



UNIVERSITI  
MALAYA

# 15<sup>th</sup> INTERNATIONAL CONFERENCE OF THE EAST AND SOUTHEAST ASIA FEDERATION OF SOIL SCIENCE SOCIETIES

# ESAFS 2022

*Our Soils Our Future*

**22-26<sup>th</sup> AUGUST 2022**  
Royale Chulan Hotel, Kuala Lumpur  
MALAYSIA

IN COLLABORATION WITH



International  
Decade of Soils  
2015-2024

## CONFERENCE PROGRAM

Sponsors



**PETRONAS**



SUPPORTED BY



Meet in   
**Malaysia**  
BE Greater, Together.

*Malaysia*  
*Truly Asia*



**SOIL EDUCATION AND PUBLIC AWARENESS**



**EMERGING SOIL CONTAMINANTS**



**SOIL INFORMATION AND DIGITAL  
MAPPING**



**SOIL FERTILITY AND PLANT NUTRITION**



**SOIL ECOLOGY AND SOIL QUALITY**



**SOIL AND WATER MANAGEMENT**



**LAND USE AND CLIMATE CHANGE**



**SOIL DEGRADATION AND REMEDIATION**



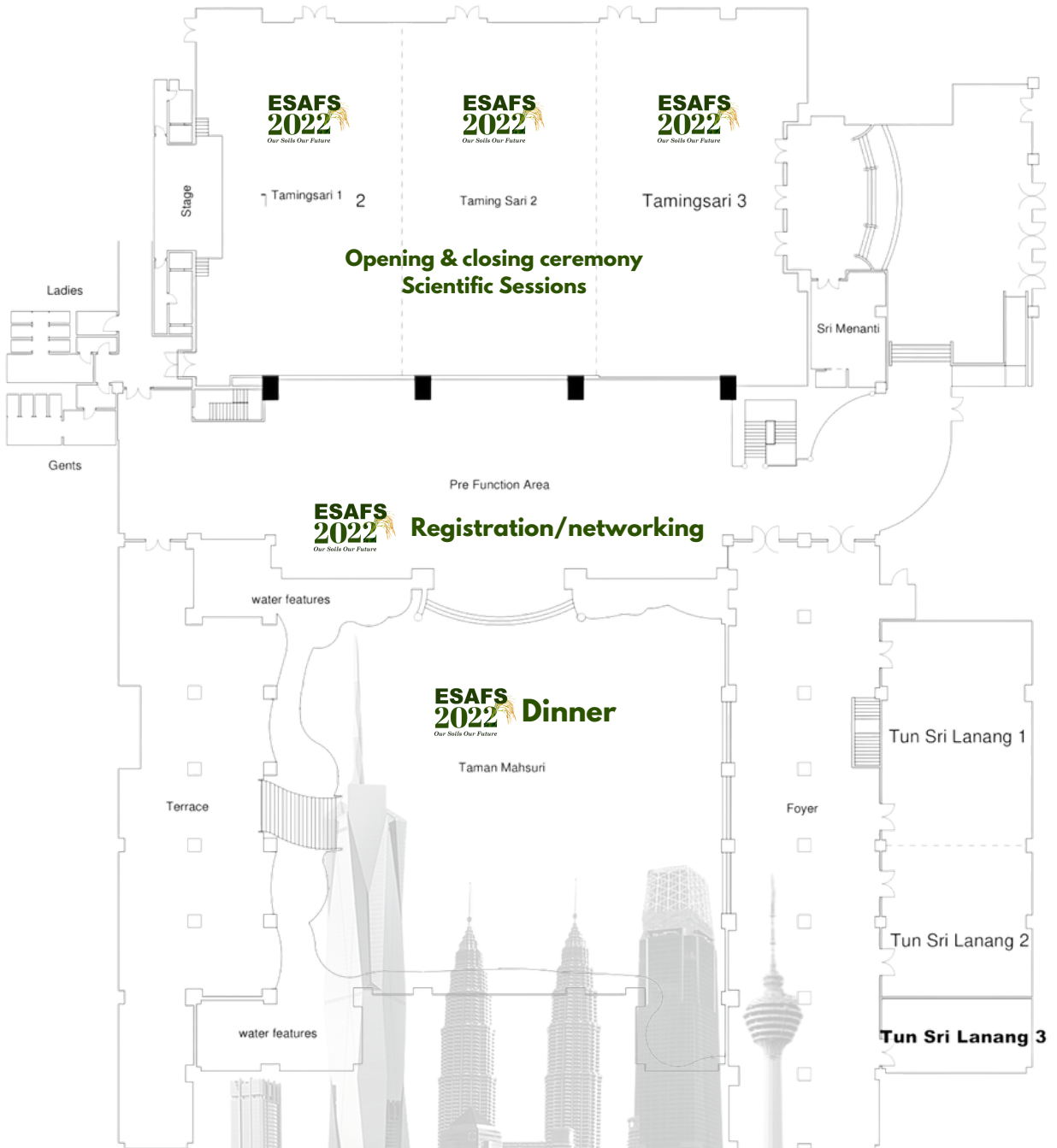
**FOREST SOILS**



**PADDY SOILS**



**RECENT ADVANCES IN SOIL RESEARCH**



## Royale Chulan Hotel Kuala Lumpur Malaysia

**Address:** 5, Jalan Conlay, Kuala Lumpur, 50450 Kuala Lumpur, Wilayah Persekutuan Kuala Lumpur

**Conference Program**

<b>MONDAY, 22 August 2022 (Taman Mahsuri)</b>	
17:00 – 19:00	<b>Registration and Welcoming Reception (Foyer Taming Sari Grand Ballroom)</b>
<b>TUESDAY, 23 August 2022 (Taming Sari Grand Ballroom)</b>	
08:00 – 09:00	<b>Registration</b>
09:00 – 10:00	<p>Welcoming Speech by Dr. Rosazlin Abdullah (ESAFS 2022 Chairman)</p> <p>Welcoming Speech by Universiti Malaya Representative</p> <p>Welcoming Speech by Prof. Dr. Laura Bertha Reyes Sánchez (IUSS President)</p> <p>Opening Speech by YB Datuk Dr. Nik Muhammad Zawawi Bin Haji Salleh (Deputy Minister of Agriculture and Food Industries of Malaysia II)</p> <p>Presentation of MSSS Education Awards</p> <p>Gimmick Opening Ceremony of ESAFS 2022</p>
10:00 – 10:30	<b>Press Conference / Coffee Breaks</b>
	<b>Keynote Speeches</b>
	<b>Chairman:</b> Dr. Wan Rasidah A. Kadir
10:30 – 11:00	<p>Keynote Speech 1</p> <p>Dato' Haslina Binti Abdul Hamid Secretary General, Ministry of Agriculture and Food Industries, Malaysia</p>
	Title: <i>National Agrofood Policy 2021-2030 (NAP 2.0)</i>
11:00 – 11:30	<p>Keynote Speech 2</p> <p>Dr. Shamsuddin Jusop, FASc, MSSS Fellow</p> <p>Title: <i>Changing Landscapes in Southeast Asia: Impact on Soil and Agriculture</i></p>
11:30 – 12:00	<p>Keynote Speech 3</p> <p>Prof. Dr. Kazuyuki Inubushi – Tokyo University of Agriculture</p> <p>Title: <i>Sustainable Land Management Strategies to Combat the Climate Change</i></p>
12:00 – 12:30	<p>Keynote Speech 4</p> <p>Prof. Dr. Ir. Dian Fiantis – Universitas Andalas, Padang, Indonesia</p> <p>Title: <i>Future Perspectives of Soil Science and its Threats</i></p>
12:30 – 14:00	<b>Lunch</b>
13:30 – 14:00	<b>Poster Session 1A</b>
S1A	<p><b>PS1A-1</b></p> <p><b><i>Rare Earth Element Concentrations in Soils and Tea Leaves from Taiwan</i></b> Z.Y. Huang and Z.Y. Hseu</p>
	<p><b>PS1A-2</b></p> <p><b><i>Assessment of Soil Quality and Plant Nutrition on Labisia Pumila Plantation: A Case Study at Serting Ulu, Negeri Sembilan</i></b> Syafiqah Nabilah, S.B., Farah Fazwa, M.A., Norhayati, S., Masitah, M. and Samsuri, T. H.</p>
	<p><b>PS1A-3</b></p> <p><b><i>Mitigating Carbon Dioxide and Nitrous Oxide Emissions in Pineapple Cultivation on a Tropical Peat Soil Using Clinoptilolite Zeolite</i></b></p>



	Choo, L.N.L.K*, Ahmed, O.H. and Sekot, S.
	<p><b>PS1A-4</b> <i>Effect of Rice Husk Filling Type Subsurface Drainer Attached to Tractor for Multipurpose Utilization in Paddy Fields</i> Jung, K.Y., Chum, H.C., Lee, S.H. and Gong, D.H.</p>
	<p><b>PS1A-5</b> <i>Evaluation of Physical and Chemical Properties of Different Soil Structures in Three Populations of Moringa oleifera L.</i> Sures Kumar, M., Farah Fazwa, M.A., Samsuri, T.H., Muhammad Hanif, M.A., Nor Izatty, A.J.S. and Mohd Zaki, A</p>
S1B	<p><b>PS1B-1</b> <i>Effects of Liquid Urea Rates on Nitrogen Dynamics, Growth, and Yield of Grain Corn</i> Ahmmmed Md Motasim, Abd. Wahid Samsuri, Arina Shairah Abdul Sukor, and Adibah Mohd. Amin</p>
	<p><b>PS1B-2</b> <i>Preliminary Findings on the Effect of Zinc Layered Hydroxide Nanohybrid on Soil Properties</i> Rozita, A., Nor Farhana, K., Wei Jian, L. and Rosdi, K.</p>
	<p><b>PS1B-3</b> <i>Assessment of High-Pressure Washing for Lead-Contaminated Soil with Different Contamination Periods</i> Sang Hyeop Park and Deok Hyun Moon</p>
	<p><b>PS1B-4</b> <i>Growth Rate, Mineral Uptake and Nitrogen Use Efficiency of Upland Pepper Fertigated with Different Types and Rates of Fertilizer</i> Lee, B.Y, Sung, J.K.</p>
	<p><b>PS1B-5</b> <i>Growth, Nutrient and Antioxidant Activity of Red Lettuce (Lactuca sativa L.) Grown with Biochar in Hydroponic System</i></p>
	Noor Sharina Mohd Rosli, Rosazlin Abdullah and Jamilah Syafawati Yaacob
S1C	<p><b>PS1C-1</b> <i>Prediction of Brown Spot Disease of Rice Using Soil and Meteorological Big Data</i> Lee, H.J., Seo, H.R., Kim, B.H., Yoon, J.H., Lee, D.B., Kim, J.W., Lee, J.H., Jang, W.S. and Kim, K.H.</p>
	<p><b>PS1C-2</b> <i>Suppressive Effect of Biochar and Green Manure Incorporation on Soybean Cyst Nematode (Heterodera glycines) Suppression and Promotes Free-Living Nematode Populations</i> Sinh, V.N., Seiya, C., Risako, K., Khoi, M.C., Phuong, K.T.N., Karl, R. and Koki, T.</p>
	<p><b>PS1C-3</b> <i>The Dynamics of Aeolian Quartz in Soils from Mongolia and Inner Mongolia, China</i> Teni Geer, Tamura Kenji, Asano Maki, Tanaka Ryoji</p>
	<p><b>PS1C-4</b> <i>Mangrove Forest Cover Changes and River-Bank Erosion in Kisap Forest Reserve, Langkawi</i> Siti Yasmin Yaakub, Muhamad Afizzul Misman, Mohd Syamin Aizat Mohamed Yusof and Mohd Fairuz Fuazi</p>
	<p><b>PS1C-5</b> <i>Effect of Different Mixing Ratio of CRF, Chemical Fertilizer, and Compost on the Improvement of Soil Fertility</i> Kim, K.H., Kim, B.H., Yoon, J.H., Lee, D.B., Kim, J.W., Seo, H.R., Lee, J.H., Jang, W.S. and Lee, H.J.</p>
S1D	<p><b>PS1D-1</b> <i>Assessment of Physicochemical in Sediment and Water Hyacinths For Planting Media Development</i> Abu Bakar, N.H., Sukor, A., and Am Haszime, H. A.</p>
	<p><b>PS1D-2</b> <i>Effect of Chicken Manure with Chito-Oligosaccharide on Growth, Yield of Baby Corn and Some Soil Properties in Sandy loam Soil Texture</i></p>



	Kongtako, N., Teeranitayatar, K., Rungcharoenthong, P. and Amkha, S.
	<b>PS1D-3</b> <b>Diagnosis of Soybean Water Stress Using Hyperspectral Image Analysis Technology</b> Park, J.K., Jeong, Mihye, Park, J.S., Lee, H.S.
	<b>PS1D-4</b> <b>Soil Biological Properties of 9- and 15-year-old Stands of Oil Palm Grown on Acidic Soil</b> Karam D.S. Arifin, A. and Rajoo. K.S.
	<b>PS1D-5</b> <b>The Combined Use of Chemical and Organic Fertilizers for Maize Production and Soil Fertility</b> Park, B.J., Lee, C.G., Yoon, H.J., Kim, Y.H. and Kim, H.S.

Room	Taming Sari 1	Taming Sari 2	Taming Sari 3
<b>Session</b>	Session 1: Paddy Soils	Session 2: Land Use and Climate Change	Session 3: Soil Fertility and Plant Nutrition
	Chairperson: Prof. Budi Mulyanto  Co-Chairperson: Dr. Muhammad Firdaus Sulaiman	Chairperson: Prof. Pil Joo Kim  Co-Chairperson: Mr. Shaharudin Bakar	Chairperson: Prof. Udaya W.A. Vitharana  Co-Chairperson: Dr. Liew Yew Ann
14.00 – 14.15	OS1-1 <b>Determination of the Amount and Dynamics of Fractionated Organic Matter and Elucidation of Their Controlling Factors in Malaysian Paddy Soils</b>	OS2-1 <b>Evaluating the Effect of Land Application of 'Biochar' on Carbon Dynamic Based on the Chemical properties of Soils from Acidic</b>	OS3-1 <b>Standing Biomass, Dry-Matter Production and Nutrient Demand of Tenera Oil Palm</b> Cheah, S.S., Siti Aishah, A.W. and Teh, C.B.S.
	Yanai, J., Nishimura, G., Saito, H., Nakao, A., Tanaka, S., Haraguchi, T., Tayasu, I. and Funakawa, S.	<b>Soils of Southern vs. Calcareous Soils of Northern Guam</b> Mohammad H. Golabi, Ferdinand Galsim, and Chieriel S. Desamito	
14.15 – 14.30	OS1-2 <b>Ammonia Volatilization in Rice Growing Alfisol Following Addition of Rice Husk Biochar under Two Moisture Regimes</b> Jayarathna, M.K.N.W. and Dharmakeerthi, R.S.	OS2-2 <b>Life Cycle Assessment of Biochar Utilization on Global Warming in Rice Cropping System</b> Canatoy, R.C. and Kim, P.J.	OS3-2 <b>Preliminary Assessment of Soil and Litter Carbon Stocks of Shorea roxburghii G. Don in Segamat, Johor, Malaysia</b> Darshini, R., Jeyanny, V., Faridah A.Z., Rosdi, K., Mohamad Fakhri, I., Rozita, A., Muhammad Asri, L. and Mohd. Afif Hazmi, A.
14.30 – 14.45	OS1-3 <b>Full Dike System Induced Changes in Soil Physico-Chemical Properties and Farmer Income and Paddy Flooding Regions of The Mekong River Basin, Vietnam</b> Tran Ba Linh, Trần Sy Nam, Huynh Cong Khanh, Lam Van Hau and Mitsunori Tarao	OS2-3 <b>Organic Amendment Management in Rice Paddy: Grand Challenges and Golden Opportunities under Global Warming</b> Kim, P.J.	OS3-3 <b>Preparation and Characterisation of Nanoemulsion Fertilisers and Their Effects on the Vegetative Growth, Yield and Fruit Quality of Rockmelon (Cucumis melo. L.)</b> Nadia, I.F., Suwenty, R.A., Mohd Nor, M.R., Mohd Shafiq, A.K., Norhayu, A., Susilawati, K., Mohd Firdaus, M.A. and Noor, A.M.
14.45 – 15.00	OS1-4 <b>Impact of Ammonium Sulfate on Significantly Reducing Ammonia Volatilization from a Rice Paddy Soil as Compared to Urea: Two-year field studies</b>	OS2-4 <b>Effect of Silicate Fertilization on Rice Production under Future Climate Conditions</b> Galgo, S.J. and Kim, P.J.	OS3-4 <b>Effect of Empty Fruit Bunch (EFB) Washing Water as Liquid Fertilizer on Nutrient Recycling Management in Oil Palm Plantation Field</b>



	Juhee Lee, Sohee Yoon, Chang Hoon Lee, Sang Yoon Kim		Sato, M., Yashima, M.M., Tan N.P., Minagawa, C. and Inubushi, K.
15.00 – 15.15	OS1-5 <b>Chemical Composition of Soil Organic Carbon in Paddy Soils under Tropics</b> Tantarawongsa, P., Shen, C.Y., Ketrot, D., Suttanukool, P. and Thupwong, K.	OS2-5 <b>Impact of Land Use on Phosphorus and Carbon Status of Soils of a Tropical Ultisol</b> Nayanarangani, M.D.P., Viitharana, U.W.A., Kumaragamage, D. and Casson N.J.	OS3-5 <b>Basalt or Mg-rich Synthetic Gypsum as an Alternative Source of Ameliorant to Manage Soil Acidity for Cocoa</b> Mohd Shafar, J.M., Shamshuddin, J. and Mohd Firdaus, M.A.
15.15 – 15.30	OS1-6 <b>Impacts of Alternative Paddy Rice Irrigation on the Physical and Physiological Characteristics of Rice Plant</b> Fitriah, N.P., Sulaiman, M.F., Amin, A.M., Irsyad, M.R. and Hashim, A.M.	OS2-6 <b>Combined Organic and Inorganic Fertilizations Simultaneously Mitigate Greenhouse Gas Emissions and Ammonia Volatilization in Arable Upland Soils during Maize and Cabbage Cultivation</b> Yeomyeong Lee, Hyerin An and Sang Yoon Kim	OS3-6 <b>Potassium Availability in Sewage Sludge Compost</b> Takahashi, I., Samata, R., Katoh, M.
15.30 – 16.00	<b>Coffee Break and Poster Session 2</b>		
S2A	PS2A-1 <b>Long-Term Assessment of Heavy Metal(oid)s Phytoavailability in Soil with Immobilizing Agents Treatment</b> Chaw Su Lwin, Mina Lee, Namhee Lee, Kwon-Rae Kim		
	PS2A-2 <b>Evaluation of Applicability of RGB Images for Rice Growth Diagnosis Using Machine Learning Method</b> Jaekyeong Baek, Wan-Gyu Sang, Dongwon Kwon, Jung-Il Cho and Myungchul Seo		
S2B	PS2A-3 <b>Digital Assessment of Soil Organic Carbon Stock Under Different Land Use in Zhuoshui River Basin of Taiwan</b> Syu, C.H., Yang, B.J., Yang, H.J., Zhang, Y.T., Guo, H.Y. and Liu, T.S.		
	PS2A-4 <b>Effect of Organic Composts, Livestock Manure- and Food Waste-Derived on Nitrogen Use Efficiency (NUE) in Rice Paddy</b> Woojin Kim and Jwakyung Sung		
	PS2A-5 <b>Soil Fertility Changes by the Treatment of Green Manure Crops with Different Mixing Ratio of Chemical Fertilizer and Manure</b> Jang, W.S., Kim, B.H., Yoon, J.H., Lee, D.B., Kim, J.W., Seo, H.R., Lee, J.H., Lee, H.J. and Kim, K.H.		
	PS2B-1 <b>Fate of Nanopesticide and Implication of Its Residual Effects on the Terrestrial Environment</b> Siti Hajar, H., Mohd Firdaus, M.A., Norhayu, A. and Wong, M.Y.		
	PS2B-2 <b>Spatial Variability of Nitrogen in Different Monsoonal Changes</b> Izzah, A.H., Wan-Asrina, W.Y., Samsuri, A.W., Wan-Mohd-Razi, I. and Jeyanny, V.		
PS2B-3 <b>Effect Of Different Types of Water and Nutrient Managements for Rice Production in Alkaline Soil</b> Shin, Y.T. and Sung, J.K.			
PS2B-4 <b>Washed Rice Water is a Beneficial Plant Fertilizer</b> Nabayi, A., Teh, C.B.S., Tan, A.K.Z and Tan N.P.			
PS2B-5 <b>Influence of Soil Amendments on the Growth and Yield of Rice in Acidic Soil</b> Nur Sa'adah, A.H, Rosazlin, A., & Normaniza, O.			



S2C	<p><b>PS2C-1</b> <i>Effect of Soil Types on Potassium Leaching in Undisturbed Lysimeter</i> Lee, C.W., Kim, Y.M., Song, Y.S. and Hyun, B.K.</p>		
	<p><b>PS2C-2</b> <i>Soil Properties Assessment at Herbal Integrated Plantation: A Case Study at Seriting Ulu, Negeri Sembilan</i> Farah Fazwa, M.A., Norhayati, S., Syafiqah Nabilah, S.B., Muhammad Hanif, M.A. and Samsuri, T.H.</p>		
	<p><b>PS2C-3</b> <i>Assessment of Cd(II) and Cu(II) Removal Efficiency by Wood Biomass Byproducts</i> Choi, S.Y., Kim, H.S., Lee, S.P., Yoon, J.H., Jeong, S.S. and Yang, J.E.</p>		
	<p><b>PS2C-4</b> <i>Soil Application of Cyanobacteria for Improving N<sub>2</sub> Fixation and Salinity Amelioration</i> Kawashima, A., Ohsawa, R., Tsuchiya, T., Ohshima, H., Kato, T. and Inubushi, K.</p>		
	<p><b>PS2C-5</b> <i>Soil Fertility Status of Various Ages of Shorea roxburghii Planted in Segamat FRIM Research Station, Johor</i> Jeyanny, V., Faridah AZ, Rosdi, K., Mohamad Fakhri, I., Rozita, A., Muhammad Asri, L. and Darshini, R.</p>		
S2D	<p><b>PS2D-1</b> <i>Evaluation of Soil Nitrogen Sensor from Various Soil Textures and Soil Moisture Contents</i> Chun, H.C., Jung, K.Y. and Gong, D.H.</p>		
	<p><b>PS2D-2</b> <i>Load of Heavy Metal(loid)s into Agricultural Soils Nearby Industrial Complex</i> Namhee Yi, Mina Lee Chaw Su Lwin, and Kwon-rae Kim</p>		
	<p><b>PS2D-3</b> <i>Effect of Boron Application on Selected Bunch Characteristics of Berangan</i> Izzah, A.H., Wan-Asrina, W.Y., Phebe, D., Nurulhikma, M.I., Norliza, A.B. and Mohd-Razi, I.</p>		
	<p><b>PS2D-4</b> <i>Integrated Rice-Duck Farming Improves Rice Yield and Soil Properties in a Paddy Field: A Preliminary Assessment</i> Norziana,Z.Z., Mohamad Najib, M.Y. , Badrulhadza, A., Mohammad Shahid, S., Raja Zainab, R.A. , and Mohamad Rodzi, S.</p>		
	<p><b>PS2D-5</b> <i>Nitrogen-associated gene expression and primary metabolites in rice plants with different water managements</i> Gahyun Kim and Jwakyung Sung</p>		
<b>Room</b>	<b>Taming Sari 1</b>	<b>Taming Sari 2</b>	<b>Taming Sari 3</b>
<b>Session</b>	Session 4: Soil Ecology and Soil Quality	Session 5: Soil and Water Management	Session 6: Soil Fertility and Plant Nutrition
	Chairperson: Prof. Dr. Keshav Raj Adhikari  Co-Chairperson: Dr. Hasmah Mohidin	Chairperson: Dr. Artemio Martin  Co-Chairperson: Dr. Pozi Millow	Chairperson: Prof. Junta Yanai  Co-Chairperson: Mr. Amir Yasak
16.00 – 16.15	<p>OS4-1 <i>Growth Response and Yield of Choy Sum Mustard in Vermicompost Amended Potting Media</i> Intan-Nadhirah, M., Tosiah, S., Daljit, S.K. and Arina-Shairah, A.S.</p>	<p>OS5-1 <i>Simulation of Watershed Management Practices in the Huai Nam Yao Sub-Watershed using SWAT Model</i> Satriagasa, M.C., Tongdeenok, P. and Kaewjampa, N.</p>	<p>OS6-1 <i>Application of Oil Palm Decanter Cake as Soil Ameliorant and Fertiliser Substitute in Oil Palm Nursery</i> Abdullah, A.A., Shamsul, K.A.A. and Samsudin, A.</p>
16.15 – 16.30	<p>OS4-2 <i>Nematode Diversity in the IADA Barat Laut Paddy Field, Selangor, Malaysia</i> Mohd Nazarudin, A. and Nur Adliza, B.</p>	<p>OS5-2 <i>Impact of Water Stress Applied at Different Growth Stages using Different Crop Coefficient (Kc) on</i></p>	<p>OS6-2 <i>Detailed Investigation of the Effects of Organic Amendment on the Alleviation of Phosphorus</i></p>





		<b>Roselle (<i>Hibiscus sabdariffa</i> L.) Planted on BRIS soil</b> Nur Amirah, Y. and Wan Zaliha, W.S.	<b>Adsorption in Allophanic and Non-Allophanic Andisols</b> Nakamura, T., Yanai, J., Tamaki, T., Nishida, M., Hirai, H., Hayakawa, C., Takahashi, Y. and Nakao, A.
16.30 – 16.45	OS4-3 <b>Nutritional Characteristics of Tea (<i>Camellia Sinensis</i>) Planted in the Lowland Area and Their Association with Soil Edaphic Factor</b> Amirah, S.S., Khairil, M. and David F.R.P. Burslem	OS5-3 <b>Bentonite: New potential as Remedy for Sandy Soils in Malaysia</b> Faridah, M. and Farhah, A.R.	OS6-3 <b>Effective Utilization and Influence of Empty Fruit Bunch Washing Water on Soils Properties and Oil Palm Seedlings Growth</b> Tan N.P., Minagawa, C., Shamshuddin J. and Inubushi, K.
16.45 – 17.00	OS4-4 <b>Vapor Buoyancy Flux and Its Relationship with Other Fluxes in the Soil</b> Goh, E.G. and Nur Syahmi, I.O.	OS5-4 <b>Grass Hedges and Cover Crops as a Conservation Technique to Reduce Sediment Loss and Surface Runoff on Steep Slope Cultivation Area</b> Siti Nursabila, M., Syaharudin, Z., Susilawati, K. and Mohd Firdaus, M.A.	OS6-4 <b>Urea Volatilization in an Oil Palm Plantation under Field Condition</b> Ngai Paing TAN, Vijjandran J.R. and Kammlesh K.
17.00 – 17.15	OS4-5 <b>Unexpected High Suppression of NH<sub>3</sub> volatilization Loss Under Plastic Film Mulching in Maize Cropping Land</b> Ho Gyeong Chae and Pil Joo Kim	OS5-5 <b>Nutrient Supply from Sewage Sludge Compost and Root Development Depending on Soil Moisture and Nutrient Retentions</b> Soga, M. and Katoh, M.	OS6-5 <b>Effect of Liquid Organic Fertilizer on the Soil Chemical Properties of the Soil Planted with Pak Choy</b> M.P. Ramarao, Sanjeev <sup>1</sup> , Elisa Azura Azman <sup>1</sup> , Nor Eliza Tajidin <sup>1</sup> , Roslan Ismail <sup>2,3</sup> and Borhan Abdul Haya <sup>4</sup>
17.00 – 17.30	OS4-6 <b>Influence of Soil Compaction to heavy and long-term Machinery Usage in Oil Palm Plantation</b> Devaraj Tarmalingam, Sundian Nadaraj and Pupathy U.T.	OS5-6 <b>Physical Characteristics of Soil in Dry Land Agriculture in the Ciliwung Hulu Watershed, West Java Province</b> Rini Fitri, Achmad Yozer Perkasa and Halus Satriawan	OS6-6 <b>Fertiliser Withdrawal Strategy for Oil Palms Prior to Replanting on Riverine Alluvial Soils</b> Vijjandran J.R., Ho S.H. and Xavier A.
17.30 – 18.00	<b>Poster Session 3</b>		
S3A	<b>PS3A-1</b> <b>Effect of Biostimulants and Seed Priming Techniques on the Seed Germination and Root Formation of the Pakchoy Varieties (<i>Brassica rapa</i> L subsp chinensis)</b> Illani, Z.I., Singh, A., Sparks, D., Ali, A. and Siddiqui, Y		
	<b>PS3A-2</b> <b>Pool size of Microbial Biomass Potassium in Various Farmland Soils</b> Yamashita, K., Nishida, M., Akita, K., Ito, T., Saito, M., Horjo, H., Shinohara, M. and Asakawa, S.		
	<b>PS3A-3</b> <b>Polyhalide Application on Growth of Rubber Seedlings under Rain Shelter Condition</b> Hidayah, N.H., Nor Faizatulakma, M.S., Syaharudin, Z., Mohd Firdaus, M.A., Che Fauziah, I., and Shamshuddin, J.		
	<b>PS3A-4</b> <b>Effects of PEG-Induced Water Potential, Mechanism of Drought Tolerance in Rice (<i>Oryza Sativa</i> L.) Seedling Roots</b> Kim, G.E. and Sung, J.K.		
	<b>PS3A-5</b> <b>Effect of Illite-Containing Fertilizer on Growth, Nitrogen Uptake and Antioxidant Activity of Lettuce Plants</b> Kim, M.J. and Sung, J.K		
S3B	<b>PS3B-1</b> <b>Investigation of <i>Bacillus</i> consortium Immobilized on Oil Palm</b>		



	<p><b>Kernel Shell Biochar on Growth Performance and Metabolite Profiles of Oil Palm Seedlings (<i>Elaeis guineensis</i>)</b> Ajeng, A.A., Abdullah, R. and Tau Chuan, Ling</p>
	<p><b>PS3B-2</b> <b>Synthesis of Zero Valent Iron (ZVI) Using Green Tea by-products and Evaluating Removal Efficiency of As(V)</b> Lee, J.E., Kim, H.S., Yoon, J.H., Jeong, S.S., Choi, S.Y. and Yang, J.E.</p>
	<p><b>PS3B-3</b> <b>Macro and Micromorphological Characteristics of Soils Under the Abandoned Fields of Mines, Ningyo-toge, Japan</b> Jiang Qi, Kenji Tamura, Maki Asano, Kenjin Fukuyama, Junko Takahashi, Keiko Yamaji</p>
	<p><b>PS3B-4</b> <b>Effects of Bauxite Mining to Nutrient Availability in Oil Palm Plantation</b> Amalyn, A.A., Mazidah, Z. and Shuhada, N.T.</p>
	<p><b>PS3B-5</b> <b>Estimation of Soil Texture using AutoML Vision Edge</b> Abu, A., Abdul-Razak, N.Q.F. and Abdullah, R.</p>
S3C	<p><b>PS3C-1</b> <b>Land Area Potential for Grain Corn Plantation Using GIS: A Case Study of Northern Peninsular Malaysia</b> Zamir, A.R.M., Halimah, H., Najib, O.G.M., Haniff, A.M, Shaidatul, A.T.A., Haslizawati, A.B.N., Hasliana, K., Muzzammil, M.N.M. and Faiza, A.R.N.</p>
	<p><b>PS3C-2</b> <b>Combined Use of DOC Coagulants and Lime for a Simultaneous Decrease of Heavy Metal(loid)s Phytoavailability in Agricultural Soils</b> Mina Lee, Chaw Su Lwin, Namhee Lee and Kwon-rae Kim</p>
	<p><b>PS3C-3</b></p>
	<p><b>Soil Carbon Dynamics of Oil Palm Following Replanting</b> Fadzilah Songkongon, Muhammad Firdaus Sulaiman, Adibah Mohd Amin and Sim Choon Cheak</p>
	<p><b>PS3C-4</b> <b>Effect of Organic Resource Treatment On Greenhouse Gas Emission During Organic Rice Cultivation</b> Lee, J.H., Kim, B.H., Kim, Y.N., Yoon, J.H., Lee, D.B., Kim, J.W., Seo, H.R. and Kim, K.H.</p>
	<p><b>PS3C-5</b> <b>The Combined Use of Chemical and Organic Fertilizers for Maize Production and Soil Fertility</b> Park, B.J., Lee, C.G., Yoon, H.J., Kim, Y.H. and Kim, H.S.</p>
S3D	<p><b>PS3D-1</b> <b>The Nature and Properties of Tanjung Lipat Soil Family at Bongawan Papar Sabah</b> Jutom Ongkosing</p>
	<p><b>PS3D-2</b> <b>Effect of Polyhalite Fertilizer on Yield and Quality Improvement of Rockmelon in Soilless Culture</b> Siti Hajar, H. H. and Ng, F.W.</p>
	<p><b>PS3D-3</b> <b>Dual coated <i>Bacillus salmalaya</i> 139SI as Sustained Release Biofertilizer for Plant Growth and Soil Nutrient Enhancement</b> Pravin Vejan, Rosazlin Abdullah, Tumirah Khadiran and Salmah Ismail</p>
	<p><b>PS3D-4</b> <b>Determination of Nitrogen and Potassium Requirements of Different Textural Soils in Screenhouse for Increased Potato Yield</b> Reena Sharma, Keshab Raj Pandey, Kalika Prasad Upadhyaya and Yam Kanta Gairhe</p>
17.00 – 18.30	Business Meeting for Society Presidents
20.00 – 22.00	Dinner (Taman Mahsuri)



WEDNESDAY, 24 August 2022

Room	Taming Sari 1	Taming Sari 2	Taming Sari 3
<b>Session</b>	Session 7: Soil Fertility and Plant Nutrition	Country Reports	Session 8: Soil Ecology and Soil Quality
	Chairperson: Dr. Jamilah Syafawati Yaacob  Co-chairperson:	Chairperson: Prof. John Kim	Chairperson: Associate Professor Dr. Rozainah Mohamad Zakaria  Co-chairperson:
08.30 – 08.45	OS7-1 <b>The Feasibility Study of Habanero Chilli (<i>Capsicum chinense</i>) using Pineapple Leaves Biochar and <i>Trichoderma</i> Biofertilizer</b> Mahdian, S., Mohidin, H., Abdullah, R., and Khalid, K.	Prof. Dr. Jing Che <i>Soil Science Society of China</i>	OS8-1 <b>Spatial Distribution of Phosphate Solubilizing Bacteria (PSB) and Arbuscular Mycorrhiza (AM) Fungi in Oransbari Agricultural Soil</b> Irnanda Aiko Fii Djuuna, Saraswati Prabawardhani, Siti Hajar Kubangun, Dwi Wasgito Purnomo, Ardianto Gultom and Novelia Sianturi
08.45 – 09.00	OS7-2 <b>Effects of Salinity and Soil Moisture on Growth and Yield Of Beetroot (<i>Beta Vulgaris L.</i>) Grown On A Silt Loam Soil in The Mekong River Delta, Vietnam</b> Dang, D.M., Tran, B.L., Lam, H.B.N, de Vos, A.C. and Chau, M.K.	Prof. Budi Mulyanto <i>Indonesian Society of Soil Science</i>	OS8-2 <b>Effects of Fe Modified Wood Biochar on Phosphate Leaching in Slope-Land Rural Soils</b> Selly Maisyarah and Shih-Hao Jien
09.00 – 09.15	OS7-3 <b>Significant Yield Improvements by Water Management in An Agricultural Commodity on Marginal Soils in Malaysia and Indonesia: A Case Study on Oil Palm (<i>Elaeis guineensis</i>)</b> Pupathy U.T. and Sundian, N.	Prof. Junta Yanai <i>Japanese Society of Soil Science and Plant Nutrition</i>	OS8-3 <b>Modification of Oxidation-Reduction Potential in Rhizosphere of Plants Increases the Microbial Community in Soil and Plant Growth</b> Shamim Al Mamun, A. Akter, P. Laboni and M. Akter
09.15 – 09.30	OS7-4 <b>Application of Soil Amendments for Sustainable Rice Production Under Seawater Intrusion in the Mekong River Delta-Vietnam</b> K. Chau, L. Tran, M. Dang, P. Nguyen, L. Thi, K. Toyoda and R. Hatano	Dr. Davaasuren Davaadorj <i>Mongolian Soil Science Society</i>	OS8-4 <b>Exploring Microbial Diversity in Okara-Based Compost to Improve Seed Germination and Soil Fertility</b> Alias, A, Ramli, M. and Hedeneç, P.
09.30 – 09.45	OS7-5 <b>Yield, Nutrient Quality and Heavy Metal Content of Compost as Influenced by Carbon-Rich Feedstocks and Composting Methods</b> Sarimong, Ryan T. and Legaspi, Salvacion J.	Prof. Pil Joo Kim <i>Korean Society of Soil Science and Fertilizer</i>	OS8-5 <b>Residual Influences of Biochar and Compost on Improving Properties of Salt-Affected Soils</b> Phuong, N.T.K., Khoi, C.M., Minh, D.D., Sinh, N.V., My, H.M.T. and Toyota. K.



09.45 – 10.00	OS7-6 <b>Integrating Pineapple Leaf Biochar for an Improved Agronomic and Nutritional Content of MD2 Pineapple on Alluvial Soil</b> Jos, S., Mohidin, H., Ahmed, O.H., Kassim, N.Q.B., Hasni, R. and Jack, R.	Dr. Rosazlin Abdullah <i>Malaysian Society of Soil Science</i>	OS8-6 <b>Potential of Seven Phosphate Solubilizing Bacteria Isolations from Highland Peat in Solubilizing P in Mineral and Organic Soil</b> T. Sabrina, M. Dava Warsyahdhana and Benny Hidayat
10.00 – 10.15	OS7-7 <b>Using Some Natural Mineral Sediments as Indigenous Alternative Sources Of Fertilizers For Sustainable Development In The Developing Countries: Glauconite Deposits In Egypt</b> Morsy, M.A.	Prof. Keshav Raj Adhikari <i>Nepalese Society of Soil Science</i>	OS8-7 <b>Effect of Nitrogenous Substrates and Composting Methods on the Yield, Nutrient Quality and Heavy Metal Content of Compost</b> Sarimong, Ryan T. Legaspi, and Salvacion J.
10.15 – 10.45	<b>Coffee Break and Poster Session 4</b>		
<b>Room</b>	<b>Taming Sari 1</b>	<b>Taming Sari 2</b>	<b>Taming Sari 3</b>
<b>Session</b>	Session 9: Soil Information and Digital Mapping	Society Reports	Session 10: Soil Degradation and Remediation
	Chairperson: Dr. Jamilah Syafawati Yaacob  Co-Chairperson:	Chairperson: Prof. Takashi Kosaki	Chairperson: Associate Professor Dr. Rozainah  Co-Chairperson: Dr. Lau Beng Fye
10.45 – 11.00	OS9-1 <b>Pedogenesis of the Soils from Andesitic Lava and Tuff Breccia Around Volcanic Plateau at Huangtzuei Mountain in Taiwan</b> H.Z. Hum and Z.Y. Hseu	Prof. Udaya W.A. Vitharana <i>Soil Science Society of Sri Lanka</i>	OS10-1 <b>Stabilization of Heavy Metal Contaminated Fine Soil Collected from a High-Pressure Soil Washing Process</b> Sang Hyeop, Park and Deok Hyun, Moon
11.00 – 11.15	OS9-2 <b>Effects of Microtopography as a Soil Forming Factor on Polder Soils in the Isahaya Polder Conserved Area, Japan</b> S. Nishikura, M. Kawahigashi	Dr. Dipak Ranjan Biswas <i>Indian Society of Soil Science</i>	OS10-2 <b>Concomitant Immobilization of Oxyanions and Heavy Metals using Vivianite</b> Han Na, Kim and Jin Hee, Park
11.15 – 11.30	OS9-3 <b>Comparison of Widely Used Soil Classification Systems for Oil Palm (<i>Elaeis guineensis</i>) Cultivation in Malaysia and Indonesia</b> Pupathy, U.T. and Paramanathan, S.	Asst. Prof. Dr. Audhasit Wongmaneeroj <i>Soil and Fertilizer Society of Thailand</i>	OS10-3 <b>A Study of Strength Reinforcement of Peat Soil: An Alteration Polyurethane-Based Stabilisation Agent Using Palm Oil Fiber and Palm Oil Kernel</b> Alip, I.A., Bakar, A.F.B., Osman, N., Halim, A. and Mustapha, K.A.
11.30 – 11.45	OS9-4 <b>Development of a Soil Database to Manage Soils of Sri Lanka for the Future</b> Ranjith B. Mapa and A.R. Dassanayake	Prof. Dr. Nguyen The Hung <i>Vietnam Society of Soil Science</i>	OS10-4 <b>Monitoring of Soil EC to Evaluate the Effect of Nitrogen and Potassium Content on EC Measurements</b> Yeong Ju Suk, Han Na Kim, Gyung Min Park, Su Kyeong Sin and Jin Hee Park
11.45 – 12.00	OS9-5	Dr. Artemio Martin	OS10-5



	<p><b>Exchange of Pedological Activities Between Taiwan and Japan for Soil Education</b> Hseu, Z.Y., Chen, Z.S., Takesako, H., Kosaki, T., Sumida, H., Tsai, H., Tsai, C.C. and Jien, S.H.</p>	<p><i>Philippine Society of Soil Science and Technology</i></p>	<p><b>The Effect of Premium Humic Acid HIPHAgro on the Growth of Post Nickel Mine Reclamation Plant in Kabaena, Indonesia</b> Hasbullah Syaf, Sahta Ginting, M. Tufaila and Budi Widiawan</p>
12.00 – 12.15	<p>OS9-6 <b>Monitoring of Bioinformatics of Cherry Tomatoes for Optimized Growth Condition in Smart Farm</b> Han Na Kim, Gyung Min Park, Hyo Kyung Jee, Yeong Ju Suk, Jeong Yeon Kim, Su Kyeong Si, and Jin Hee Park</p>	<p>Prof. Yu-Min Tzou <i>The Chinese Society of Soil and Fertilizer Sciences (Taiwan)</i></p>	<p>OS10-6 <b>Effects of Humic Acid and Organic Manures on the Point of Zero Charge</b> Sourav Kumar Khan and Sanjib Kar</p>
12.15 – 12.30	<p>OS9-7 <b>Improving Dry Matter and Nutrients Uptake of Zea Mays L. Using Crude Humic and Fulvic Acids Isolated from a Tropical Peat Soil</b> Effyanti M.S, Ahmed, O.H., Japar, S.B. and Susilawati, K.</p>	<p>Prof. S.M. Imamul Huq <i>Soil Science Society of Bangladesh</i></p>	<p>OS10-7 <b>Early Growth and Mineral Nutrition of Tea Nursery Plants Influenced by Chicken Feather-Derived Biostimulant</b> Raguraj, S., Kasim, S., Jaafar, N.M. and Nazli, M.H.</p>
12.30 – 14.00	<b>Lunch</b>		
2.00 – 2.30	<b>Poster Session 3</b>		
S3A	<p>PS3A-1 <b>Effect of Biostimulants and Seed Priming Techniques on the Seed Germination and Root Formation of the Pakchoy Varieties (<i>Brassica rapa L subsp chinensis</i>)</b> Illani, Z.I., Singh, A., Sparks, D., Ali, A. and Siddiqui, Y</p>		
	<p>PS3A-2 <b>Pool size of Microbial Biomass Potassium in Various Farmland Soils</b> Yamashita, K., Nishida, M., Akita, K., Ito, T., Saito, M., Horjio, H., Shinohara, M. and Asakawa, S.</p>		
	<p>PS3A-3 <b>Polyhalide Application on Growth of Rubber Seedlings under Rain Shelter Condition</b> Hidayah, N.H., Nor Faizatulakma, M.S., Syaharudin, Z., Mohd Firdaus, M.A, Che Fauziah, I., and Shamshuddin, J.</p>		
	<p>PS3A-4 <b>Effects of PEG-Induced Water Potential, Mechanism of Drought Tolerance in Rice (<i>Oryza Sativa L.</i>) Seedling Roots</b> Kim, G.E. and Sung, J.K.</p>		
	<p>PS3A-5 <b>Effect of Illite-Containing Fertilizer on Growth, Nitrogen Uptake and Antioxidant Activity of Lettuce Plants</b> Kim, M.J. and Sung, J.K</p>		
S3B	<p>PS3B-1 <b>Investigation of <i>Bacillus</i> consortium Immobilized on Oil Palm Kernel Shell Biochar on Growth Performance and Metabolite Profiles of Oil Palm Seedlings (<i>Elaeis guineensis</i>)</b> Ajeng, A.A, Abdullah, R. and Tau Chuan, Ling</p>		
	<p>PS3B-2 <b>Synthesis of Zero Valent Iron (ZVI) Using Green Tea by-products and Evaluating Removal Efficiency of As(V)</b> Lee, J.E., Kim, H.S., Yoon, J.H., Jeong, S.S., Choi, S.Y. and Yang, J.E.</p>		



	<p><b>PS3B-3</b> <b>Macro and Micromorphological Characteristics of Soils Under the Abandoned Fields of Mines, Ningyo-toge, Japan</b> Jiang Qi, Kenji Tamura, Maki Asano, Kenjin Fukuyama, Junko Takahashi, Keiko Yamaji</p>
	<p><b>PS3B-4</b> <b>Effects of Bauxite Mining to Nutrient Availability in Oil Palm Plantation</b> Amalyn, A.A., Mazidah, Z. and Shuhada, N.T.</p>
	<p><b>PS3B-5</b> <b>Estimation of Soil Texture using AutoML Vision Edge</b> Abu, A., Abdul-Razak, N.Q.F. and Abdullah, R.</p>
S3C	<p><b>PS3C-1</b> <b>Land Area Potential for Grain Corn Plantation Using GIS: A Case Study of Northern Peninsular Malaysia</b> Zamir, A.R.M., Halimah, H., Najib, O.G.M., Haniff, A.M, Shaidatul, A.T.A., Haslizawati, A.B.N., Hasliana, K., Muzzammil, M.N.M. and Faiza, A.R.N.</p>
	<p><b>PS3C-2</b> <b>Combined Use of DOC Coagulants and Lime for a Simultaneous Decrease of Heavy Metal(loid)s Phytoavailability in Agricultural Soils</b> Mina Lee, Chaw Su Lwin, Namhee Lee and Kwon-rae Kim</p>
	<p><b>PS3C-3</b> <b>Soil Carbon Dynamics of Oil Palm Following Replanting</b> Fadzilah Songkongon, Muhammad Firdaus Sulaiman, Adibah Mohd Amin and Sim Choon Cheak</p>
	<p><b>PS3C-4</b> <b>Effect of Organic Resource Treatment on Greenhouse Gas Emission During Organic Rice Cultivation</b> Lee, J.H., Kim, B.H., Kim, Y.N., Yoon, J.H., Lee, D.B., Kim, J.W., Seo, H.R. and Kim, K.H.</p>
	<p><b>PS3C-5</b> <b>The Combined Use of Chemical and Organic Fertilizers for Maize Production and Soil Fertility</b> Park, B.J., Lee, C.G., Yoon, H.J., Kim, Y.H. and Kim, H.S.</p>
S3D	<p><b>PS3D-1</b> <b>The Nature and Properties of Tanjung Lipat Soil Family at Bongawan Papar Sabah</b> Jutom Ongkosing</p>
	<p><b>PS3D-2</b> <b>Effect of Polyhalite Fertilizer on Yield and Quality Improvement of Rockmelon in Soilless Culture</b> Siti Hajar, H. H. and Ng, F.W.</p>
	<p><b>PS3D-3</b> <b>Dual coated Bacillus salmalaya 139SI as Sustained Release Biofertilizer for Plant Growth and Soil Nutrient Enhancement</b> Pravin Vejan, Rosazlin Abdullah, Tumirah Khadiran and Salmah Ismail</p>
	<p><b>PS3D-4</b> <b>Determination of Nitrogen and Potassium Requirements of Different Textural Soils in Screenhouse for Increased Potato Yield</b> Reena Sharma, Keshab Raj Pandey, Kalika Prasad Upadhyaya and Yam Kanta Gairhe</p>
<b>Room</b>	<b>Taming Sari Grand Ballroom</b>
14.00 – 14.30	Speech by Mr. Ronald Vargas (Secretary of Global Soil Partnership, FAO) Title: <i>Soil Science Towards 2023</i>
14.15 – 14.30	Sharing Session with Prof. Takashi Kosaki (IUSS Past President)
14.30 – 14.45	Closing Remarks by the MSSS President
14.45 – 15.00	Acceptance Speech by 16 <sup>th</sup> ESAFS Host Country's President
	<b>Coffee Break</b>