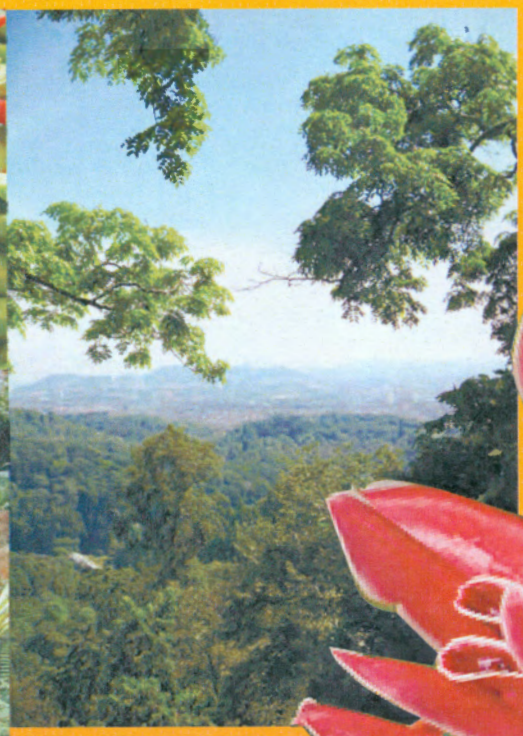
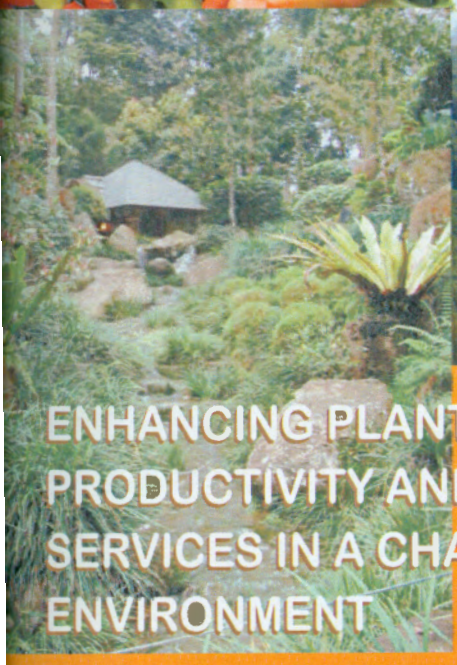
MSPPC 2009

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

Organized by

MALAYSIAN SOCIETY OF PLANT PHYSIOLOGY (MSPP)

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MSPPC 2009

PROGRAMME

20th 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 *Platycerium 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 *Tristaniopsis 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 20th ANNUAL GENERAL MEETING

1700 – 1730 POSTER SESSION, EXHIBITION AND REFRESHMENTS

2000 – 2230 DINNER

Sunday 26 July 2009

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

O04 CORN YIELD RESPONSE TO SEVEN PLANTING DENSITIES AND TWO CROPPING SEASONS

Mokhtarpour, H.[1,2*], Teh, C.B.S.[2], Saleh, G.[3], Selamat, A.B.[3], Asadi, M.E.[4] and Kamkar. B.[5]

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Corn is planted in two seasons per year in northern Iran (mid-April as a main crop and mid-June as a second crop after wheat harvest). Therefore this study was to determine if corn growth and yield would differ between these two seasons, as well as to different planting densities. Two field experiments were conducted with a Randomized Complete Block Design on 19th April (as a main crop) and 18th June (as a second crop) in Agricultural Research Center of (Golestan-Iran) (36° 53' N, 54° 21' E) in 2008. Each experiment included 7 planting densities (1600, 25000, 45000, 65000, 85000, 105000 and 125000 plants ha^{-1}) with four replications. Each plot contained 4 rows with 7 meters in length. Distance between rows was 0.75 m. Both experiments were conducted without any water and nutrient limitation. Phonological traits measured were emergence date, tasseling, silking, milk stage, dough stage, physiological maturity and harvesting time were recorded during the growth stages. To analyze the data a combined analysis ANOVA was done. Least significant differences test (LSD) was used to compare the mean values in each trait. The results showed that the effect of planting densities and season were significantly different in most traits. The values of total dry matter (TDM), grain yield, ear length, ear per plant, W1000, stem diameter, harvest index, seed number per rows, (cob+ husk) weight, (cob+ husk)% in first season were significantly higher than second season (between 6.5% and 52.7%), but the percent of stem weight in second season was more than first season by (29.1%). ANOVA showed a significant interaction between season and density for 12 of 14 properties (TDM, stem weight, grain yield, ear length, ear per plant, stem diameter, seed number per rows, number of seed row, (cob+ husk) weight, (cob+ husk)%, harvest index). In first season maximum values of, TDM, stem weight, and stem % observed in middle densities (65000 and 85000 plants ha^{-1}) while in second season their maximum value observed in high planting densities 105000-125000 plants ha^{-1}). Maximum grain yield observed in middle planting densities in first season while in second season the grain yield was same in planting densities between 25000 and 125000 plant ha^{-1}. The low values in growth parameters for the season two was due to the higher temperature in season two than season one (in first season 14 days during growth stages experience temperature more than 34°C while in second season maximum temperature in 38 days was more than 34°C) hence maize grown in season two had a shorter growing period (days to maturity in first season was 105 days while in second season it was 100 days). Exponential function was fitted to show relationship between yield per plant (Y) and planting densities (X) ($Y = 416.22 \times \exp^{-0.146X}$, $R^2 = 0.987$) and ($Y= 229.39 \times \exp^{-0.141X}$, $R^2 = 0.954$) were the developed equations for first and second season respectively. Although the yield per plant in two season was not same but the equations showed that the slope of curves in both seasons were fallowed nearly a same trend (-0.146 and -0.141) it means the intensity of yield reduction with increasing plant density was similar for both seasons. This study found that corn should be planted in season one for higher corn growth and yield.
