



MALAYSIAN SOCIETY OF SOIL SCIENCE (MSSS)

NEWSLETTER

April 2018 Issue 1

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NOTICE OF THE 47th ANNUAL GENERAL MEETING

Notice is hereby given that the 47th Annual General Meeting (AGM) of the Malaysian Society of Soil Science (MSSS) will be held as follows:

Time : 12.30 pm
Venue : Palm Garden Hotel 101 Resort, Putrajaya
Date : 25th June 2018



Soil is Life.



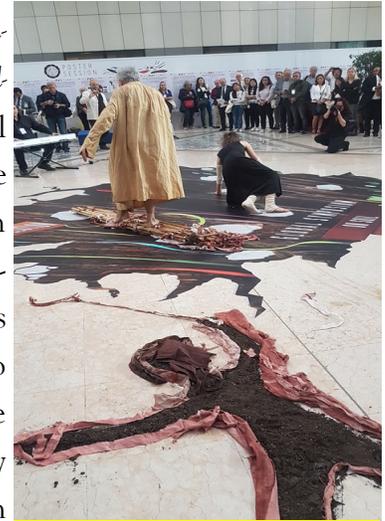
International
Decade of Soils
2015-2024

SELAMAT HARI RAYA AIDILFITRI
MAAF ZAHIR DAN BATIN
1430 HIJRAH



GLOBAL SYMPOSIUM ON SOIL POLLUTION

Soil pollution is one of the ten major soil threats identified in the 2015 *Status of the World's Soil Resources* report and subsequently addressed in the *Voluntary Guidelines for Sustainable Soil Management (VGSSM)* of the FAO. Soil pollution is defined as a chemical degradation process of soils caused by the presence of certain chemical elements or potentially harmful substances in amounts that exceed recommended levels for the health of humans, animals and plants or cause a detriment on soil normal functioning. Sources of soil pollution is widening, may it be chemical or geogenic has started to take centre stage in various industries such as agriculture, mining, waste disposal, military and other anthropogenic advances. The FAO recently organized the Global Symposium on Soil Pollution from 2-4 May 2018 in Rome, Italy to address the current issues related to soil pollution. The symposium was attended by Malaysian delegates from Forest Research Institute



Soil art performance during the opening ceremony

Malaysia (FRIM) and the Department of Environment (DOE) Malaysia. Oral presentations titled 'Reversing soil degradation via phytoremediation techniques in an ex-tin mine and gold mine in Peninsular Malaysia' was presented by Dr Jeyanny Vijayanathan (FRIM) and Contaminated land management in Malaysia: Policies and ad legal framework was presented by Mr. Ismail Ithnin (DOE). The themes which were covered include i) soil pollution on agricultural fields and other land uses; ii) the impact of soil pollution on food production and safety, the environment and overall human well-being, iii) remediation of polluted sites and lastly iv) global status of soil pollution. Some of the key take home messages which were further deliberated were on emerging pollutants such as microplastics and antibiotics, state of the art remediation using phytoremediation, nuclear techniques and nano-fertilizers, and the need to develop regional or global threshold levels for contaminants for management strategies. The conclusion and way



The Malaysian delegates from FRIM and DOE

forward was further emphasized by the Global Soil Partnership Secretariat of FAO, Mr. Ronald Vargas for global scale commitment among private and governmental agencies in line with the VGSSM for being the solution for soil pollution. *By: Dr. Jeyanny Vijayanathan, Research Officer at Forest Research Institute Malaysia*

Workshop on guide to healthy soils

A workshop entitled, “Guide to Healthy Soils” was held on 3 and 4 Feb 2018 at the Department of Land Management, Faculty of Agriculture, Universiti Putra Malaysia, Serdang. This workshop was developed specifically for urban gardeners, farming hobbyists, farmers, or land owners with little or no background in soil science. The only criteria is they must have a keen interest in urban gardening or farming! This workshop was organized by the Faculty of Agriculture, the Malaysian Soil Science Society, and Eats, Shoots and Roots Sdn, Bhd. A total of 28 participants had registered for this workshop. During this two-day workshop, participants were taught on a wide range of topics, so that at the end of the workshop, they were able to answer questions such as what makes a healthy soil, the importance of organic matter, how much to water the plants and how much fertilizer to apply. The participants also received hands-on experience on: 1) preparing soil media, 2) making compost, 3) interpreting soil test results, 4) fertilizer calculations, and 5) preparing a wick irrigation system. Lecturers involved in the workshop instruction were Dr. Christopher Teh Boon Sung, Dr. Tan Ngai Paing, and Dr. Ali Tan. These three lecturers are from UPM. We are happy to report that at the end of the workshop, participants provided written as well as verbal feedbacks that they enjoyed the workshop and found it very helpful, and some even asking for a sequel workshop!

By *Dr. Christopher Teh Boon Sung, Senior Lecturer UPM*



Participants trying their hand on aerobic compost making



Participants, lecturers, and assistants of the workshop

Workshop on soil manuring for rubber

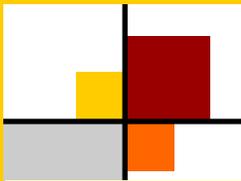


The Extension and Development Division of the Malaysian Rubber Board has organized two days workshop on soils and manuring programme for rubber cultivation to enhance the knowledge of its officers and staff. This workshop was held from 19 to 20 December 2017 at MITC and RRIMINIS in Jasin, Melaka. It was attended by more than 50 Region Extension and Development Division's officers and staffs from all over the country. The workshop was officiated by the Director of Extension and Development, Mr. Tuan Mohamad Tuan Muda. The programme started with lectures on the first day and practical sessions at the field on the second day. The lecture was delivered by MSSS fellow, Dr. Wan Noordin Wan Daud, assisted by

Dr. Shafar Jefri who explained on soil formation and classification during the practical session. The workshop started with introduction on the properties of soils and soils types in Malaysia. The programme continued with practical demonstration of manuring for immature and mature rubber. Two soil pits were prepared and used for the soil profile study. The first profile was of the Batang Merbau series, an Ultisol, developed from high



grade metamorphic rock and the second profile was an Inceptisol, developed from colluvium deposit. The workshop was well received by attendees and is an avenue to promote the importance of soil science in relation to manuring programme for better extension programme and development. *By: Dr. Shafar Jefri, UPM*



BARIO RICE: Preserving cultural identity of quality produce

Lying above 1,000 m a.s.l of the Mulu mountainous range and flanked by streams of river; resides a community that cultivated a highly premium variety of rice, the “Bario rice” as it is locally known. The Lun Kelabit people had cultivated it for generations and regards it as part of their cultural and socio-economical identity. Less than 10 per cent of rice grains were traded globally; targeted for quality selections such as “basmathi” (India/Pakistan), “jasmine” (Thailand/Vietnam/Cambodia), “koshihikari”(Japan) as well as some indigenous rice like “bario”(Malaysia) and “rojolele”(Indonesia). Even with low trading figures, consideration should be given on its marketing potential towards community progress, i.e agrotourism like Bario. Bario rice, for generations has been cultivated under natural farming concept (buffaloes tilling and manuring) as well as utilizing natural agro-climatic suitability to produce good quality products. However, outmigration of young Lun Kelabit to take better job opportunities in the cities had led to the abandonment of their ancestral way of planting. As a result, modern mechanization system has been promoted by the federal government under the New Key Economic Areas (NKEA) to revitalize and ensuring its future continuity. Such task proven to be arduous ones, since pursuits of progress and upholding cultural identities does not always share the same paths. A visit to this tranquil town was made in 2017, after 5 years of the policy implementation. The agriculture reforms were



Picturesque scenery of the Bario valley



Weighing and vacuum packaging of the end product

executed in splendid manner. With more than 150 ha of lands currently adopted into more modern approaches viz a viz, usage of combine harvester, seedling transplanter and NPK fertilizations. Yet, embracing the modern agriculture practices particularly in premium commodities should not focus on yield only; but most importantly towards retaining its selling point, “the quality”. Thus reforms should mimic to original practices as close as possible by ensuring mutual benefits for “people-environment-foods” in the minds of any social ventures. For more information on modernization approaches that has been taken place in Bario, the readers can visit: - <http://www.ceriagroup.org/>. *By Mr. Khairun Naim Mula-na, Post-graduate Student Tokyo University of Agriculture and Technology (TUAT), Fuchu-shi, Tokyo, Japan.*

Assessment of the global impact of 21st century land use change on soil erosion



Land is not merely soil, it is a fountain of energy flowing through a circuit of soils, plants and animals.

— Aldo Leopold —

13th International Conference of the East and Southeast Asia Federation of Soil Science Societies (ESAFS)

"Soil Quality for Food Security and Healthy Life"

12 - 15 December 2017, at Nong Nooch Tropical Garden, Pattaya, Thailand



Presidents of Soil Science Society from East and Southeast Asia Country

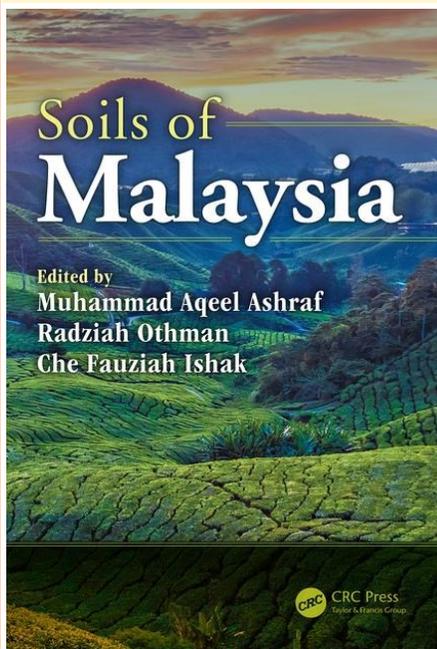
The 13th International Conference of the East and Southeast Asia Federation of Soil Science Societies (ESAFS) was held on December 12-15, 2017 in Pattaya, Thailand. The theme of this conference is Soil Quality for Food Security and Healthy Life. Prof. Dar Yuan Lee was elected as the medalist of the ESAFS Award due to his distinguished work in the conference. This conference was attended by Dr. Wan Rasidah and Dr. Rosazlin. Dr. Wan Rasidah was partially sponsored by FAO. As a President of Soil Science Society of Malaysia, Dr. Wan Rasidah presented the country report in this conference. The next conference, 13th International conference of ESAFS will be held in Taiwan in 2019.

BOOK REVIEW

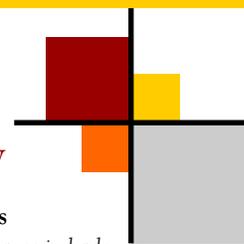
Title : Soils of Malaysia

Publisher : CRC Press

Author: Muhammad Aqeel Ashraf, Radziah Othman and Che Fauziah Ishak



The book *Soils of Malaysia* was published in 2018 by CRC Press, a member of the Taylor & Francis Group. This book has 205 pages comprising of eight chapters. The book was edited by Muhammad Aqeel, Radziah Othman and Che Fauziah Ishak, the latter two being members of MSSS. This book covers a wide range of topics related to soils in Malaysia. The perspective of this book is not limited to only soil in Malaysia pertaining to agricultural use, but it also covers aspects of soil use for hydrology, civil construction and environmental contamination from landfills, pesticide, etc. This book begins with an introduction of the Malaysian climate, ecosystem, flora and fauna followed by the geologic and hydrological characteristics of Malaysia. The book later progressed to describe the major land use for agriculture in Malaysia and the Malaysian soil types and classification. The preceding chapters delved into the more technical aspects of Malaysia soil covering soil properties, soil contamination and soil fertility and its management. The final chapter of the book covered the future issues with Malaysian soil. This book is highly recommended as a general reference book for soils in Malaysia and as a textbook for undergraduate and graduate level courses. *Dr. Mohd. Firdaus Sulaiman, UPM.*



10th PSILPH 2018
 10th INTERNATIONAL SYMPOSIUM ON PLANT-SOIL INTERACTIONS AT LOW pH

Introduction
 The main objective of the 10th International Symposium on Plant-Soil Interactions at Low pH (10th PSILPH2018) is to address issues related to sustainable food production on soils with low pH, with the intention of achieving environmental sustainability. In tropical regions of the globe, soils with low pH are very common due to the prevailing weather conditions of high temperature and high rainfall all the year round. Low pH soils can cause injuries to the plant root systems, inhibiting overall plant growth. Agriculture and agronomic practices are continuously being developed and/or improved to overcome the problems, facing growers without necessarily neglecting the environment.

In line with the symposium theme "Achieving Sustainable Food Production on Acid Soils, the 10th PSILPH2018 aims to gather researchers, scientists, experts and academicians in the field of soil science, plant physiology and others to share and discuss the latest research findings and thoughts on current status of agriculture production and practices; thus, ensuring food security and environmental sustainability.

Symposium Topics

- Physical, chemical and microbiological properties of low pH soils.
- Physiological, molecular mechanisms and plant adaptation to acid soil conditions.
- Soil-microbe-plant interactions at low pH.
- Amelioration and remediation of low pH soils.
- Sustainable management of plantation and other crops on acid soils.
- Forestry and agroforestry management on low pH soils.
- Effects of soil acidity on food quality and human nutrition.

Extended Abstract (Two pages)
 A two-page extended abstract should include title, name, affiliation and address of all authors, introduction, methodology, discussion, conclusion and list of references. Figures and tables may be included and type using single-spacing in Times New Roman, font size 12.

Important Date
 Extended Abstract Deadline | 30th November 2017
 Notification of Acceptance | 31st December 2017
 Early Registration Deadline | 28th February 2018
 Normal Registration Deadline | 31st May 2018
 Symposium | 25th – 29th June 2018

Payment details
 Account : The Malaysian Society of Soil Science
 Bank : CIMB Bank Berhad
 Account No. : 8622998900
 Swift Code : CIBBMYKL
 Branch Code : 1212
 Bank Address : Ground Floor, Block B,
 Bangunan Pusat Pelajar UPM,
 43400 UPM Serdang, Selangor, Malaysia
 Payment reference : 10th PSILPH2018 and participant full name

Registration Fees	Early Registration	Normal Registration
International participant	USD 500	USD 600
Developing/Low income countries*	USD 400	USD 480
Local participants	RM1 000	RM1 200
Local students/ ASEAN countries students	RM 700	RM 800
International students	USD 300	USD 350

*For further information, contact us at:
 10th PSILPH2018 Secretariat
 Department of Land Management
 Faculty of Agriculture, Universiti Putra Malaysia
 43400 Serdang, Selangor, MALAYSIA
 Tel: +603-8947 4886
 E-mail: lowph2018@gmail.com

*Organization for Economic Cooperation and Development (OECD)
 Participants that cover the cost of transportation, meals, travel and their
 contribution to the abstract, oral presentation will be accepted.
 Abstract and registration form can be downloaded at www.psiph2018.com

PERTANIAN • INOVASI • KEHIDUPAN

Keynote and Plenary Papers

- ♦ *Regulation of aluminum tolerance in barley*
 Jian Feng Ma, Miho Fujii-Kashino, Naoki Yamaji, Miki Yamane, Daisuke Saisho and Kazuhiro Sato
- ♦ *A magnesium dechelataase gene is involved in low magnesium-induced leaf chlorosis and magnesium remobilization in rice.*
 Zhi Chang Chen, Yu Yang Peng and Jian Li
- ♦ *Unravelling the organic anion exudation from different root types of aluminium-resistant wheat and its effect on the root colonizing microbiome*
 Akitomo Kawasaki, Paul G. Dennis, Emmanuel Delhaize, Alan E. Richardson, Ulrike Mathesius, Matthew Gilliham, Michelle Watt and Peter R. Ryan
- ♦ *The mechanism underlying regulation of internal P reutilization by different nitrogen forms in rice in acid soils*
 Ren Fang Shen, Xiao Fang Zhu and Chun Quan Zhu
- ♦ *Weathered soils in Southeast Asia can sustain oil palm production in the long run*
 Shamshuddin Jusop, Fauziah, C.I. and Radziah, O.
- ♦ *Crop adaptation to acid soils: Common features between aluminum resistance and tolerance to phosphorous deficiency*
 Leon V. Kochian
- ♦ *Plant-microbe interactions in low pH soils: Options for maximizing soil biological fertility*
 Lynette K. Abbott
- ♦ *Managing phosphorus under acid soils environment*
 Mohd Hanafi Musa
- ♦ *Regulation and modeling of essential nutrient transport required for tolerance to acid soil*
 Toru Fujiwara

MSSS Publications for Sale!

BOOKS (RM 10/each)

1. Bibliography of Malaysian Soils
2. Recent Developments in Land Evaluation
3. Sustainable Land Management
4. Secondary & Micronutrients in Malaysian Agriculture
5. Developments in Soil Research In Malaysia
6. Soil Management for Food and Fruit Crop Production

PROCEEDINGS (RM 10/each)

1. Soil Science Conference of Malaysia year ('91, '93, '94, '95, '97, '98, '99)
2. Soil Science Conference of Malaysia year ('02, '03, '04, '06)

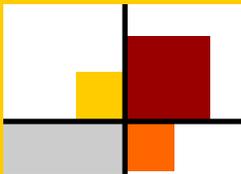
JOURNALS (RM 10/each)

1. Malaysian Journal of Soil Science (Volume 1–12)
2. Malaysian Journal of Soil Science (Volume 15–16, 18)

Announcements!

CONFERENCES

1. [MSPP 2018](#), 28-30 Aug, Kota Bharu, Kelantan
2. [21st World Congress of Soil Science](#), 12-17 Aug, Rio, Brazil
3. [5th Annual Congress on Plant and Soil Science](#), 28 Feb– 1 Mar, London, UK



www.msss.com.my

MSSS Newsletter

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CONTRIBUTE TO OUR NEWSLETTER!



We are a big group of almost 300+ soil enthusiasts and we like to hear from you! We are looking for article contributions on soil related issues, mainly

GENERAL ARTICLES: If you have a story/report about an activity related to soil, such as soil training/workshop/conference/meetings; please send it along. A one – two page article with color pictures are encouraged.

YOUNG SCIENTIST: If you are currently a young soil scientist (below 40 years of age) working on a research project related to soil dynamics, you may send in your research article about 500 to 600 words which states on the intro, justification, brief methods, results and conclusion. Please include a digital photo as well.

SENIOR SCIENTIST: If you are currently a senior soil scientist (above 40 years of age) working on a research project related to soil dynamics, you may send in your research article about 500 to 600 words which states on the intro, justification, brief methods, results and conclusion. Please include a digital photo as well.

THE EASTERN CONNECTION: Dedicated for any soil research endeavors and information from Sabah and Sarawak.

ANNOUNCEMENTS: Of trainings or educational opportunities, forthcoming meetings, conferences or other international announcement regarding soil, agriculture, forestry, etc.

BOOK/PAPER REVIEW: If you have come across a recently published article you think may be of interest to other MSSS members, please alert the Newsletter Editor and we will highlight it for our readers. We give priority to publications by MSSS members but anything on soil research is welcomed.

ADVERTISEMENTS: Submit your advertisement for RM 40 for half page and RM 80 for full page in our newsletter. Gain more visibility with your services and products! Submission information: For text send a word document with Arial font (11) to jeyanny@frim.gov.my or rosazlin@um.edu.my and for photos .jpg is preferred. All submission will be scrutinized by the Editorial Board for suitability before publishing. Once approval, the Editorial Board will inform you with further details.

MJSS - CALL FOR PAPERS

The Malaysian Journal of Soil Science (MJSS) is a scientific journal published by the Malaysian Society of Soil Science. It contains research papers in English on matters related to soil and soil-plant interactions. The journal welcomes original research works not previously or simultaneously published in any other scientific or technical journal from MSSS members as well as other scientists in Malaysia and abroad. The aim of the journal is to promote the development of soil science in Malaysia, other tropical and subtropical regions. **MJSS is a peer-reviewed, fully open access journal, is now indexed by Scopus and published annually.** Instruction for authors and other details are available on our website <http://www.msss.com.my/journals/instruct.php>



Contact us

Malaysian Society of Soil Science
Locked bag 254,
43409 UPM Serdang,
Selangor Darul Ehsan

The IUSS song

*It is our life! We call it soil
It is the stuff, in which we toil
From soil we've sprung, to soil we'll go
Protect the soil of this earth so we can grow*