**Employee roundtable discussion** 

Growth strategy of the ISEKI Group —environmental response—

# Reducing the environmental impact of agriculture and landscape maintenance operations globally with ISEKI technology



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In Project Z, under which the Company aims to formulate and implement measures for fundamental structural reform and growth strategies, the ISEKI Group has identified "Leverage ISEKI technology to realize on a global scale reduced impact on the environment for agriculture and landscaping" as one of its key themes. This year's session featured a roundtable discussion among key front-line people on the themes of environmental response and value creation initiatives that leverage the ISEKI Group's strengths.



#### How do you position the environment in your business activities?

Kitagawa: The Green Innovation Promotion Section, to which I belong, conducts research and formulates development themes with an eye to developing electric products and utilizing new energy sources such as decarbonized fuel and hydrogen toward the realization of a carbon-neutral society.

Agriculture and landscaping business, which benefit from nature, are closely related to the environment and climate change, and significantly impact the Group's business environment.

Based on this perspective, we have positioned the "realization of a decarbonized and recycling-oriented society" as one of our priority issues (materiality). And, in our Environmental Vision revised in 2022, we have set the goal of creating a carbonneutral, sustainable society by 2050 by providing innovative products and higher quality of services to the customers. In addition to promoting the dissemination of our business activities, products, and services, we have announced our endorsement of the Task Force on Climate-related Financial Disclosures (TCFD) recommendations in 2022 and operate our own eco-product certification system.\*1 We are working to develop products that

contribute to mitigating environmental impact throughout their lifecycle, from raw material procurement to product disposal.

\*1: Our unique system that certifies products with high environmental conformance that clear internal evaluation criteria in areas such as conservation of energy and labor, environmental burden reduction, resource conservation, and consideration of biodiversity.

**Sogabe:** As a supporter of our customers' farming business, the Dream Agricultural Solution Promotion Department is committed to environmental initiatives. We believe that mitigating environmental impact in line with the Ministry of Agriculture, Forestry and Fisheries' policy, "Strategy for Sustainable Food Systems, MIDORI" is a key theme. Large-scale farmers are more highly aware of environmental conservation. From 2024, cross-compliance\*2 will also be required in order to receive subsidized projects. In response to this farming business environment, we plan to work on both expanding organic agriculture and reducing chemical fertilizers. To this end, we intend to steadily and repeatedly conduct verification testing, and provide environmentally friendly agricultural solutions while maintaining yields and profits.

\*2: To ensure that implementing support does not create a new environmental burden by mandating the practice of minimum environmental impact reduction efforts when receiving subsidies from the Ministry of Agriculture, Forestry and Fisheries (MAFF), etc.

Seri: In Europe, while complying with various environmental regulations, we provide landscape maintenance machinery used for park and street cleaning. Within our business history of more than five decades, we have a proven track record of, and take pride in, having supported European urban development and expanding our business. In the meantime, the "European Green Deal" was announced in 2019. Our mainstay diesel engine products are also required to be carbon neutral. While this constitutes a major change in direction, our basic policy remains the same as it has been. As a company that supports European landscape maintenance, which is an essential business, we will continue to offer new electric and other products to satisfy new market demands.





**Kitagawa:** From a development standpoint, I think it is important to consider how we can add value to the electrification process. Transitioning from diesel engines to electric power will lead to greenhouse gas emissions in customer use dropping to zero. Looking ahead to the next phase, we are discussing with the production and sales sections how to provide added value to customers and the market and how to then link this to profitability. We are in the process of developing electric products with value only ISEKI can provide.

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## What solutions do you offer to help resolve issues for customers and the environment?

**Sogabe:** Even with regard to the solutions we provide in our domestic business, we concentrate on how we can offer high added value. One such effort is focused on variable fertilizing technology, which prevents the application of excess fertilizer, thus reducing the environmental burden. The use of a variable fertilizer rice transplanter equipped with a real-time automatic fertilizer adjustment function—our best weapon—has resulted in a 15% reduction in chemical fertilizer use compared with conventional systems, while verified results show it ensures the same yield and quality as conventional systems. The technology is highly regarded by customers as it reduces environmental impact while also making possible low-cost cultivation. Furthermore, a new rice transplanter compatible with the xarvio® FIELD MANAGER\*3 fertilizing map went into full-scale operation in the spring of 2024. We are augmenting our variable fertilizer agricultural machinery lineup. Moreover, we are working to expand the use of organic farming in wet-rice cultivation, centered on the Aigamo-Robo, an automatic weeding robot. In a verification test conducted with the National Agriculture and Food Research Organization (NARO), Tokyo University of Agriculture and Technology, and Newgreen Inc. (formerly Yukimai Design Co., Ltd.), mechanical weeding frequency was reduced by an average of 58%, and yields increased by an average of 10% over conventional organic cultivation. There is great promise in organic and other environmentally sound agriculture as a market. We are convinced that this is a field in which we can leverage our singular strengths in proposals and providing support for farm business from both a tangible aspect such as smart agricultural machinery, and an intangible aspect such as farm business technology.

\*3: Al-based cultivation management system recommended by Japan's National Federation of Agricultural Cooperative Associations (JA Zen-Noh). Al analysis of data such as soil and crop variety characteristics, weather information, and satellite images will enable the creation of efficient cultivation management plans.

Seri: In Europe, we are also focusing on rolling out environmentally friendly products. In 2022, we became Japan's first manufacturer to introduce an electric riding lawn mower to the market on a limited basis. The reason the release was on a limited basis was not only to gather know-how in terms of product development and production, but also to accumulate know-how in battery storage—which diesel engine-equipped machines do not have—as well as after-sales service and logistics, and to ascertain user needs. We achieved a certain degree of success as individual and semi-professional users, the target audience for the product, was sufficiently impressed by the development theme, "ensuring performance on a par with diesel engine specifications." We have also introduced products compatible with the use of hydrotreated vegetable oil (HVO) fuel, made by hydrotreating used cooking oil and other raw materials, to our diesel engine-powered product lineup. To heighten the competitiveness of our products, we plan to sequentially roll out the product in all models by 2025.

Kitagawa: We based the electric riding lawn mower on a small diesel engine model that had been well received in the European market—where environmental awareness is particularly high—as it allows us to respond swiftly to market needs. Although there are still numerous issues to overcome in the electrification of medium- and large-scale machines for professional users, such as extending continuous working hours, reducing the time required for recharging, and cost, we will effectively link the many opinions we obtained through monitoring surveys of previous small-scale machines to the development of the next generation of electric products.



### Please tell us about any plans you have for future initiatives.

Kitagawa: While enhancing our own core technologies, instead of settling on a self-sufficient approach, we intend to generate new value by proactively incorporating highly specialized external technologies and ideas. We will collaborate with companies—including start-ups—as well as suppliers, universities, and government agencies more than we did previously to accelerate and streamline technology development in growth markets. We view it as important to achieve carbon neutrality not only through electric products—the keyword up to this point—but also, depending on the application and region, through the optimal combination of energy and technology. This includes the use of decarbonized fuels and hydrogen.

We will continue, through product development, to deliver value to our customers and the market that only ISEKI, an integrated manufacturer specializing in agricultural machinery, can offer, and we will strive to play a role in the food supply as well as in creating livable communities. As an extension of this, we would like to contribute to the creation of a social environment where young people, the leaders of the next generation, will want to choose a career in agriculture and the landscaping business itself, by making it more appealing.

**Seri:** We believe that we have built our current position in Europe together with our customers. We are now in a period of significant change in European environmental policy. As Mr. Kitagawa noted, we feel that we need to show agility in developing products that satisfy user needs. This includes transitioning to decarbonized fuels and electrification. Europe is the most vital region of our overseas endeavors. We intend to continue expanding our business in the environmentally conscious European market by providing high value-added solutions that focus on resolving issues that our customers and the global environment are faced with.



Sogabe: I believe that future initiatives will be concentrated on smart agriculture that utilizes cutting-edge technology and data and the term "environmentally sound agriculture" that I mentioned earlier. In my own, frank words, I would characterize it as "the achievement of profitable agriculture." Farmers are working very hard to realize sustainable agriculture. But it is ultimately meaningless without both sides involved. We would like to collaborate with farmers to make laborsaving, low-cost farming possible while also realizing profitable farm management. We are presently promoting about 12 projects in cooperation with municipalities, private-sector companies, and producers nationwide and, through strengthened collaboration, we intend to push forward a series of initiatives and further upgrade and deepen our solutions in growth markets.

**35** ISEKI Report 2024 SEKI Report 2024