

MTDC, UPM launch plant factory Programme to accelerate smart farming

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Malaysian Technology Development Corporation (MTDC) and Universiti Putra Malaysia (UPM) launched the Plant Factory - UPM MTDC Signature Programme, a flagship facility that brings smart indoor farming, vertical cultivation, and data-driven crop management under one roof.

MTDC, in a statement, said the programme, which was initiated in December 2020 under the MTDC-UPM Flagship Programme, aims to fast-track research-to-market outcomes for Malaysia's agro-food sector.

It said the Plant Factory is part of MTDC's university-based initiatives to catalyse urban agriculture and smart-farming models that are commercially and socially impactful, serving as a training hub, innovation platform, and industry bridge for Malaysia's agro food ecosystem.

The programme received total funding of RM582,025, with 40 per cent from MTDC and 60 per cent from UPM, and operations commenced on Jan 15.

In its first production tranche, the facility supplied Green Coral lettuce to a domestic buyer at RM6 per kilogram (kg) with an output of approximately 100 kg per week, while running trials on additional high-value crops such as Red Coral, Red Oak, Crispy Leaf/Ezfrill, Curly Kale, Baby Spinach and microgreens, with indicative retail pricing of RM12-RM20 per kg.

These early results demonstrate a clear pathway from controlled-environment cultivation to market, as well as a platform for value-added products including ready-to eat items, the statement said.

MTDC Group Chief Executive Officer Mohammad Hazani Hassan said the UPM-MTDC Plant Factory is designed to deliver measurable outcomes, including market-validated crops, contracted buyers, and industry-ready talent.

“By pairing MTDC funding with structured incubation and hands-on consultancy, the programme reduces adoption risk for small and medium enterprises (SMEs) and accelerates Malaysia’s smart-farming footprint,” he said in the same statement.

Meanwhile, UPM Vice-Chancellor Datuk Prof Dr Ahmad Farhan Mohd Sadullah said the facility strengthens UPM’s role as a research-to-industry bridge.

“Students, researchers, and partners can co-develop climate-resilient cultivation, while entrepreneurs gain a test-bed to meet market standards and scale responsibly,” he said.

He added that as one of Malaysia’s research universities, UPM provides the depth of agritech expertise and talent development needed to translate research into industry grade operations and skilled jobs.

The facility also supports SMEs and startups by validating crops, meeting industry benchmarks, securing buyers, and offering practical training to farmers and cooperatives.

It serves as a living lab aligned with the National Agrofood Policy 2021–2030 (NAP 2.0), and supports Malaysia’s Sustainable Development Goals (SDGs) and MSME development under the SDG Roadmap for Malaysia (Phase II).

The Plant Factory was officiated by Selangor Menteri Besar Datuk Seri Amirudin Shari at Pusat Kebudayaan dan Kesenian Sultan Salahuddin Abdul Aziz Shah, UPM.