

News Release

P205/23e
May 17, 2023

BASF, Kubota and ZEN-NOH collaborate to help improve and optimize Japan's rice production

- **Integrating BASF's xarvio® FIELD MANAGER and Kubota's KSAS platform**
- **Delivering optimized fertilizer use through variable application maps**
- **Linking technologies for more convenience, income, and sustainability**

Cologne, Germany/Osaka, Japan – BASF, Kubota and ZEN-NOH will collaborate to help improve and optimize rice production in Japan.

The collaboration consists of two phases, beginning with the integration of BASF's advanced [xarvio® FIELD MANAGER](#) crop optimization platform with Kubota's state-of-the-art [KSAS](#) operating platform to assess operability.

The main aim of platform integration is to deliver greater convenience, increase yield, optimize fertilizer use, and provide a higher return on investment for farmers. This outcome would tackle many of the challenges affecting rice production in Japan, including an ageing workforce, labor shortages, and the consolidation of farmland. It would also help farmers become more sustainable, globally competitive and meet established fertilizer reduction targets listed in the country's [MeaDRI](#) strategy for sustainable food systems.

Phase two of the collaboration will test the performance of platform integration through field trials in rice crops, which will be managed by ZEN-NOH.

The field trials will be held during the 2023 growing season and involve farmers experienced with using xarvio FIELD MANAGER, Kubota's KSAS platform and its machinery. Here farmers will use the KSAS platform and Kubota rice transplanters to implement field-specific, xarvio FIELD MANAGER variable application maps for fertilization.

The results of these new field trials will complement those achieved in more than 100 field trials conducted in rice crops last year by ZEN-NOH and BASF. In last year's field trials, xarvio FIELD MANAGER's variable application maps for fertilization were used and compared to standard fertilization application practices. By using xarvio FIELD MANAGER's variable application maps, yield increases of between 15% to 20% were achieved, with an average fertilizer input reduction of 10% recorded. In some cases, depending on field conditions, fertilizer use was reduced by up to 50%.

Konstantin Kretschun, Global Head of BASF Digital Farming, comments: "Rice farmers in Japan recognize the need to become more sustainable and globally competitive, while reducing environment impacts and meeting MeaDRI strategy targets. Climate smart farming technology provides a proven, effective and available solution to help them achieve these goals. By working closely with Kubota and our valued partner in ZEN-NOH to connect offerings, we can together deliver even greater value to farmers and positively transform rice production in Japan."

In April 2021, BASF and ZEN-NOH launched xarvio FIELD MANAGER in Japan. Its success, particularly its strong adoption rate among farmers, is based on its ability to deliver consistent, field-specific, measurable agronomic benefits. The digital product uses proven plant models and agronomic algorithms in combination with multiple data inputs, including historical agronomic information, in-season risks, weather data and satellite-based biomass images to provide farmers with clear and prompt, field-specific agronomic recommendations to apply crop fertilization and crop protection.

By connecting xarvio FIELD MANAGER with Kubota's powerful KSAS farming and service support system, the seamless transfer and use of xarvio FIELD MANAGER's variable application maps for fertilization by KSAS compatible rice transplanters is realized, without the need for an added device for data transfer.

It is anticipated that full integration between xarvio FIELD MANAGER and Kubota's KSAS platform will be commercially available in Japan from spring 2024.

About xarvio® Digital Farming Solutions – a brand by BASF Digital Farming GmbH

xarvio® Digital Farming Solutions is at the forefront of the digital transformation of agriculture, optimizing crop production. Its products, xarvio® FIELD MANAGER and xarvio® HEALTHY FIELDS, use an advanced crop modelling platform to provide independent, timely and field-specific agronomic advice. xarvio's proven technology consistently delivers measurable benefits for farmers, helping them to produce crops more efficiently, sustainably, and profitably. For more information, please visit www.xarvio.com or any of our social media channels.

About BASF's Agricultural Solutions division

Farming is fundamental to provide enough healthy and affordable food for a rapidly growing population while reducing environmental impacts. Working with partners and agricultural experts and by integrating sustainability criteria into all business decisions, we help farmers to create a positive impact on sustainable agriculture. That's why we invest in a strong R&D (Research & Development) pipeline, connecting innovative thinking with practical action in the field. Our portfolio comprises seeds and specifically selected plant traits, chemical and biological crop protection, solutions for soil management, plant health, pest control and digital farming. With expert teams in the lab, field, office and in production, we strive to find the right balance for success – for farmers, agriculture, and future generations. In 2022, our division generated sales of €10.3 billion. For more information, please visit www.agriculture.basf.com or any of our social media channels.

About Kubota Corporation

Kubota Corporation is one of Japan's leading manufacturers of a comprehensive range of machinery and other industrial and consumer products. Since 1890, Kubota Corporation has offered various products including farm equipment, engines, construction machinery, pipe-related products, environment-related products, and social infrastructure-related products to contribute to improve human lives and society. With broad product lineup and its unique comprehensive strength, Kubota Corporation presents in more than 120 countries and strives to solve the worldwide problems related to food, water, and the environment, which are indispensable for human beings. Please visit Kubota Global Site for the latest news and more information.

About ZEN-NOH

The Japan Agricultural Cooperatives (JA) Group is an organization consisting of farmers' cooperatives, whose purpose is to protect and enhance agricultural management and the livelihood of farmers in the spirit of mutual assistance. The National Federation of Agricultural Cooperative Associations (ZEN-NOH) is in charge of the marketing and supply business of the JA Group. It seeks to connect producers and consumers, revitalize production centers, and preserve society and the environment. Through integration with prefectural-level JA federations in the course of organizational restructuring aimed at strengthening its business foundation, the ZEN-NOH Group has now 32 Prefectural Headquarters and one Prefectural Office nationwide.