

Low Environmental Impact Products

In the pursuit of a more prosperous life, humans are having a significant impact on the global environment, which is the foundation of our lives. With environmental issues such as climate change, water shortages, and deforestation becoming more serious, we are firmly committed to realizing one of its key policies, “Contribution to a sustainable agricultural industry.”

Contribution to a Sustainable Agricultural Industry

Having established the Kumiai Chemical Group Basic Policy on the Environment, we research, develop, and produce environmentally-friendly products, and provide customers with products and services with low environmental impact. In doing so, we aim to indirectly contribute to the development of a recycling-oriented society by using water resources sustainably, conserving resources, and reducing waste.

Products with Low Environmental Impact

Field crop herbicide
AXEEV®



Our mainstay product, AXEEV®, is a field crop herbicide that can be used for the world’s major crops, such as soybean, wheat and corn. AXEEV® was developed with the target that has better efficacy at one-tenth the dosage compared to conventional field crop herbicides. Nowadays, AXEEV® is selling well in the U.S., Brazil, Argentina, and other countries. Demand for AXEEV® is expected to increase as a low-carbon product that not only reduces environmental impact by reducing the amount of chemicals used but is also highly-efficient during manufacturing and transportation.

Labor-saving formulation
MAMETSUBU®



MAMETSUBU® is a water-surface application formulation for paddy rice that we developed independently. The size of common granules is about 0.8 to 1.2 mm, and when applied to paddy fields, they sink to the bottom of the water and the active ingredients gradually dissolve out of the granules. On the other hand, MAMETSUBU® has larger granules (3 to 8 mm in diameter), which float on the surface of the water and disperse and disintegrate in a short time when spread in the paddy field, allowing the active ingredients to spread throughout the paddy field. Conventional herbicides for paddy rice required 1 to 3 kilograms per 10 ares. However, MAMETSUBU® requires only 250 grams per 10 ares, about one-tenth the amount of conventional products. Not only is the time and labor required for application greatly reduced, but energy use and greenhouse gas (GHG) emissions associated with the distribution of agricultural chemicals are also reduced.

Microbial pesticides
KUMIAI ECO Series



Microbial pesticides are biological pesticide that have been refined to function as pesticides by finding usable substances from bacteria and filamentous fungi that exist in nature and using proprietary culture and formulation technologies. In 2003, we began selling ECOHOPE, our first microbial pesticide, as a rice seed disinfectant. Subsequently, we launched ECOHOPE DJ, which can be stored at room temperature and has expanded the range of diseases to which it can be applied and improved the stability of its effects, and ECOSHOT, a horticultural fungicide with extremely low staining on fruit and excellent storage properties. Special cultivation that reduces the use of agricultural chemicals and fertilizers to 50% or less and environmentally-friendly IPM (Integrated Pest and Weed Management) have been attracting attention recently. Our KUMIAI ECO Series is chosen by farmers practicing special cultivation and IPM because it conforms to the Japanese Agricultural Standard (JAS) for organic agricultural products and is not counted in the number of active ingredients.

Paddy rice herbicide
NOMINEE®



There are two main methods of rice cultivation: transplanting and direct seeding. Among the latter, dry direct seeding is gaining attention in water-stressed countries due to its substantial water savings, as it involves sowing seeds directly into dry paddy fields and flooding the fields only after the seedlings are established. The paddy rice herbicide NOMINEE® is widely used in direct seeding for its high safety on rice is also for weed control, which is a problem in dry direct seeding.

Column | Raising Awareness About the Safety and Necessity of Agricultural Chemicals

The need to produce sufficient food to feed the growing population has emerged as a global issue. Agriculture itself is facing various issues such as climate change, limits to the expansion of land for cultivation, and a decrease in the number of farmers. Agricultural chemicals contribute to the resolution of these issues. A survey by the Japan Plant Protection Association shows that without the use of agricultural chemicals, the yields of rice and apples are reduced by about 24% and 97%, respectively. Other crops would also inevitably suffer from lower yields and poorer quality. Appropriate use of agricultural chemicals helps maintain quality and yields while enhancing food safety and security.

Agricultural chemicals also make a significant contribution to labor-saving in agriculture while reducing environmental impacts. In the past, 3 kilograms per hectare of active ingredient had to be applied per hectare, but thanks to technological advances, some agricultural chemicals now require as little as 30 grams per hectare. Not only is the time and labor required for application greatly reduced, but the reduced use of active ingredients also help lower environmental impact. Furthermore, energy use and GHG emissions associated with the distribution of agricultural chemicals are also reduced.

Activities to Raise Awareness about Agricultural Chemicals

We conducts awareness-raising activities to communicate accurate knowledge of agricultural chemicals and deepen understanding of agriculture.

In FY2024, we launched a new program called “Food Education Program for High School Students: Group Discussions on Food Production.” Under the theme “Let’s think about food production—what would happen if agricultural chemicals disappeared from the world?”, participating schools held group discussions and wrote reports. A total of 98 groups with 433 participants took part, and the group selected for the Excellence Award was invited to visit our Chemical Research Institute (ShIP). The report on the Excellence Award is available for download on our official



website.
https://www.kumiai-chem.co.jp/sustainability/kumika_special/06/ (in Japanese)



We have also created a series of brochures on agricultural chemicals used for crops. To date, we have published brochures on rice, apples and tangerines, capsicum and potatoes, and cabbages and tea. The brochures include cartoons to explain the role of agricultural chemicals in crop cultivation. Distributed to schools and at agriculture-related events, the brochures are also used in classes given by us at schools.

Through these activities, we aim to enhance our corporate value by disseminating accurate information on agricultural chemicals and foster an environment in which growers and our employees can handle agricultural chemicals with confidence.

