

SOILS 2003 PROGRAMME

MALAYSIAN SOCIETY OF SOIL SCIENCE CONFERENCE
NEW PACIFIC HOTEL, KOTA BHARU, KELANTAN
APRIL 15-16, 2003

MONDAY 14 April 2003

2000 – 2200 **PRE-REGISTRATION AND POSTER PLACEMENT**

TUESDAY 15 April 2003

0830-0900 **REGISTRATION**

0900-1115 OPENING CEREMONY

Arrival of guests
Arrival of YB Deputy Minister of Agriculture
Recitation of Doa Selamat
Speech by the Chairman of the Organizing Committee
Speech by the President of MSSS
Speech and Official Opening by the YB Deputy Minister of Agriculture
MSSS Education and Best Soil Science Student Award Presentation
Photo session with YB Deputy Minister of Agriculture
Refreshment

KEYNOTE

Chairman: Assoc. Prof. Dr. Mohd. Khanif Yusop (UPM)

1115-1145 Proposal for Fruit Industrial Zone
Enhancing Competitiveness of the Malaysian Fruit Sector Through
Development of Fruit Industrial Zones.
Dato' Embi Yusoff (Deputy Director General of MARDI)

1145-1245 **POSTER PRESENTATION**

1245-1430 **MSSS ANNUAL GENERAL MEETING AND LUNCH**

SESSION 1: LAND USE PLANNING AND LAND MANAGEMENT

Chairman: Prof. Dr. Wan Mohamad Wan Abd. Kadir (UiTM)

1430-1445 Crop Zoning – A Measure to Enhance Competitiveness in Agriculture
Lim Jit Sai, Mustafa Kamal Baharudin, A.K. Rao and Nor Zailan Abd. Jalil (Dept. of Agriculture)

1445-1500 Land Use Trend in Peninsular Malaysia From 1960-1997
Anthony K. Rao (Dept. of Agriculture)

1500-1515 Rice Demand and Supply Estimation: An Integration of Biophysical and
Socioeconomic Elements
T. Ariffin and H. Abd. Razak (MARDI)

1515-1530 Development of an Expert System in Agricultural Land Suitability
Evaluation Using Visual Basic 6

1530-1545 *Ahmad Rusydi Mohamad and Sahibin Abd. Rahim (UKM)*
Discussion

SESSION 2: SOIL CHEMISTRY AND ENVIRONMENT

Chairman: Dr. Norhayati Moris (RRIM)

1545-1600 The Abundance of Selected Heavy Metals in Soil from the Surrounding Copper Mine in Ranau, Sabah
Baba Musta, Sahibin Abd. Rahim, Adong Laming and Tukimat Lihan (UMS)

1600-1615 Evaluation of Three Soil Test Methods for Assessment of Phosphorus Bioavailability in Soils Fertilized with Water Soluble and Sparingly Soluble P Fertilizers
Esther W. Gikonyo and A.R. Zaharah (UPM)

1615-1630 Porosity of Carbonaceous Peat and its Potential as an Oil Absorber
Safari Zainal and Ku Halim Ku Hamid (UiTM)

1630-1645 Recent Developments in Acid Sulfate Soils Research in Malaysia
Shamshuddin Jusop (UPM)

1645-1700 Discussion

1700 **REFRESHMENT AND POSTER SESSION**

2000 - 2200 **MSSS ANNUAL DINNER**

WEDNESDAY (16 April 2003)

SESSION 3 SOIL PHYSICS AND SOIL CONSERVATION

Chairman: Dr. Ghulam Mohammed Hashim (MARDI)

0845-0900 Georeferencing Irrigation and Drainage Networks using Advanced Spatial Technology
Adel M.Elprince and Yousef Y. Al-Dakheel (King Faisal Univ., Saudi Arabia)

0900-0915 Design of Demonstration Plots and its Equipment for Measurement of Runoff and Sediment Quantification
Wan Abdullah W.Y., Abdul Kahar, S., Aini Hayati A. and Zulkefli, M. (MARDI)

0915-0930 Water Retention Characteristics of Some Major Oil Palm Growing Soils in District of Tawau, Sabah
Mokhtaruddin A.M., Adrinal, Sugardi A. and Goh, K.J. (UPM)

0930-0945 Discussion

0945-1000 **REFRESHMENT**

SESSION 4: SOIL MICROBIOLOGY

Chairman: Dr. Halimi Mohd Saud (UPM)

1000-1015 Adsorption of Fecal Coliforms, *Escherichia coli* in Different Soils in Sarawak

- 1015-1030 *Ling Teck Yee, Goh Soon Hian and Kasing Apun (UNIMAS)*
Effects of Combined Inoculation with Azospirillum, Arbuscular Mycorrhiza and Compost Application on Spinach and Tomato
O. Radziah, Erzan M.N. and Che Mazlan C.J. (UPM)
- 1030-1045 Effect of Crop Changes on Population Development of *Pratylenchus* p.(nr. *Pratylenchus penetrans*)
Wong, N. C., P.M. Yuen and S. Abdul Karim (MARDI)
- 1045-1100 Green Fluorescent Protein (GFP) as a Biomarker for Novel Plant Growth-Promoting Rhizobacteria (PGPR), *Bacillus subtilis* UPMB13 and *B. sphaericus* UPMB10
Shamsuddin, Z.H., Raha A.R., Maziah M., Halimi M.S. and P. Premalatha (UPM)
- 1100-1115 Discussion

SESSION 5: RESIDUE MANAGEMENT, AGROFORESTRY AND CROP SCIENCE

Chairman: Prof. Dr. Shamshuddin Jusop (UPM)

- 1115-1130 Seeing it in 3-D: How the Maize Plant Captures Solar Radiation
C.B.S. Teh (UPM)
- 1130-1145 Evaluation of *Chrysanthemum* Residue Compost for Seedling Production and for Cabbage Cultivation in the Highlands
P.Vimala, N.C. Wong, H.Salbiah and A.R. Aini Hayati (MARDI)
- 1145-1200 On and Off-farm Management of Pineapple Residues
Ahmed, O.H., M.H.A. Husni, A.R. Anuar and M.M. Hanafi (UPM)
- 1200-1215 Agroforestry and Soil Management
Mahmud Abd. Wahab and Azmi Yaakob (FRIM)
- 1215-1230 Discussion
- 1230-1400 **POSTER SESSION AND LUNCH**

SESSION 6: PLANTATION CROPS

Chairman: Dr. Mahmud Abd. Wahab (FRIM)

- 1400-1415 Integration of Global Positioning System and Geostatistical Analyses for Site Specific Management on Oil Palm Production on Peat
James Lopaz, Wan Mohamad W.A.K. and Anuar A.R. (UiTM)
- 1415-1430 Evaluation of Various Sources of P Fertilizers on Immature and Young Oil Palm Planted on a Sedentary Soil
Zin Z. Zakaria, Zulkifli H., Khalid H., Hamdan A.B., Tarmizi A.M. (PORIM)
- 1430-1445 Effect of Boron Fertilizer on Oil Palm Leaf Nutrient Status and Yield
Lee Chin Tui, Foong Sang Foo, Eow Wat Son and Suhaidi Hamzah (FELDA)
- 1445-1500 Discussion

SESSION 7: SOIL FERTILITY

Chairman: Prof. Dr. Zaharah Abdul Rahman (UPM)

- 1500-1515 Performance of Papaya on Peat

- 1515-1530 *Chan, Y.K and Raveendranathan, P. (MARDI)*
Sustainability of Rice Soil-Rice System of Kelantan
Aziz Bidin (MARDI)
- 1530-1545 An Assessment of Degradation of Paddy Soils and its Impacts on
Sustainable Rice Production
*Aminuddin, H. Abd. Razak, C.H. Mohammad, M. Mohd Zain and M.
Normah (MARDI)*
- 1545-1600 Sustaining High Rice Yield Under Intensive Rice Production System
Through Nutrient Management of Organic and Inorganic Fertilizer
Sources
Ismail Che Haron (MARDI)
- 1600-1615 Discussion
- 1615-1700 CLOSING**
Remarks by the President of MSSS
Best Poster Presentation Awards
- 1700 **REFRESHMENT**

THURSDAY (17 April 2003)

POST-CONFERENCE TOUR (17-19 Apr. 2003)

Kelantan and southern Thailand

POSTER SESSION

LAND USE PLANNING AND LAND MANAGEMENT

1. Monitoring of On-Farm Nutrient Stocks and Flows in an Agricultural Production System in Semi-Arid Tropics
Jagadeeswaran R., V. Murugappan, M. Govindaswamy and K. Arulmozhiselvan.
Tamil Nadu Agric. University, INDIA
2. Time Series Analysis of Remotely Sensed Data for Land Use Monitoring
Muhamad Radzali Mispan
MARDI
3. Modeling the Dynamics of Dry Matter and Fruit Yield of Banana and Pineapple Intercropped with Immature-Rubber
Jalloh M.B., T. Jamal., W.H. Wan Sulaiman, M.F. Ramlan, A. Rajan and C.B.S. Teh
UPM
4. Mineralogy Properties of Soils on Volcanic Materials in Lembang Area, West Jaya, Indonesia
Yatno E., S. Zauyah, C.I. Fauziah and Peli Mat
UPM
5. Prediction of Bris Water Table by Modified WAT Model
Mohammud C.H. and P.B. Leeds-Harrison
MARDI
6. Optimizing Future Land Use: Methodology Development in Estimation and Quantification of Agriculture Inputs
Hawa Z.E.J, A. Mohd Yusoff, H. Abd Razak, A.G. Mohamad Zabawi, A.A. Zainol, A.R. Azizan and A.B. Ismail
MARDI
7. Some Physical and Chemical Properties of Sesquioxidic Soils From Sidamo Region of Ethiopia
Abayeh E., S. Zauyah, A.B. Rosenani and M.M. Hanafi
UPM
8. Application of 'Interactive Multiple Goal Linear Programming (IMGLP)' in Land Use Planning
Ismail A.B. and B.Y. Aminuddin
MARDI

SOIL CHEMISTRY AND ENVIRONMENT

9. Heavy Metals Profile in Tin/Iron/Copper Mine Remnant in Kota Tinggi, Johor

*Sahibin Abd. Rahim, Tukimat Lihan, Wan Mohd. Razi Idris, Baba Musta, Adong Laming, AK Jalaludin Ag. Besar and Azman Hashim
UKM*

10. Production of Organic-Based Fertilizers from Wastes
*Ong H.K., M. Suhaimi, S.P. Soo and S. Poovan
MARDI*
11. Phosphate Rock Dissolution Following the Application of Compacted Mixture Fertilizer (Urea, P Fertilizer and Peat) in an Acid Soil.
*Susilawati K., H. Aminuddin, M.M. Hananfi and Y.M. Khanif
UPM Bintulu*
12. Incorporating Soil Phosphorus Buffering Coefficients in Fertilizer Recommendations
*Esther W. Gikonyo, Paul Smithson, Louis Verchot, Helga Recke and A.R. Zaharah
UPM*
13. Pysico-Chemical Study on Soil Surrounding Abandoned Gold Mine in Jeli, Kelantan
*Wan Mohd Razi Idris, Sahibin Abdul Rahim, Tukimat Lihan, Baba Musta, Adong Laming, Azman Hashim and AK Jalaludin Ag. Besar.
UKM*
14. Soil Organic Carbon and Nitrogen Evaluation in an Immature Oil Palm Plantation Converted from Tropical Jungle
*Sabri M, A.B. Rosenani, S. Zauyah and C.I. Fauziah
UPM*
15. Potential by Products to be Used as Soil Amendments
*Nur Hanani M. and I. Che Fauziah
UPM*
16. Quality of Soils and Vegetables in Johore: Heavy Metals Perspective
*Zauyah S., I. Che Fauziah, A.B. Rosenani, C.Y. Koh, B. Juliana and R.Noorhafizah
UPM*
17. Distribution of Heavy Metals in Some Farms on Ex-Mining Land in Southern Perak
*Kamshary M., Zauyah S., I. Che Fauziah and A.B. Rosenani
UPM*

SOIL PHYSICS AND SOIL CONSERVATION

18. Temporal Soil Moisture Contents on Hilly Slope Under Oil Palm as Influenced by Soil Conservation Practices
Arif Sugandi, Goh Kah Joo and Teo Chor Boo

SOIL MICROBIOLOGY

19. Effect of Arbuscular Mycorrhiza on Growth and Nutrient Uptake of Four Different Sweetpotato Varieties
Yassin M.A. and O. Radziah
UPM
20. Screening of Plant Growth Promoting Rhizobacteria on Growth of *Allium ascalonium*
Maliza H. and O. Radziah
UPM
21. Effect of Rhizobacterial Inoculation on Growth and Nutrient Uptake of Different Sweetpotato Variety
Farzana, Y. and O. Radziah
UPM
22. The Inoculation Effects of Azospirillum and Mycorrhiza on the Growth and Canopy Architecture of Maize (*Zea Mays* L.)
Chin S.H.M and C.B.S. Teh
UPM
23. *Sesbania rostrata* as Green Manure for Vegetable Soybean Cultivation
Y.W. Loh and Halimi Mohd Saud
UPM

RESIDUE MANAGEMENT, AGROFORESTRY AND CROP SCIENCE

24. Composting of Spent Mushroom Growth Media and its Evaluation on Crop Yield
Vimala P. and S. Vikineswary
MARDI
25. Crop Residues for Sustainability of Irrigated Rice System
Sariam O. and T. Zahrah
MARDI
26. Effect of Oil Palm Empty Fruit Bunch Mulch on Forest Soil Fertility
Wan Rasidah K. and Wan Asma I.
FRIM
27. Use of Oil Palm Mesocarp Compost as a Peat Substitute in a Soilless Media for Potted *Chrysanthemum*
Rosenani, A.B, Thohirah L.A, Mazlina I. and Nga Shee Kiong
UPM

28. Recycling Crop Residue: Synchrony of Nutrient Released from Crop Residue and Uptake by Subsequent Crop
Juliana B. and Rosenani A.B.
UPM
29. Continuous Flow Stem Infusion of Fertilizer N, P and K on the Performance of Oil Palm (*Elaeis Guineensis Jacq.*) Seedlings
Aminuddin, H. and M. Noraidah
UPM
30. Influence of Rootstock and Interstock on Growth and Nutrient Uptake of Mango Cv. Harumanis
Tengku Ab. Malik T.M. and O. Fauziah
MARDI

SOIL FERTILITY

31. The Use of Peat as Soil Medium in Oil Palm Nursery
Pupathy U.T.
Golden Hope
32. Application of Chicken Manure in Lowland Cabbage Grown Under Rainshelter on Peat
Illias M.K. and P. Vimala
MARDI
33. The Soil and Leaf Nutrient Status of Limau Madu in KETENGAH Citrus Valley – A Case Study
Zabedah, M. Izham and Hashim A.B.
MARDI
34. Effect of Soil Treatments and Fertilizer Application Methods on Productivity of Crop Grown on Alluvial and Bris Soils
Wan Zaki, W.M., C.H. Mohammad, M.Kuan, M. Laughlin, J. Baker, J. Mohamed and M. Mohd Kassim
MARDI
35. Sodium for Partial Potassium Substitution in Pineapple
Yufdy, M.P, M.H.A Husni and T.L. Abdullah
UPM
36. Response of Magnesium Fertilizer on Oil Palm Seedling Grown on Highly Weathered Acid Soil
Azham M., S.R. Syed Omar, M.H.A. Husni and Zin Z. Zakaria
UPM
37. Relative Contributions of Green Manures and Phosphate Rock to P Uptake in an Amended Acid Soil
Abdul R. Bah and A.R. Zaharah

UPM

38. Effect of Fertilizer Rates and Application Frequencies on Growth and Yield of Mengkudu (*Morinda citrifolia*) Grown Under Perimeter Hedgerow Rubber Planting System
Hassan S., P. Vimala, A. Mega Arjuna, S. Zulkefly and M.T. Mohammed Senawi
MARDI
39. Performance of Chilli Using Organic Potassium Fertilizer
Aziz Bidin and P.Vimala
MARDI
40. Magnesium Requirement of Rice Crop in Malaysian Soils
Choundhury A.T.M.A, Y.M. Khanif, H. Aminuddin and W. Zakaria
UPM