FGV Pioneers Innovation for Local Fragrant Rice Paddy Cultivation

Fortified Field™ Fragrant Rice (3FR) programme integrates effective paddy cultivation methods through Agriculture 4.0

The DJI T2 Agras drone is used to map farming areas and monitor crop health, which enables treatment for specific affected areas

KUALA LUMPUR, 13 JULY 2021 – FGV Holdings Berhad (FGV) through its subsidiary, FGV Integrated Farming Holdings Sdn Bhd (FGVIF), innovates the local paddy and rice industry with the introduction of its Fortified Field™ Fragrant Rice (3FR) programme for effective fragrant rice paddy cultivation.

The 3FR programme is a comprehensive planting system that integrates paddy farming activities through smart agriculture practices, mechanisation, automation and Internet of Things (IoT) technologies. The initiative combines FGV's expertise in research, agronomy, crop nutrition, drone technology, and remote sensing to increase fragrant rice yields.

To date, FGV's 3FR programme has significantly increased the local fragrant paddy yield to seven metric tonnes (MT) per hectare, making it a preferred planting system among farmers. According to a report produced by Khazanah Research Institute, the national average paddy yield is hovering around four MT per hectare, while low yield granaries produce below three MT per hectare.

Harvesters filling up herbicide inside the drone, which has a maximum capacity of 20 litres for spraying to prevent weed growth

Azman Ahmad, FGV Group's Officer-In-Charge and Group Divisional Director of Logistics and Support Businesses said, that FGV will continue to pioneer in smart farming solutions and Agriculture 4.0 to increase production capacity and capabilities of local fragrant rice paddy farming.

"From utilising drone technology in the fields, to hyperspectral imaging in pest and disease control, the methods used in our 3FR programme has set a new benchmark for the paddy and rice industry in Malaysia. To ensure quality and traceability of our paddy, FGV also cultivates our own premium MRQ76 fragrant rice certified seeds to be distributed to appointed contract farmers participating in the programme."

"By providing continuous support and guidance, farmers will be able to increase their paddy yield and gain a potential income of RM13,300 per hectare, as compared to RM6,240 per hectare for traditional white rice paddy planting. Through this unique partnership with farmers, we hope to strengthen the rice supply chains in an economical and sustainable way, and build more resilient farms and communities," he continued.

FGV's 3FR programme includes advanced farming applications, automated transplanting machines, artificial intelligence in field and water resource monitoring, drones for spraying, lighter weight combined harvesters, and soil rejuvenating methods using microbes and biotechnology. For the upcoming planting season, FGV plans to expand its applications to include smart tractors, weather stations and field sensors to monitor field performance through precision farming.

The lightweight combined harvester is used to prevent damage on hardpan soil

As part of its business strategy moving forward, FGV targets to further expand the use of IoT by developing blockchain technology for agri-food production, which can ease access to supply chain data from farmers, as well as other chain stakeholders and consumers. This will result in an increase in food production traceability.

FGV's 3FR programme is in support of the Large-Scale Smart Paddy Field Programme (Smart SBB) initiated by the Ministry of Agriculture and Food Industry (MAFI) in February 2021. It is currently being implemented in 310 hectares of granary fields in IADA Seberang Perak and IADA Barat Laut in Selangor, together with more than 100 appointed local contract farmers.

The total area is expected to increase to 600 hectares by the harvest season at the end of July 2021, with a plan to expand to 1,500 hectares in the next three years.

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