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Meraque Reveals RACE, Malaysia's First Plantation Autonomous Ground Vehicle (AGV)

By Cynthia Ignatius - August 8, 2022



Meraque has unveiled the first ever Malaysian Autonomous Ground Vehicle (AGV). The AGV has been named RACE, an acronym for Robotic Agro in Complex Environment.

RACE was developed to reduce reliance on manpower and improve fertilizer spraying consistency in oil palm plantation fields. With a high-power computing module in the brain, RACE is able to navigate its way autonomously between plants, analyse surroundings for decision-making and routing as well as set boundaries using high-precision location points.

The unveiling was officiated by YB Datuk Hajah Zuraida Kamaruddin, Minister of Plantation Industries and Commodities, on the third day of the Malaysia International Agricommodity Expo & Summit (MIACES), at Malaysia International Trade and Exhibition Centre (MITEC) Kuala Lumpur.

YB Datuk Hajah Zuraida Kamaruddin, Minister of Plantation Industries and Commodities, said, “New innovations such as Meraque’s RACE will help accelerate Malaysia’s drive to be on the agro commodity global map and fortify Malaysia’s standing as the leading producer of agro commodity products internationally. It is a testament that our home-grown brands are more than capable of producing world-class solutions that have the propensity to solve real-world challenges plaguing the agro-industry.”

RACE comes embedded with a load capacity of 150L (equivalent to 150kg) for its small-scale prototype, which is suited for strip spraying. In contrast, the full-scale prototype is equipped with over 500L of load capacity to support both strip spraying and manuring activities. RACE can be integrated with other AGVs through its swarm technology and can navigate its swarm to complete projects expeditiously with it being carried out in phases.

Phase one of the project covers the AGV navigation spraying system in a complex environment such as the oil palm plantation to collect data and analyse patterns for AI training. Phase two will see the configuration of the high payload capacity and manuring activities. The final phase is where the deployment of the swarm happens after integration with the swarm technology.

CEO of Meraque, Md Razalee Ismail shared that in the spirit of Malaysia’s push to promote the nation as an international hub for agri commodity activities, Meraque’s efforts are all channelled at seeding the future of agriculture not just for Malaysia but across the globe through “Buatan Malaysia” innovations.

“With Meraque’s plantation AGVs that were built by infusing agricultural robotics with artificial intelligence, we hope to build a better tomorrow for the agricultural sector- helping more plantations in improving efficiencies, preserving yields, coping with labour costs and shortages, mitigating capricious weather, increasing production and maximizing profits, all while ensuring sustainable practices,” Razalee added.

Earlier last week, Meraque announced its partnership with Malaysia Debt Ventures Berhad (MDV), a subsidiary of the Minister of Finance (Incorporated) [MOF (Inc)] and an agency under the purview of the Ministry of Science, Technology, and Innovation (MOSTI), to facilitate the growth of Meraque’s operations and expansion in Malaysia and the ASEAN region, with a key focus on the agriculture, plantation, infrastructure and telecommunication sector, through MDV’s specialised financing facility.