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R&D is the source of our group's growth. We will strengthen our R&D capabilities and accelerate the creation of innovation through proactive investment and human capital development.

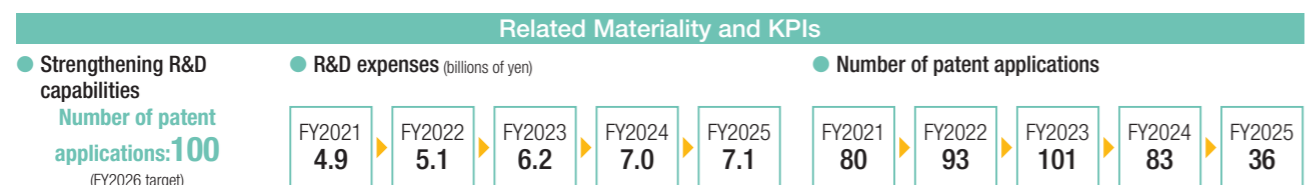
Our group has developed through the provision of products such as agricultural chemicals and chemical products that contribute to solving social issues and improving people's lives. R&D is the driving force behind this, and there is demand for the creation of further innovation.

In the Agricultural Chemicals and Agriculture-Related Business, proprietary agricultural chemicals such as AXEEV®, EFFEEDA® and DISARTA® are currently driving business. We have already filed an application for agricultural chemical registration of the new miticide, Flupentiofenox (VANENTA®), and R&D of subsequent chemical pesticide pipelines is progressing steadily. In recent years, the number of patent applications filed by us has remained at a high level, and we expect this number to stay at a high level of nearly 100 applications per year as the development of our pipelines continues to progress and expand. In addition, the microbial pesticide ECOARK® was registered as an agricultural chemical in March 2025 and will be launched in FY2026. We will continue to develop solutions to solve the global issue of stable food production.

In the Fine Chemicals Business, which is being developed as our second pillar, we are working on the development of new semiconductor materials that utilize technologies owned by our group. We will also actively introduce technologies from outside to promote product development.

In order to strengthen our R&D capabilities, which form the foundation of our business, we are investing in hardware, such as updating facilities at our research institutes. In addition, we are using AI and other new technologies to speed up the creation of new agricultural chemicals, while also proactively developing human capital to support R&D.

As an R&D department that supports our group's growth, we will accelerate the creation of innovation.



Our Strengths in R&D

We are an R&D-oriented enterprise whose mainstay business is agricultural chemicals. Our strength lies in our R&D system that covers the whole process of agricultural chemicals development, which requires a wide range of expertise. The development of new agricultural chemicals requires a wide range of technological capabilities, including chemical discovery and synthesis, biological evaluation, safety assessment, environmental impact assessment, formulation development, and process development. We generate innovation through strong collaboration between the Chemical Research Institute and Life Science Research Institute, based on the free

thinking of researchers who voluntarily and proactively tackle research issues. Our current success is due to the high level of integration of four elements: talented human capital with extensive knowledge in a wide range of fields, global market forecasts rooted in agricultural production sites, accumulated development know-how, and proactive R&D investment.

R&D must always look 10 to 20 years into the future. We will maximize the effective use of management resources and continue to create new value by implementing long-term strategies based on meticulous information gathering.

Current Status and Future Measures

In the Agricultural Chemicals and Agriculture-Related Business, we will prioritize the early commercialization of new agricultural chemicals, and aim to maximize sales volume of our active ingredients, EFFEEDA® and DISARTA®, by expanding overseas.

Regarding the development of new chemicals, the

miticide, Flupentiofenox (VANENTA®), is in the process of registration as an agricultural chemical, and we are developing a new insecticide for paddy rice. In addition, we have pipelines for multiple herbicides, fungicides, and insecticides in the practical evaluation stage, and we will make maximum use of internal and external resources to

rapidly advance development. We have also begun development of the herbicide EFFEEDA® in the U.S., aiming to develop it into a mainstay product alongside AXEEV®. Development of the fungicide DISARTA® is underway with a view to expanding its application in fields other than paddy rice both domestically and internationally. In addition, our first biostimulant NATSU-TSUYOSHI, which alleviates high-temperature damage to crops, is scheduled to begin sales in 2026. In addition to agricultural chemicals, we will proactively engage in research and development of various technologies that support agricultural production.

In the Fine Chemicals Business, we are promoting efforts to develop semiconductor substrates that use in-house technologies and high-performance materials

used in various sensors. In addition to introducing technologies from external research institutes, we are building a collaborative system with group companies to further accelerate research and development.

As an initiative to strengthen R&D capabilities, we are currently constructing a new research building for the Life Science Research Institute, following the completion of the Chemical Research Institute in 2023. At the same time, we are developing efficient development methods, such as target-based screening methods that utilize IT and AI. We also focus on developing the human capital that drives research and development, and provide a wide range of challenging opportunities to support the creativity and growth of researchers.

Status of Development of New Active Ingredients and Technologies

	Field	Before launch		After launch
		Evaluation stage	Development stage	Region/crop expansion
Insecticides				
Flupentiofenox (VANENTA®)	Miticide		●	
Insecticide A	Insecticide for paddy rice		●	
Insecticide B	Insecticide for paddy rice and horticulture	●		
Fungicides				
DISARTA®	Fungicide for paddy rice			●
Fungicide A	Fungicide for fruit trees and vegetables	●		
Fungicide B	Fungicide for field crops	●		
Herbicides				
EFFEEDA®	Herbicide for wheat and paddy rice			●
Herbicide A	Herbicide for field crops	●		
Herbicide B		●		
Microbial pesticides and biostimulants				
ECOARK®	Microbial pesticide for the control of crown gall			●
Microbial pesticide A	Microbial pesticide for fruit trees and vegetables	●		
NATSU-TSUYOSHI	Biostimulant			●
Microorganism A	Biostimulant	●		

TOPICS Example of Value Creation in Research and Development

ECOARK® (active ingredient: non-pathogenic *Rhizobium vitis* ARK-1 strain) is a microbial pesticide jointly developed with Okayama Prefecture and K-I CHEMICAL INDUSTRY CO., LTD., and is an effective control agent against crown gall, which occurs in various crops. This disease forms galls on the roots and stems of plants, causing stunted growth and death, and it is difficult to control. It has been having a serious impact on wine production both in Japan and overseas, especially on grapes used for winemaking. ECOARK® has been put to practical use as the only control agent capable of controlling this crown gall disease in grapes. As it is a soil-borne bacterial disease, evaluating the effectiveness of control measures is extremely difficult. However, through repeated refinement of the testing system and treatment methods, we have established a usage method that balances practicality with high control effectiveness. Furthermore, with regard to storage stability, which is an issue with microbial pesticides, we have achieved formulations that can be stored for long periods of time through freeze-drying. As the only option for a disease that is difficult to control with chemical pesticides, and as a new product in our microbial pesticide brand ECO Series, which conforms with the "Strategy for Sustainable Food Systems, MIDORI," this product will contribute to resolving issues at agricultural sites.



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