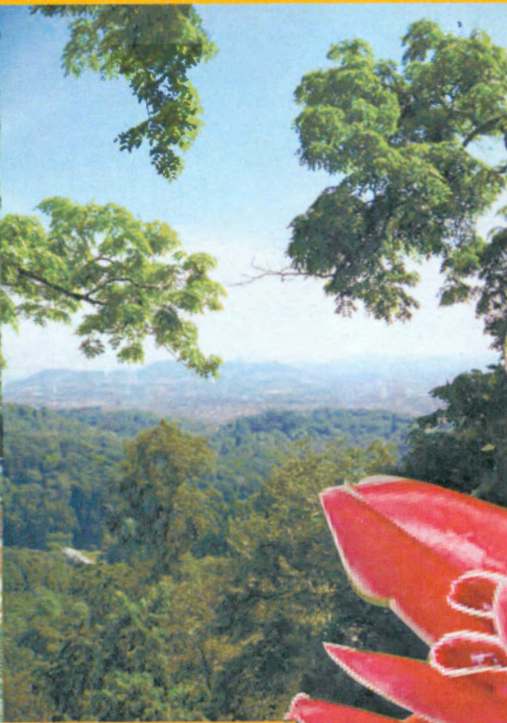


# **MSPPC 2009**

20th Malaysian Society of Plant Physiology Conference

## **Programme & Abstract**

24–26 July 2009  
Avillion Admiral Cove  
Port Dickson, Negeri Sembilan



ENHANCING PLANT  
PRODUCTIVITY AND ECOSYSTEM  
SERVICES IN A CHALLENGING  
ENVIRONMENT



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**MALAYSIAN SOCIETY OF PLANT PHYSIOLOGY (MSPP)**  
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# **MSPPC 2009**

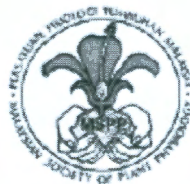
## **ENHANCING PLANT PRODUCTIVITY AND ECOSYSTEM SERVICES IN A CHALLENGING ENVIRONMENT**

20<sup>th</sup> Malaysian Society of  
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## **PRE-CONFERENCE TOUR**

- Dr. Zamri Ishak
  - Tuan Hj. Ahmad Safie Bukari
-

# MSPPC 2009

## PROGRAMME

20<sup>th</sup> Malaysian Society of Plant Physiology Conference  
*Enhancing Plant Productivity and Ecosystem Services  
in a Challenging Environment*

### Friday 24 July 2009

- 1430 - 1730 PRE-CONFERENCE TOUR  
MARDI RESEARCH STATION, LINGGI, NEGERI SEMBILAN
- 2000 - 2200 PRE-REGISTRATION AND POSTER PLACEMENT

### Saturday 25 July 2009

- 0800 REGISTRATION
- 0900 WELCOMING ADDRESS BY THE PRESIDENT OF MSPP  
*Dr Elizabeth Philip*
- 0915 **PLENARY PAPER**  
**Chairperson: *Dr Elizabeth Philip***  
Changing Environment: Malaysian Perspective  
*Dr. Yap Kok Seng (Director General, Malaysian Meteorology Department)*
- 1000 EXHIBITION, POSTER SESSION AND REFRESHMENTS  
GROUP PHOTOGRAPHY SESSION

## SESSION I: ASSIMILATE PRODUCTION, GROWTH AND DEVELOPMENT

Chairperson: *Dr. Zamri Ishak*

- 1030 – 1050 Floral development of lemba (*Curculigo latifolia* Dryand)  
*Abdullah, N.A.P. (UPM), Saleh, G.B., Thohirah, L.A. and Firdaus, M.I.*
- 1050 – 1110 Effects of seeding density and watering duration on growth characteristics and sprouting atmosphere of black gram (*Vigna Mungo* L.) sprouts grown in a chamber  
*Choon, S.Y. (UPM), Ahmad, S.H., Ding, P., Sinniah, U.R. and Hamid, A.A.*
- 1110 – 1130 Planting containerized ginger (*Zingiber officinale* Roscoe) using fertigation system  
*Yaseer Suhaimi, M. (UPM), Mahamud, S. and Mohamad, A.M.*
- 1130 – 1150 Corn yield response to seven planting densities and two cropping seasons  
*Mokhtarpour, H. (UPM), Teh, C. B. S., Saleh, G., Selamat, A.B., Asadi, M. E. and Kamkar, B.*
- 1150 – 1210 Growth performance and physiological characteristics in *Aquilaria malaccensis* plantations differing in site resource availability  
*Dayana Aisyah, H. (UPM), Hazandy, A.H. and Nor Aini, A.S.*
- 1210 – 1230 Understorey light variations in chronosequence rehabilitated forest stand  
*Ismail, A. (UPM), Ahmad Ainuddin, N. and Ahmad Makmom, A.*
- 1230 – 1400 LUNCH

## SESSION II: ECO-PHYSIOLOGY AND STRESS BIOLOGY

Chairperson: *Assoc. Prof. Dr. Thohirah Lee Abdullah*

- 1400 – 1420 Physiological responses to light stress in the epiphytes of *Platyserium Bifurcatum*  
*Ruzana Adibah, M.S. (UPM), Ahmad Ainuddin, N. and Hazandy, A.H.*
- 1420 – 1440 The use of chlorophyll fluorescence to study the effects of environmental stresses on photosynthesis of *Tristanopsis fruticosa* in mount Tahan  
*Azita, A.Z. (UPM), Hazandy, A.H. and Mohd-Zaki, H.*
- 1440 – 1500 Influence of salinity on germination of Iranian Alfalfa Ecotypes  
*Masoud, T. (UPM), Mohd Ridzwan, A.H., Ahmad Husni, M.H., Uma Rani, S. and Mohd Razi, E.*
- 1500 - 1520 Sources of resistance to *Phytophthora palmivora* in durian  
*Nik Masdek, H. (MARDI)*
- 1520 – 1700 MSPP 20<sup>th</sup> ANNUAL GENERAL MEETING
- 1700 – 1730 POSTER SESSION, EXHIBITION AND REFRESHMENTS
- 2000 – 2230 DINNER

**SESSION III: POST-HARVEST TECHNOLOGY, BIOTECHNOLOGY, MODELLING AND SIMULATION**

**Chairperson: Assoc. Prof. Dr. Siti Hajar Ahmad**

- 0900 – 0920 Effects of pre-harvest calcium on disease occurrences and quality of red dragon fruit, *Hylocereus polyrhizus*  
*Muhd Azlan, A.G. (UPM) and Yahya, A.*
- 0920 – 0940 Activity of cell wall degrading enzymes of Pitaya fruits (*Hylocereus polyrhizus*) as affected by post-harvest calcium treatment  
*Siti, H.C. (UPM), Yahya, A., Mahmud, T.M.M and Zakaria, W.*
- 0940 – 1000 Maturity index and respiratory pattern indicate optimal harvesting time and post-harvest handling of *Jatropha curcas* Linn fruit  
*Silip, J.J. (UMS), Armansyah, H.T., Hambali, H., Sutrisno, and Surahman, M.*
- 1000 – 1020 Allometric relationship of trees based on ecological grouping in hill dipterocarp forest, Peninsular Malaysia  
*Mohd Razman, S. (FRIM) and Abd Rahman, K.*
- 1020 – 1045 REFRESHMENTS
- 1045 – 1230 BEST POSTER AWARDS  
PRESENTATION OF CERTIFICATES OF APPRECIATION  
CLOSING BY THE PRESIDENT OF MSPP
- 1230 – 1400 LUNCH

### **P30 SOIL WATER CONTENT UNDER SEVERAL SOIL WATER CONSERVATION METHODS IN AN OIL PALM ESTATE**

**Chong, S.Y.<sup>1\*</sup>, Teh, C.B.S.<sup>1</sup> and Goh, K.J.<sup>2</sup>**

<sup>1</sup>Department of Land Management, Faculty of Agriculture, Universiti Putra Malaysia, 43400 Serdang, Selangor, Malaysia.

<sup>2</sup>Applied Agriculture Research, Locked Bag 212, Sg. Buloh Post Office, Sg. Buloh, Selangor.

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Oil palm (*Elaeis guineensis*) is one of Malaysia's major agricultural crops since the 1960's. The fast development of oil palm plantation is therefore now limited to the marginal soils. One of these marginal lands for agriculture includes those in hilly, steep land areas. These areas are facing soil and water loss erosion during heavy rainfall through run-off. Water stress of oil palm plantation will cause the oil palm to form male flower instead of female flower. Hence, directly reduce total yield. Therefore, soil water conservation is important as it directly influences the yield of oil palm estate throughout the year. The main objective of this experiment was to measure and compare the soil water profile under EFB, Ecomat, silt pit and control (palm frond heaps) in an oil palm estate from March 2008 until March 2009. The experiment was carried out at Balau Estate (02°55'57" N; 101°52'56" E), Semenyih, Selangor, with slope of about 6°, and the soil is classified as a Typic Paleudult (Rengam series), with a sandy clay texture (37% clay and 56% sand). Rooting depth of the palms planted in the site collected was 55 cm depth from soil surface and was cultivated with 8-10 year old oil palm trees and planted with 8 x 8 m spacing. The experimental design was a Randomized Completely Block design with four treatments and three replications. Each plot was divided equally and randomly into four treatment plots with each treatment plot having a size of 8 x 8 m and with a gap of 8 m between two plots. Empty fruit bunches (rate of 1000 kg EFB palm<sup>-1</sup> year<sup>-1</sup>) were heaped on the ground. Likewise, four Ecomat carpets (2 by 2 m long and wide, and 0.02 m thick) were arranged in a single layer on the ground. The silt pits were constructed by digging a trench along the hill contour, measuring 1 m wide, 4 m long and 0.5 m deep. Each treatment was allocated in the middle of each treatment plot. For water content, it was measured daily using AquaPro-Sensor (Aquatic Sensors, Nevada) at soil depth 0-750 mm and rainfall data was collected using a portable weather station (Watchdog Model 700, Spectrum Technologies Inc., Illinois). Of the four treatments, EFB had the highest amount of soil water which was 37.23% higher than control, whereas, Ecomat and silt pit had 10.62% and 9.93%, respectively, higher water content than control. The idea of using Ecomat and construction of silt pits were intended to trap soil water, but this experiment found that Ecomat and silt pit did not conserve the water as much as EFB.

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### **P31 EVALUATION OF PHYSICAL LAND SUITABILITY FOR WHEAT IN TASHKUIEH PLAIN, IRAN**

**Moghimi, A.H.<sup>1,2</sup> and Hamdan, J.<sup>1\*</sup>**

<sup>1</sup>Department of Land Resource Management, Universiti Putra Malaysia, 43400 Serdang, Selangor, Malaysia.

<sup>2</sup>Agricultural Research, Education & Extension Organization, Iran.

\*Corresponding author: hamdan@agri.upm.edu.my

Wheat grows in all agro-ecological zones in Iran. It is, therefore, very important to use the existing cultivated lands more efficiently. Land suitability evaluation is the fitness of a given type of land for sustainable use. Objectives of this study were to classify soil, evaluate and determine land quality for growth of wheat. Four representative profiles located at four different sites were