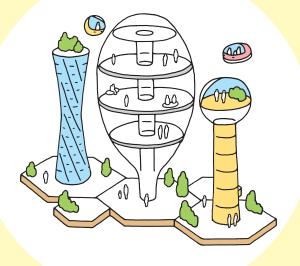
*Bio-stimulant

A variety of substances and microorganisms that enhance the health and resilience of plants by harnessing the natural power of plants and their surrounding environment.

Imagine File 07

Enhancing chemical product technologies that underpin manufacturing, to fulfill our dreams of future lifestyles

Kumiai's Fine Chemicals Business supports various manufacturing endeavors with expertise cultivated through years of agricultural chemical development. In our future lives, we should expect to see the emergence of groundbreaking products and services that overturn conventional wisdom. So that we can meet the demands of such innovation, we are making steady efforts in basic research, and engaging in the development of a wide range of technologies.



Evolving Agricultural Chemicals Contributing to a Sustainable Future

What role should agricultural chemicals play in future society? At Kumiai, we envisage the following.

Worsening global food issues

Global food problems continue to worsen, with around 700 million people now said to be facing starvation. Concerns have also been raised about the agriculture underpinning this, including environmental damage from climate change, limits to the expansion of cultivated land, and the vulnerability of production bases due to fewer agricultural workers. The sustainable development goals (SDGs) adopted by the United Nations also include targets related to hunger, climate change, and the natural environment, all considered urgent challenges facing humanity. In 2021, the Japanese government also introduced the "Strategy for Sustainable Food Systems, MIDORI" to build sustainable food systems, and this set a goal of "reducing agricultural chemical usage by 50% by 2050 on a risk-conversion basis" as a way of addressing food issues, while also the environment into consideration. This shows that low-risk, highly active agricultural chemicals are required in order to try to improve yields, productivity, and safety within limited agricultural land.

Solving these issues is one goal that we aim to achieve as a company with agricultural chemicals as a mainstay business, and these have already been incorporated into our various business strategies.

Agricultural chemicals born from nature evolved through science

At their heart, the primary purpose of agricultural chemicals is to control diseases, pests, and weeds. Plants naturally possess defense systems using toxic substances and bitter compounds to protect themselves, however, these have been weakened through selective breeding of the plants for use as food. Since the ancient Egyptians, people have been using sulfur, olive oil, and other substances to compensate for this. Using the power of science, modern agricultural chemicals have evolved from these natural pest control substances. In some cases, natural materials may contain ingredients harmful to humans and the environment, however,

agricultural chemicals have been carefully designed to eliminate such harmful substances and to be effective only on specific targets.

In the modern world, there are strict legal standards, with only products that are deemed to be harmless to crops, users, consumers, and the environment able to be sold.

While agricultural chemicals have a negative connotation, they represent a culmination of chemical technologies that minimize risk while demonstrating greater efficacy than natural pest control substances.

Agricultural chemicals in building a prosperous society

Developing agricultural chemicals that meet extremely high standards in terms of effectiveness and safety for living organisms and the environment is generally considered to take around 10 years and 25 to 30 billion yen in research and development. This is because discovering useful ingredients is an interminable endeavor comparable to finding a single type among 160,000 compounds.

Looking forward, we will need to further enhance our technical development capabilities so that we can address increasingly complex and sophisticated societal challenges. To this end, we are focusing on strengthening our research infrastructure by establishing the Shimizu Innovation Park / ShIP research institute, equipped with cutting-edge facilities, and acquiring companies with unique expertise in microbiology and ICT utilization as our subsidiaries. In addition to the development of new agents to control pests and weeds, we are accelerating innovation in many other areas such as research into new compounds that increase plants' own resistance, and using ICT and Al technologies to streamline agricultural work.

Agricultural chemicals have the potential to contribute to solving global food issues. As leading innovators in this field, we are adamant that we have the responsibility through our research and development activities to support global agriculture, and ultimately support a sustainable society as a whole. This spirit is encapsulated in Kumiai's philosophy—"Protecting and fostering life and nature."

Corporate Information

Company name

KUMIAI CHEMICAL INDUSTRY CO., LTD.

Address of Head Office

4-26, Ikenohata 1-chome, Taito-ku, Tokyo 110-8782, Japan

Telephone

+81-3-3822-5036

Established

June 20, 1949

Share capital

4,534 million yen

Stock exchange listing

Tokyo Stock Exchange Prime Market

Business activities

Manufacturing and sales of agricultural chemicals including insecticides, fungicides, and herbicides Manufacturing and sales of chemical products such as organic intermediates and amine curing agents

Company's official website



https://www.kumiai-chem.co.jp/english/

Main offices

< Offices >

Head Office

Sapporo Branch

Tohoku Branch

Tokyo Branch

Nagano Sales Office

Niigata Sales Office

Nagova Branch

Shizuoka Sales Office

Osaka Branch

Chu-Shikoku Branch

Matsuyama Sales Office

Kvushu Branch

< Research locations >

Chemical Research Institute

(Shimizu Innovation Park)

Process Chemistry Research Center

Formulation Technology Research Center

New Molecule Research Center

Life Science Research Institute

Agrochemical Research Center

Life & Environment Research Center

< Production bases >

Shizuoka Factory Kogota Factory Tatsuno Factory

< Domestic Group Companies >

RIKENGREEN CO., LTD. (Agricultural chemical, industrial chemical production and sales)

IHARANIKKEI CHEMICAL INDUSTRY CO., LTD. (Organic intermediate production and sales)

K-I CHEMICAL INDUSTRY CO., LTD.

(Organic intermediate, industrial chemical production and sales)

Ihara Construction Industry Co., Ltd.

(General construction business, chemical product production and sales)

ONOMICHI KUMIKA INDUSTRY CO., LTD. (Agricultural chemical production and sales)

RYOCHI SANGYO CO., LTD. (Agricultural chemical sales)

NIHON PRINTING INDUSTRY CO., LTD. (Printed material production and sales)

KUMIKA LOGISTICS CO., LTD. (Transport and warehousing)

ASADA SHOJI CO., LTD. (Agricultural chemical sales)

NEP CO., LTD. (Environmental conservation, human resource dispatch)

Agricore Corporation (Agricultural produce production, cultivation technology licensing and biotechnology-related business)

GRA Inc. (Agricultural produce production and sales, research and development of agricultural technologies, support business for new farmers, etc.)

< Overseas Group Companies>

K-I CHEMICAL U.S.A. INC. (Agricultural chemical import/export)

K-I CHEMICAL EUROPE SA/NV (Agricultural chemical import/export)

K-I CHEMICAL DO BRASIL LTDA. (Contracted operations)

Iharanikkei Chemical (Thailand) Co., Ltd. (Organic intermediate production and sales)

PI Kumiai Private Ltd. (Agricultural chemical production and sales)

Asiatic Agricultural Industries Pte. Ltd. (Agricultural chemical production and sales)

KUMIKA KOREA CO., LTD. (Agricultural chemical research and development, and import)

KUMIAI CHEMICAL SHANGHAI CO., LTD. (Agricultural chemical import/export)





KUMIAI CHEMICAL INDUSTRY CO., LTD.

4-26, Ikenohata 1-chome, Taito-ku, Tokyo 110-8782, Japan +81-3-3822-5036

Company's official website: https://www.kumiai-chem.co.jp/english/



