

**TECHNICAL VISIT TO MARDI'S PLANT FACTORY:  
THE CATALYST OF MODERN FARMING IN MALAYSIA**

(Organized by Agricultural and Food Engineering Technical Division, IEM)  
BEM Approved CPD/PDP Hours: 4 Ref. No.: IEM22/HQ/163/V

**Date** : 28 June 2022 (Tuesday)  
**Time** : 9.00 am -1.00 p.m  
**Venue** : MARDI Headquarters, 43400 Serdang, Selangor.  
**Transport** : Self arranged. Participants are to assemble at 9.00 am sharp at the venue for registration.

**Commitment fees (inclusive GST)**  
(Non refundable & non transferable)  
IEM Member : RM 50.00  
Non IEM Member : RM 70.00

**SYNOPSIS**

Urban farming has been a bold agenda in a series of national policies in Malaysia's plans to primarily address food security concerns. As a leading agricultural research organization in this country, MARDI has aggressively conducted research on urban farming in the 11th Malaysian Plan (2016 - 2020). The indoor farming system known as Plant Factory (PF) was also one of the concerned technologies to be focused. An innovated warehouse type of PF model measuring 30' x 80' x 20' was developed in MARDI in 2018. The space utilized for plant cultivation (30' x 60' x 20') was supported with a seven-storey Deep Flow Technique (DFT) multi-layer hydroponic and an automated fertilizer and irrigation system. In this medium scale PF, MARDI used the first Malaysian made LED lighting as growth lights through collaboration with a local company to produce high quality lighting for the PF at reasonable costs. This PF capacity contributed to an impressive crop production rate of between 75 and 100 kg per day. The IoTs application was developed as a tool to monitor performance, collect data and visualize parameters in the PF and provide information on temperature, humidity, carbon dioxide and airflow on the environmental aspects and pH, EC and water temperature for fertilizer solution from respective sensors. This IoT apps enables farmers to monitor crop cultivation remotely and thus minimizing physical field visits. It also enables to optimize energy usage of air-conditioning, analyse plant growth effects, and control light exposure, hence reducing operational costs.

**ITINERARY OF THE VISIT**

TIME	ITINERARY
09.00 a.m – 09.30 a.m	Arrival at MARDI Headquarters, Serdang
09.30 a.m – 11.00 a.m	Introduction to Indoor Farming technologies (Plant Factory)
11.00 a.m – 11.30 p.m	Demonstration on an automated fertilizer and irrigation system
11.30 a.m – 12.45 p.m	Technical visit to MARDI Plant Factory
1.00 p.m	Dismiss/The End

- ✓ The visit is strictly limited to **30 participants** registered on a first-come, first-served basis.
- ✓ Interested participants are to register and pay online at [www.myiem.org.my](http://www.myiem.org.my) or register by returning the appended registration form **before 20 June 2022** together with the payment.
- ✓ Cheques are to be made payable to **The Institution of Engineers, Malaysia**.
- ✓ Please note that the commitment fee must be settled prior to the visit. Payment on the day of the visit is not acceptable.
- ✓ After this closing date, IEM reserves the right to allocate seats on first come first pay basis.
- ✓ Members are also reminded that if a place is reserved, IEM may cancel the reservation if payment is not received.

**Ir. Yong Hong Liang**  
Chairman Session 2021/2022  
Agricultural and Food Engineering Technical Division, IEM

**PERSONAL DATA PROTECTION ACT**  
I have read and understood the IEM's Personal Data Protection Notice published on IEM's website at <http://www.myiem.org.my> and I agree to IEM's use and processing of my personal data as set out in the said notice.

**REPLY SLIP (Email: [ezzaty@iem.org.my](mailto:ezzaty@iem.org.my))**

Chairman, Agricultural and Food Engineering Technical Division, IEM  
The Institution of Engineers, Malaysia

**Technical Visit to Mardi's Plant Factory: The Catalyst of Modern Farming in Malaysia**

I wish to participate in the above visit on **28 June 2022**. I enclosed herewith a cheque No ..... for the amount of ..... as my commitment fee for the visit.

<b>Name of Member</b> :	.....	<b>M'Ship No</b> :	.....
<b>Company's Name</b> :	.....	<b>NRIC</b> :	.....
<b>Position</b> :	.....	<b>Email</b> :	.....
<b>Address</b> :	.....	<b>Tel</b> :	.....
	.....	<b>Mobile</b> :	.....
	.....	<b>Fax</b> :	.....

I will be participating in the visit at my own risk and hereby indemnify fully the IEM from all claims arising from any injury, damage or loss that may be sustained by me.

.....  
(Date)

.....  
(Signature)