



Kao Corporation Earth Corporation

February 29, 2024

Kao and Earth Collaborate in the Field of "Insect (Mosquito) Control" in Thailand

Earth Launches Spray to Eradicate Mosquitoes based on Kao's Technology

Kao Corporation and Earth Corporation share the goal of contributing to solving the problem of mosquito-borne infectious diseases and have begun collaborating to address this issue. Applying Kao's technology that prevents mosquitoes from flying by wetting their wings and bodies*, Kao and Earth have developed the *ARS Mos Shooter*, a spray that can eradicate mosquitoes "anytime, anywhere" in everyday life. It will be launched in Thailand from July 2024, where Earth has been active domestically for about 40 years.

* Kao News Release dated June 20, 2023: Focusing on the Surface of the Mosquito's Body to Control Mosquito Behavior Using a Surfactant: New Technology Development to Eradicate Mosquitoes Without Using Insecticides



ARS Mos Shooter

Background

Dengue fever is a viral disease spread by mosquitoes. Many of those infected are children, and serious cases can result in death. There is currently no vaccine or treatment for dengue fever, therefore it is critical to avoid being bitten by disease-carrying mosquitoes and to minimize mosquito outbreaks. Furthermore, it has long been a social issue in Southeast Asia and other parts of the world, due to the significant economic burden it entails.

The number of people infected with dengue fever has increased in recent years as a result of global warming and rapid urbanization, which has widened the habitat of mosquitoes that carry the virus, and the number of dengue fever cases in 2023 was the largest ever recorded globally.

Kao has been conducting unique research from an entirely new perspective to protect people from mosquitoes. In 2023, Kao developed a new technology that prevents mosquitoes from flying by wetting their wings and body surfaces, keeping them in a "knocked down" state. Because it does not use conventional chemically manufactured insecticidal components, this approach has the potential to contribute to a wider range of applications.

Earth Corporation founded ARS Chemical (Thailand) Co., Ltd. (now Earth (Thailand) Co., Ltd.) in Thailand in 1980. Earth (Thailand) single-handedly manages development, sales and distribution of, for example, the insect control item brand *ARS* as a local subsidiary in Thailand. It has grown by learning about the country's living habits and needs, as well as conducting business with locals. In addition, Earth (Thailand) is collaborating with educational organizations such as the Ministry of Public Health and schools to offer consumer-oriented instructional programs.

Based on the shared goal of contributing to solving the problem of mosquito-borne infectious diseases, the companies developed a spray that eradicates mosquitoes from a new perspective. Both Kao and Earth believe that this product will help people living in areas suffering from dengue fever.

About this product

This mosquito eradication spray was commercialized by combining Kao's technology that prevents mosquitoes from flying by wetting their wings and bodies with Earth's expertise. It uses a trigger that constantly sprays a fine mist, knocking down both flying and hidden mosquitoes. Because it does not contain chemically manufactured insecticidal components, it can be used in settings where the use of insect control products has previously been avoided, as well as in combination with conventional products to provide more comprehensive insect (mosquito) control.

Product name	Scents	Net contents	Vendor
ARS Mos Shooter	Lemongrass	370 ml	Earth (Thailand) Co., Ltd.
	Floral		

Product features

- A spray that knocks down and eradicates mosquitoes with a fine mist.
- It is effective against both flying and hidden mosquitoes. It can be used anytime and anyplace necessary
- No chemically manufactured insecticidal components
- Active ingredient: Contains lemongrass oil

Launch date and region

July 2024 / Thailand

About sales strategy

Earth has been increasing sales of daily necessities that support comfortable living, such as insect control products, in Thailand, and currently has a high market share. It will continue to seek to increase its share in the Thai market by introducing the mosquito eradication spray from a new perspective.

Regarding collaboration

Yoshihiro Hasebe, President and CEO, Kao Corporation

Kao has set the vision of its Mid-term Plan 2027 (K27) as "protecting future lives." Above all, protecting people's lives from mosquito-borne infectious diseases, which pose a global threat, is a critical concern, and we have been conducting research with an unprecedented approach on how to protect people from mosquitoes. We are supplying the technology which skillfully controls water to eradicate mosquitoes for people in Thailand for this product. Together with Earth Corporation, Kao aims to help people live more safe and secure, and contribute to creating life free of mosquitoes.

Katsunori Kawabata, President & Representative Director, Earth Corporation

Earth Corporation is dedicated to "acting to live in harmony with the Earth." Based on this corporate philosophy, Earth, a total care company for infectious diseases, has strived to improve the health and comfort of people all over the world, as well as to avoid infectious diseases transmitted by insects. We shared our ideas with Kao Corporation, pioneered a new field through collaboration with new technology and created products with new value. We will continue to stand by people in their daily lives not only in Japan, but all across the world, and will work to make those lives even richer and more comfortable.

Company profiles

Kao Corporation

Representative	Yoshihiro Hasebe, President and CEO, Representative Director	
Address	14-10, Nihonbashi Kayabacho 1-chome, Chuo-ku, Tokyo 103-8210, Japan	
Established	May 21, 1940 (founded June 19, 1887)	
Business description	Consumer products businesses, including Hygiene & Living Care, Health &	
	Beauty Care, Life Care, and Cosmetics, and the Chemical business to meet the	
	needs of industry	

Earth Corporation

Representative	Katsunori Kawabata, President & Representative Director	
Address	12-1, Kanda-Tsukasamachi 2 chome, Chiyoda-ku, Tokyo 101-0048, Japan	
Established	August 26, 1925 (founded April 1, 1892)	
Business description	Manufacture, sale and import/export of drugs, quasi-drugs, medical tools,	
	everyday goods, etc.	

About Kao

Kao creates high-value-added products and services that provide care and enrichment for the life of all people and the planet. Through its portfolio of over 20 leading brands such as *Attack, Bioré, Goldwell, Jergens, John Frieda, Kanebo, Laurier, Merries*, and *Molton Brown*, Kao is part of the everyday lives of people in Asia, Oceania, North America, and Europe. Combined with its chemical business, which contributes to a wide range of industries, Kao generates about 1,530 billion yen in annual sales. Kao employs about 34,300 people worldwide and has 137 years of history in innovation. Please visit <u>the Kao Group website</u> for updated information.

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